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#### PHD

### Programs to promote physical activity among children and adolescents A case study of the Team Bath Tribe Project

Koorts, Harriet

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## PROGRAMS TO PROMOTE PHYSICAL ACTIVITY IN CHILDREN AND ADOLESCENTS: A CASE STUDY OF THE TEAM BATH TRIBE PROJECT

Volume 1 of 1

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A thesis submitted for the degree of Doctor of Philosophy

University of Bath Department for Health

January 2012

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### PUBLICATIONS

Koorts, H., Mattocks, M., Ness, A., Deere, K., Blair, S. N., Pate, R., & Riddoch, C. 'The association between the type, context and levels of physical activity amongst adolescents' *Journal of Physical Activity & Health*, 2011, 8, 1057 – 1065

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### ABSTRACT

**Background:** Physical inactivity has been identified as the fourth leading risk factor for global mortality. Despite public health guidelines advising children and adolescents to spend a minimum of 60 minutes per day of at least moderate intensity physical activity, a large proportion of children and adolescents fail to meet these guidelines. Interventions promoting physical activity show varying degrees of success, and more detailed evaluations of such interventions are essential. The aim of this research was to conduct an in-depth evaluation of a community-based physical activity program aimed at children and adolescents, specifically the Tribe Project.

**Methods:** The RE-AIM framework (Reach, Effectiveness, Adoption, Implementation and Maintenance) was used to evaluate the individual and organisational-level impact of the Tribe Project. A single mixed method case study was used based on five sources of evidence: interviews, questionnaires, documentation, archival records and direct observations. Participants included the Tribe managers and coaches implementing the program and the Tribe parents and children/adolescents who attended.

**Results:** The Tribe Project reached approximately 2.5% of the eligible population living within Bath and North East Somerset. The program successfully met some of its objectives although feedback procedures were poor and the program aims were unclear. The community-level adoption of the program was high, however, the implementation and adherence to the program principles at the setting-level varied. The program was successfully institutionalised within the University of Bath yet pathways after the program into the community varied, and were mostly competitive only. Nonetheless, a combination of social, psychological and physical benefits was reported following participation.

**Conclusion:** To assess accurately the potential impact of physical activity interventions a combined assessment of individual and organisational-level factors is necessary. This will help inform policy on effective strategies to promote physical activity in the community, and develop interventions that are more effective as a result.

## LIST OF ABBREVIATIONS

AEE	Activity-related Energy Expenditure
ALSPAC	Avon Longitudinal Study of Parents and Children
BANES	Bath and North East Somerset
CFA	Confirmatory Factor Analysis
СМО	Chief Medical Officer
CPM	Counts per Minute
DLW	Doubly Labeled Water
EE	Energy Expenditure
FA	Factor Analysis
MVPA	Moderate to Vigorous Physical Activity
PA	Physical Activity
PE	Physical Education
RCT	Randomised Control Trial
REE	Resting Energy Expenditure
SES	Socio-Economic Status
STV	Sports Training Village
TEE	Total Energy Expenditure

### **CHAPTER 1: INTRODUCTION**

#### 1.1 Introduction

The purpose of this chapter is to introduce the current social climate of physical activity among children and adolescents, and to illustrate the importance of the current research. The main body of this chapter is dedicated to a description of the physical activity program that forms the basis of this case study. The primary components and organisational structure of this physical activity program will be described. Following this, the context and rationale within which this research is conducted are discussed. This relates specifically to the aims and objectives of this research and the specific research questions to be addressed within this thesis. The broad focus of this thesis is program evaluation. Therefore, a brief overview of the importance of criteria by which to judge physical activity interventions will be presented.

#### 1.2 Current Social Climate

Physical inactivity has been identified as the fourth leading risk factor for global mortality (World Health Organization, 2010). Current public health guidelines advise children and adolescents to spend 60 minutes per day in moderate to vigorous physical activity (MVPA) (Department of Health, 2004). Despite these public health guidelines, a large proportion of children and adolescents fail to meet these physical activity recommendations (Riddoch et al., 2007; Strong et al., 2005). Statistics published in the 2008 Health Survey for England revealed that only 33% of boys and 21% of girls met the government recommendations for physical activity (The NHS Information Centre, 2008a). Only 1 in 5 children achieved at least 30 minutes of MVPA per day, and 47% of boys and 61% of girls could be categorised as inactive (The NHS Information Centre, 2008a). A sustained, long-term increase in the physical activity levels of children and adolescents has since become the undisputed goal within physical activity and health promotion research. Many physical activity programs have been implemented in an attempt to increase the physical activity levels of children and adolescents. Nonetheless, it still remains unclear as to how to successfully intervene and establish a permanent shift in physical activity behaviours (Austin et al., 2007). Exploring the determinants of children's physical activity levels and the different patterns of physical activity behaviour could help improve this.

The determinants of children's physical activity include both internal factors such as motivation and enjoyment (Biddle, Wang, Chatzisarantis, & Spray, 2003; Sirard, Pfeiffer, & Pate, 2006), and external factors such as environment and social norms (Ferreira et al., 2007, Salmon and Timperio, 2007). The interaction between these factors is complex, and although it is known that less active and highly active children differ in the amount physical activities they engage in, it is unclear exactly why these patterns of behaviour differ, and how. As a result, physical activity interventions have shown varying degrees of success in increasing the physical activity levels of children and adolescents (Gordon-Larsen et al., 2000), and none have consistently succeeded in producing a lasting or permanent physical activity behaviour change post intervention. The changes in physical activity levels that may occur are often a direct response to the intervention, and not an actual permanent shift in the behaviour of the individual (Sallis et al., 2001). Emphasis within research has now been placed upon evaluating the intervention design, delivery and impact upon recipients in addition to the measureable outcomes. A better understanding of how social and physicalenvironmental factors influence physical activity patterns is necessary in order to design more informed and effective programs to promote physical activity and healthy behaviours among this population in the future.

#### 1.3 The Team Bath Tribe Project

#### 1.3.1 Introduction and Overview

The Team Bath Tribe Project is the University of Bath's program of community sport, and is implemented as part of the Department of Sports Development at the University of Bath. The University of Bath has a key objective of bringing sport into the community, and it is through the Tribe Project that this key objective is achieved. Launched in the summer of 2003, the Project encompasses a series of sports courses and programs that allow children and adolescents aged between 7-14 years to have access to sport, receive a positive experience of sport and maintain an active lifestyle. The Tribe Project is delivered within local primary and secondary schools, sports clubs and on the University of Bath campus. The aim of the Tribe Project is to encourage participation in sport and physical activity, using the University's student coaches as positive role models. The Tribe Project has successfully established partnerships with multiple organisations and local schools within Bath and North East Somerset (BANES), and has an estimated 45,000 interactions with individuals from the local community per year.

#### 1.3.2 Primary Components of the Tribe Project

The central ethos to the Tribe Project is to function as part of the University of Bath's participation pathway, which allows children to follow sport from a young age into an active future. The participation pathway starts with mother and baby classes which progresses into Tots activities (4-7yrs), followed by the Tribe Project (7-14yrs), then onto Futures (7-16yrs), Academics (16-18yrs) and finally Adult Recreation (18+ yrs). The pathways are intended to allow routes into performance-specific pathways and participation-only pathways interchangeably. The Tribe Project has engaged local coaches, organisers and officials to work within the program and help to develop the direction of the pathway. This participation pathway provides individuals with access to sporting opportunities throughout their life, with the long-term goal of contributing to a healthier lifestyle. As part of the Tribe Project's mission statement, the three core aims are:

- 1. To create participation pathways from 4 years to 18 years in all focus sports
- 2. To engage with the community using students as positive role models
- 3. To provide a fun and safe environment for young people to enjoy sport

The sports offered within the Tribe Project include athletics, badminton, hockey, judo, multi-skills, netball, swimming, tennis and trampolining. The programs run on a termtime basis, with a 6-week break over the summer during the last two weeks of July and the whole of August. This structure is designed to coordinate with the school summer holidays.

During the school half-term breaks and the six week break during summer the Tribe Project runs 'Holiday Sports Camps', which are aimed at children and adolescents aged 2-16 years old. Participants can attend for full days, half days or enrol for an entire week. Activities are run in half-day blocks, and the children can participate in 'tots' sessions', 'mix and match' and 'sports specific sessions'. The tots' sessions are available for 2-6 year olds only, and include football and trampolining. Mix and match sessions are aimed at 7-14 year olds only, and include individual sports or a combination of sports over a morning only, afternoon only or a full day. The sports-specific sessions are available only for children and adolescents aged between 6-16 years old, and are available across a range of activities that include: athletics, badminton, beach volleyball, netball, hockey, swimming, tennis and trampolining. The prices of the holiday camps range from £2.75 for an individual tot's session, to £25 for a

full day. There are discounts available for the University of Bath staff across all of the holiday camps.

#### 1.3.2.1 Stakeholders and Funding

The Tribe Project does not receive direct funding as a program of community sport, which as a result means it is predominantly supported through revenue generated from the weekly Tribe sports sessions and holiday camps. The Tribe Project does receive, however, partial financial support through National Lottery funding allocated by Sport England. Sport England is specifically designed to fund projects that facilitate individuals' involvement in sport and physical activity. Their aim is to improve population health through the development of clubs, coaches and local volunteers. This includes refurbishing existing sports facilities, developing programmes and initiatives that use sport and activity to promote community cohesion, and improving knowledge of healthy behaviours. The National Lottery funding was awarded to the University of Bath specifically for the development of the Sports Training Village (STV), and was designated for the purposes of generating partnerships within the community and promoting sport within BANES. Although the Tribe Project is not a direct recipient of this funding source, it contributes indirectly to ensuring community involvement in sport is achieved, thereby securing the likelihood of future sponsorship.

#### 1.3.3 Organisational Structure

The Tribe Project is primarily managed by three main Tribe Project managers. These managers are responsible for the overall organisation, administration and delivery of the program. Their core responsibilities and duties within the Tribe Project are outlined below.

#### 1.3.3.1 Tribe Project Manager Number 1

The Sports Development Manager established the Tribe Project in 2003, and they are responsible for overseeing the entire Project. This encompasses overseeing the Sports Development Officer, the Sports Development Administrator, the Swim School Coordinator, the Netball Development Officer and the head Judo coach, all of whom work as part of the Tribe Project. The main roles of the Sports Development Manager are budget responsibility and the maintenance and development of sporting pathways

in participation and gifted and talented strands. Further responsibilities include: expansion of the Tribe Project, quality assurance in terms of the program delivery and coaching quality and managing the development of the sessions in keeping with new ideas and new methods. It is through this role that potential streams of new partnerships and new funding sources can be generated. The Sports Development Manager is responsible for coordinating the entire implementation and expansion of the Tribe Project. Specifically this role includes;

- Supporting the gifted and talented partnerships for the Sports Colleges of Bath, Wiltshire, Dorset and Bristol, creating multi-skill clubs and academies as well as the provision of tailored visits to the University of Bath for groups from across the South of England.
- Responsibility for ongoing relationships and new projects with the British Olympic Foundation, Youth Sports Trust, Sport England and Sports coach UK. Responsibility for continuous engagement with School Sport Partnerships, Local authorities, County Sports Partnerships, Delivery forums and agencies, National Governing Bodies and National Organisations.
- The development of new or the partnership with existing clubs to create a pathway from Tribe, allowing children to follow a particular sport on a regular and competitive basis.
- Responsibility for the development of the partnership with City Academy Bristol, supporting the scholarship athletes and elite teams as well as students studying sport at the Academy.

#### 1.3.3.2 Tribe Project Manager Number 2

The Sports Development Officer has been working for Team Bath for over 9 years and within the Tribe Project for 6 years. The Sports Development Officer has core responsibility for the delivery of the Tribe Project through coordinating the Tribe coaches and monitoring the delivery of the Tribe sports sessions. Their main responsibilities within this role include: organising the sports activities on campus, maintaining the community sports links, organising the local school visits, school events and festivals and developing the ongoing relationships with local and national sports organisations. Specific responsibilities include:

 Developing and creating as many opportunities as possible for children at every level to access sport.

- Maintaining a close working relationship with the local School Sports Partnership Managers, with emphasis on the Wellsway School Partnership.
- Assisting local schools in the provision of coaching for curriculum and afterschool sport. Liaising with external partners including School Sport Coordinators, Local Authorities, Sports Development Officers and Active Sports Managers.
- Overseeing the provision of tailored visits to the University of Bath for school groups and teams from across England.
- Organising and delivering annual events including, the Youth Sport Trust Toplink Conference, Olympic Day Run, Run for the Children, K3 Games, Key Stage 1 Festival for primary schools and many others.

#### 1.3.3.3 Tribe Project Manager Number 3

The Sports Development Administrator is the first point of contact for the Tribe Project. This includes taking bookings and dealing with enquiries for the Tribe Project, holiday camps and birthday parties during term time and in the school holidays. The Sports Development Administrator is also the first point of contact for the local schools within BANES that wish to visit the STV as well as the Tribe parents who may wish for further information.

#### 1.3.4 History and Evolution of the Tribe Project

There have been several major developments since the Tribe Project was first introduced, and multiple partnerships with the local education authority, county sports partnership and the school sports partnership have consequently been created. The Tribe Project now delivers sports coaching sessions to approximately 30 of the Primary and Secondary schools within BANES, and has established links with approximately 80 of the Primary and Secondary schools in the area. The sports delivered within these local schools are either linked to junior sports clubs running at the University of Bath, or the most appropriate sports club in the area. The intention is to use these Tribe Project has dramatically expanded since its launch with Tribe football in 2003, now offering a range of 10 different sports. Since October 2009 the Project has introduced Team Bath Tribe Speed Schools, the Swim School now provides rookies and water polo training and beach volleyball has been introduced as part of the Tribe Project Holiday Camps. The Tribe Project is now also linked with local sports clubs, specifically Bath Netball and

Bath Arsenal football club, and individual sports have since developed their own junior clubs in Judo and Hockey. Through these partnerships, it is intended that children and adolescents living within BANES will be encouraged to continue participation in sport and join local sports clubs linked to the Tribe Project.

#### 1.4 Context and Rationale for this Research

Physical activity is a complex human behaviour, and early childhood and adolescence are key life stages for forming physical activity behaviours and shaping long-term physical activity patterns. Although physical activity is our evolutionary heritage, and children are highly motivated towards physical activity innately, we live in a social world that counteracts physical activity (Boreham and Riddoch, 2001). Indeed, there are now fewer opportunities for physical activity participation during childhood and adolescence due to a reduction in the availability of physical activity within schools and the environment as a whole (Barnett et al., 2006, Boreham and Riddoch, 2001, Lee et al., 2007). Despite steadily increasing physical activity levels during childhood, there is a steep decline during adolescence (Janz et al., 2000, Kimm et al., 2000, Sallis, 2000, Salmon and Timperio, 2007). Children and adolescents are now surrounded by an obesogenic environment (Swinburn, 2009), and although the barriers for active and inactive children may be the same, their physical activity behaviours differ. Differences between highly and less active children and adolescents extend further than the volume of activity they engage in. It furthermore includes the type of activity chosen and context within which it is performed. Greater insight into the different contexts in which children and adolescents engage in physical activity may help inform the development of interventions targeted specifically to increase physical activity amongst this population.

Many physical activity interventions have previously been implemented in an attempt to increase the physical activity levels of children and adolescents. Such interventions have shown varying degrees of success, and the reasons for these inconsistent results remain unclear. Physical activity interventions remain largely targeted at youth, however, a sustained increase in physical activity levels are consistently shown as a rarity in the daily routine of modern children (The NHS Information Centre, 2008a). The development of physical activity interventions that lead to a permanent shift in the physical activity behaviours of children and adolescents is now a priority within health promotion and physical activity research. Focus amongst researchers has since been placed on examining external validity factors that may mediate the intervention effects. Consequently, emphasis within program evaluation research has centred upon the

intervention design, delivery and sustainability, in addition to the individual-level impact. Conducting a thorough evaluation of a physical activity program in this context enables the program's effectiveness, mechanisms responsible for change and how a particular set of circumstances may give rise to certain outcomes to be evaluated.

Detailed scientific assessments of the impact of physical activity interventions need to be conducted in order that the association between physical activity behaviour change and intervention design can be further understood. Questions have been raised as to whether the omission of evaluating factors associated with the long-term effectiveness and external validity criteria of such interventions can truly reflect an intervention's effectiveness (Belza et al., 2007, Dzewaltowski et al., 2004b). The individual-level outcomes following the implementation of an intervention are typically further removed from the original theory than the delivery of it is. It is this notion of 'causal sequence', rather than 'input-output' association, that may allow for more informed behaviour-change interventions (Michie et al., 2008). Recognising these differences is vital to draw valid and accurate conclusions regarding the program reliability and the theoretical mechanisms surrounding any behaviour change (Michie et al., 2008). This is potentially critical to an intervention's overall effectiveness, as more precise, scientific and standardised physical activity programs may be produced as a result (Neumann et al., 2002).

The aim of the current research is firstly to explore the context within which physical activity occurs during adolescence, and secondly to examine the effectiveness of a sports-based program designed to promote physical activity. By taking a more holistic approach to scientific understanding throughout this thesis, a broader understanding of physical activity promotion among children and adolescents can potentially be achieved. This will result in research findings, which can be generalised to wider populations.

#### 1.5 Overview of the Proposed Research

The core focus of this thesis is an in-depth case study evaluation of a community-based physical activity program to assess its impact at multiple levels. To assess contextual differences in the physical activity behaviours of active and inactive adolescents, a preliminary epidemiological study was conducted. Differences in the type, timing and context of physical activity participation among active and inactive adolescents were

assessed. The results from this study were used directly to inform the type of physical activity program chosen as the basis for the main case study evaluation.

An overview of the epidemiological study of active and inactive adolescents and the case study evaluation of the Tribe Project is presented below.

# 1.5.1 Epidemiological Study of Adolescents of Differing Physical Activity Levels

The patterns of physical activity observed among children and adolescents are embedded in the social and cultural fabric of their society (Davison and Birch, 2001). Greater insight into the context of physical activity participation may lead to more informed policy-level decisions regarding the promotion of physical activity during youth, as well as more targeted interventions to increase participation among this population. The aim of this study was to assess differences in the type, timing and context of physical activity among adolescents of differing activity levels. The complete copy of this published paper, '*The Association between the Type, Context and Levels of Physical Activity amongst Adolescents*', is presented in Chapter 3.

The primary research question that was addressed in this study was:

RQ: 'What are the differences in the type and context of physical activity in adolescents of differing objectively measured activity levels?'

A secondary analysis was conducted using data from the Avon Longitudinal Study of Parents and Children (ALSPAC) (Golding et al., 2001), which is a birth cohort study located in the southwest of England. Questionnaire and accelerometer data from 14-year-old adolescents were used to assess the level and context of physical activity. The mean (SD) age of participants was 13.8 (+0.1) years. The accelerometer data identified the less, moderately and highly active adolescents based on the average minutes of MVPA recorded per valid day of activity measurement. Using questionnaire data, the less, moderately and highly active adolescents were compared, based on the types of activity they engaged in and time of day these activities occurred.

Based on the finding that the more active adolescents achieved their higher activity levels via outside and sports-related activities, the impact of a sports-based program promoting physical activity was assessed. The Tribe Project was chosen as the focus for this in-depth evaluation, as it is a sports-based community program aimed at promoting physical activity among children and adolescents.

#### 1.5.2 Case Study of the Tribe Project

The aim of this case study was to evaluate the individual and organisational-level impact of the Tribe Project, based on the five dimensions of the RE-AIM framework (Glasgow et al., 1999). The Tribe Project is an appropriate focus for this case study, as it is a program designed to provide sporting opportunities for children and adolescents. It is not centred upon an underlying theory of behaviour change, nor does it have the aim of producing a measurable change in physical activity levels of participants. The aim of the Tribe Project is, nonetheless, to provide a positive experience of sport for children and adolescents through access to a range of activities and sports facilities. The Tribe Project possesses certain unique features such as the wide range of sports it offers, the broad age range of children and adolescents that are able to attend and the various links with the community that it has generated.

The individual and organisational-level impact of the Tribe Project were measured according to the representativeness of program participants, the extent to which the program aims have been met, the representativeness of settings adopting the program, the successful delivery of the program and the long-term outcomes of the Project. Data were collected as part of a mixed methods case study, and the evaluation was based on the RE-AIM framework of program evaluation (Glasgow et al., 1999). Quantitative and qualitative data were collected as part of this case study, and the aims and objectives are described below.

The qualitative data collection phase was designed to assess the Tribe managers, coaches and parents perspectives and experiences of the Tribe Project as a program to promote physical activity during youth. Using the RE-AIM framework, the five dimensions aimed at the individual and organisational-level were assessed through interviews with participants. The key aim of this data collection was to explore the perspectives of the Tribe managers, coaches and parents regarding the *Reach*, *Effectiveness, Adoption, Implementation* and *Maintenance* of the Tribe Project.

The quantitative data collection phase was designed to assess the determinants of children's and adolescents' participation in the Tribe Project, as well as the importance of factors whilst they attended. Using written questionnaires, the Tribe Project participants rated a series of items associated with their participation and maintenance

within the Project, which were based on the socioecological model of health behaviour (Sallis and Owen, 1997). The socioecological model combines both the social and physical factors which affect an individual, and are framed upon intrapersonal, interpersonal, social and environmental/organisational factors (Sallis and Owen, 1997). Behaviour is understood as being a product of social and physical factors having a combined effect on an individual and their physical activity behaviour (Sallis and Owen, 1997). Social factors include the role of peers and family in terms of support, influence and attitudes. The physical-environmental factors include the proximity to facilities, the facilities themselves and access to sports programs. The specific influences are categorised as intrapersonal (goals, progression), interpersonal (beliefs, morals), social (family, peers) and organisational or environmental factors (structure, facilities). A combination of these factors is understood as a multi-dimensional approach to behaviour change, and is summarised within this ecological model.

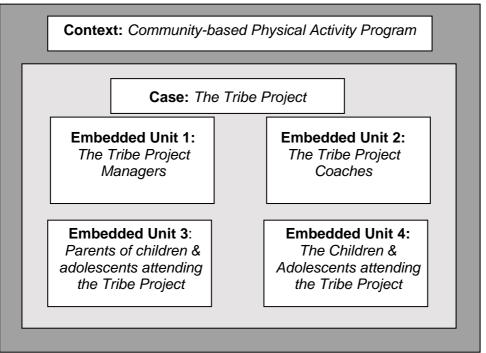
Two key research questions were addressed via the questionnaire:

RQ1: 'Which factors determine the children's and adolescents' participation in the Tribe Project?'

RQ2: 'Which factors are most important to the children and adolescents whilst attending the Tribe Project?'

This case study adopts a single case (embedded) design, with multiple units of analysis. The embedded units of analysis in this research consist of the Tribe managers that run and organise the Tribe Project, the coaches who implement the Tribe sports sessions and the parents and children/adolescents who attend. For the purposes of this thesis these individuals are referred to as either 'Tribe managers', 'Tribe coaches', 'Tribe parents' or 'Tribe children/adolescents'. This case study was descriptive in nature, and based on Stake's (1995) propositions; can be considered instrumental. The selection of the case was based on the relevance to current issues regarding successful physical activity promotion among children and adolescents. A single case study was an appropriate method in this research as The Tribe Project is a notable example of a community-based physical activity program. Generalisations from this case to the wider population are therefore expected. In this design, the individuals who are experiencing the phenomenon constitute the units of analysis, and their accounts were an integral part of this research. Figure 1 illustrates the case study design used within this research.





Adapted from Yin (2003)

Five sources of mixed methods data were collected as part of this case study, which included archival records, documentation, semi-structured interviews with the Tribe managers, coaches and parents, written questionnaires from the children and adolescents attending the Project and field notes from direct observations over the course of the case study.

#### 1.5.2.1 Case Study Analysis Framework

The evaluation of the Tribe Project centred upon the RE-AIM framework (Glasgow et al., 1999), which is a model used to frame strategies to design, implement and evaluate practice-based research interventions (Glasgow et al., 1999). RE-AIM is a framework designed to facilitate the translation of evidence into practice, and measure the potential public health impact (Glasgow et al., 2006). The framework places equal emphasis upon internal and external validity issues, provides specific and standard ways of measuring key factors and emphasises participant and setting-level representativeness (Planas, 2008). Focus is placed upon the long-term effectiveness among more diverse samples in real-world settings, as opposed to the short-term efficacy in controlled settings (Bopp et al., 2007). The model is centered upon the following five dimensions (Belza et al., 2007):

**1. Reach:** The absolute number, proportion and representativeness of individuals who are willing to participate in a given initiative

**2. Effectiveness:** The impact of an intervention on important outcomes, including potential negative effects, quality of life and economic outcomes

**3. Adoption:** The absolute number, proportion and representativeness of settings and intervention agents who are willing to initiate a program

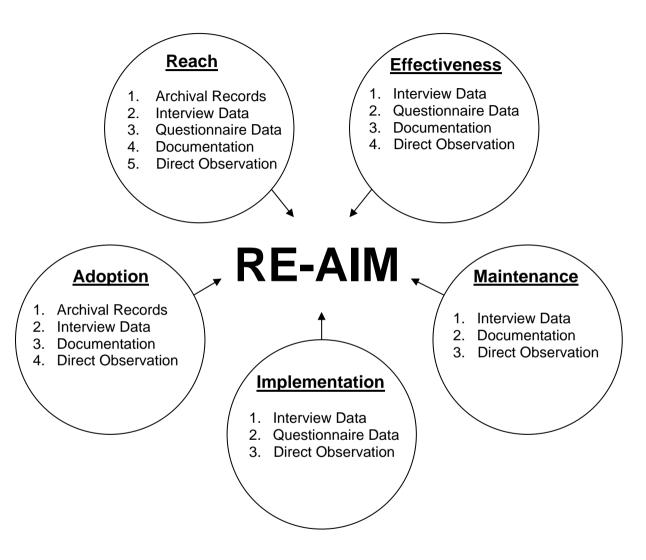
**4. Implementation:** This includes consistency of delivery as intended, and the time and cost of the intervention

**5. Maintenance:** The extent to which a program or policy becomes institutionalized or part of the routine organizational practices and policies. At the individual-level, maintenance has been defined as the long-term effects of a program on outcomes after 6 or more months after the most recent intervention contact

Evidence collected from the five sources of data was integrated into the RE-AIM framework (Figure 2) to assess the individual and organisational-level impact of the Tribe Project.

Chapter 2 presents a detailed review of the current literature surrounding the nature of this research. The evidence relates specifically to the current trends in physical activity among children and adolescents, the correlates of physical activity participation and the potential strategies to intervene effectively.

Figure 2: Application of the Five Sources of Case Study Data into the RE-AIM Framework



### **CHAPTER 2: LITERATURE REVIEW**

#### 2.1 Introduction

In this chapter, the current literature surrounding physical activity during childhood and adolescence is presented. Firstly, the current trends in physical activity among children and adolescents is outlined, described in the context of the associated health implications of physical inactivity during childhood and in later adult life. The subjective and objective methods used to measure the physical activity levels of children and adolescents are presented next, and are discussed with reference to their respective strengths and weaknesses. The correlates of physical activity participation are then described in light of social and physical-environmental factors and the potential barriers to physical activity participation during youth. The ecological model of health behaviour is then discussed, specifically in light of the socioecological model of health, a key part of this case study. The final part of this chapter describes previous physical activity interventions aimed at promoting physical activity among children and adolescents, specifically in the context of the school and community-based setting.

### 2.2 Physical Activity, Inactivity and Health

There has been a widespread decline in physical activity participation among children and adolescents (Kimm et al., 2000; Sallis, 2000; Telama, 2009). Concern has arisen that not only are the rates of physical activity among children and adolescents below recommended standards, but childhood inactivity has been shown to frequently track over time (Raustorp, Svenson, & Perlinger, 2007; Telama et al., 2005). Although physical activity levels steadily increase during childhood (5-11 yrs), longitudinal studies of physical activity levels and health among children have shown that there is a steep decline during adolescence (12 yrs and upwards) (Janz et al., 2000, Kimm et al., 2000, Sallis, 2000, Salmon and Timperio, 2007). The World Health Organization estimates that 1.9 million deaths worldwide are attributable to physical inactivity among adults (World Health Organization, 2004). Therefore, the aim within physical activity and health promotion research centres upon two key objectives: firstly to successfully establish a permanent increase in the physical activity levels of children, and secondly to maintain these increased activity levels throughout adolescence into adult life. The promotion of physical activity among individuals and populations is an essential public health strategy of the 21st century (World Health Organization, 2004), and the patterns of physical activity and sources of motivational pursuit during childhood have become a crucial period in which to implement public health interventions.

It is known that a physically active lifestyle has many established health benefits. Higher physical activity levels have been positively associated with improved bone health (Brooke-Wavell and Stensel, 2008), a reduced risk of obesity (Gillis et al., 2006, Trost et al., 2003) and a reduced likelihood of developing cardiovascular disease risk factors (Andersen et al., 2008, Fang et al., 2003, Kosti and Panagiotakos, 2006). A physically active lifestyle has also been associated with a reduced risk of developing type 2 diabetes mellitus (Hale, 2004, Hu et al., 2003, Kriska et al., 2003), colon cancer (Gotay, 2005) and reduced blood pressure (Leary et al., 2008). Furthermore, physical activity is frequently shown within the literature to be positively correlated to increased psychological health (Maltby and Day, 2001) and improved self-esteem (Strauss et al., 2001). Physical fitness has also been shown to reduce total and abdominal adiposity, to improve mental and bone health, to increase academic performance in youth and to protect against all-cause mortality (Blair et al., 1989, Ortega et al., 2008).

Previous research has shown that, in order to receive the positive health benefits from physical activity, there are certain thresholds relating to the intensity, frequency and duration of physical activity that must be reached and maintained (Mattocks et al., 2007, Pate, 1993, Puyau et al., 2002). The Chief Medical Officer (CMO) for England recommends that children and adolescents achieve a minimum of 60 minutes per day of at least moderate intensity physical activity (The NHS Information Centre, 2010). Moderate to vigorous intensity activities include: brisk walking, jogging, sporting activities or strenuous housework. In this report, the CMO advises children to engage in activities that improve bone health, muscle strength and flexibility at least twice a week (The NHS Information Centre, 2010). The 60 minutes of physical activity can be completed during a single bout of activity, or across a series of 10 minute bursts throughout the day on at least five days of the week (Department of Health, 2004). Irrespective of these guidelines, the Health Survey for England (2008) reported that boys were more likely than girls to meet the government recommendations for physical activity, although the number of children achieving the minimum requirements was still low. Only 33% of boys and 21% of girls achieved at least 60 minutes of MVPA on each of the seven days of accelerometer recording, and only 1 in 5 children achieved at least 30 minutes of MVPA (The NHS Information Centre, 2008a).

Boys are consistently shown to be more active than girls (Armstrong and Welsman, 2006, Mattocks et al., 2008a, Riddoch et al., 2007), and participate in greater amounts of MVPA (Armstrong and Welsman, 2006, Jihong et al., 2010, Nader et al., 2008, Trost et al., 2002). The Health Survey for England (2008) revealed that girls aged 4-15 years old spent longer in sedentary pursuits than boys aged 4-15 years old, and boys on average spent significantly more time in moderate intensity activity. The survey also revealed that, overall, boys spent on average 85 minutes per day in MVPA, whereas girls only spent 61 minutes in MVPA (The NHS Information Centre, 2008a). The proportion of children achieving the government recommendations also decreases with age (The NHS Information Centre, 2008a). Among boys aged 4-10 years, 51% achieved the advised 60 minutes of MVPA per day. However, when aged 11-15 years old, the proportion of boys achieving the physical activity recommendations had decreased to only 7% (The NHS Information Centre, 2008a). This pattern remained consistent across girls.

Between ages 4-10 years old, 34% of girls met the minimum of 60 minutes of MVPA per day, whereas none of these girls aged 11-15 achieved these recommended levels (The NHS Information Centre, 2008a). A study assessing the physical activity levels of 9-15 year old European children revealed that, although at 9 years old 97% of European children achieved the physical activity recommendations, by age 15 these figures had declined to 82% and 62% for boys and girls respectively (Riddoch et al., 2004). The duration of time spent in MVPA also decreased with age. At ages 4-7, boys spent approximately 124 minutes in MVPA over 7 days of accelerometry recording, and girls approximately 101 minutes in MVPA. This dramatically decreased by ages 12-15, whereas boys were shown to spend approximately 52 minutes in MVPA, girls spent approximately 28 minutes in MVPA (The NHS Information Centre, 2008a). As a result, there is much a greater interest in improving the health-related behaviours of children and adolescents. Consequently, the development of interventions to promote physical activity during youth has become critical.

#### 2.2.1 Summary

It is now widely believed that physical activity throughout childhood increases the likelihood of physical activity during adulthood (Fuentes et al., 2003), lessening the risk of chronic illnesses. The reduction in children's physical activity levels is argued to be a result of social and physical-environmental change, rather than a decreased interest. Population-level strategies to alter the physical activity behaviours of individuals and

communities have thus become paramount. To effectively promote an active lifestyle in the long-term, and to reach a large number of children in a relatively cost-effective manner, physical activity behaviours need to be considered within the cultural and social context in which they occur in order to be understood (Boreham and Riddoch, 2001, Dobbins et al., 2009). Given that childhood and adolescence is a crucial period for the establishment of patterns of physical activity, a broader range of individual, social and physical-environmental influences that affect physical activity participation have been identified (Casey et al., 2009a). To successfully change activity behaviours, valid methods of estimating physical activity among children and adolescents are critical to understanding the dose-response relationship between physical activity, health and associated risk factors. Achieving this goal is largely dependent upon the sensitivity of the measurement tools in question, and the successful evaluation of their relative effectiveness. Precise measurement of child and adolescent physical activity behaviours has therefore become vital, and extensive research into the most appropriate way to quantify physical activity behaviour has consequently been conducted.

#### 2.3 Measuring Physical Activity in Children and Adolescents

To gain a better understanding of the physical activity behaviours of children and adolescents, it is essential to record their physical movements in a precise and quantifiable manner. The aim is to achieve a balance between the precise measurements of physical activity, along with a translation of these measurements into meaningful behavioural patterns. Physical activity has been defined as:

"...a complex set of behaviours that encompass any bodily movement produced by skeletal muscles that result in energy expenditure. Physical activity in daily life can be categorized into occupational, sports, conditioning, household, or other activities." (Caspersen et al., 1985)

In their paper on the definitions and distinctions of physical activity, exercise and fitness, Caspersen's (1985) definition of physical activity emphasises that a number of different types of activities and behaviours exist. Depending on the specific physical activity in question, its context, purpose, determinants of uptake, health impact and potential modification will vary. Accurate assessment of physical activity is dependant, therefore, on the context in which the behaviour occurs, the measurement tool in question and the population within which it is being measured.

There is an ongoing debate as to the most effective way to measure physical activity in children and adolescents, which can facilitate a better understanding of the dose-response relationship between physical activity and health benefits. Objective measures of physical activity include direct observation, accelerometry, pedometry and heart rate monitoring. Subjective measures of physical activity include questionnaires, proxy reports, interviews and physical activity diaries. Depending on the outcome measure of interest, subjective and objective measures provide a unique contribution to the measurement of physical activity among children and adolescents. Although appropriate at quantifying the level and intensity of physical activity, objective measures fail to convey the physical and social context within which the behaviour occurs. Subjective measures of physical activity are more appropriate at capturing the broader social influences on physical activity. Such measures allow us to gain greater insight into the context, timing and type of activity children and adolescents engage in.

#### 2.3.1 Subjective Measures of Physical Activity

#### 2.3.1.1 Self- Report Measures

Self-report measures are the most commonly used techniques to measure physical activity among children and adolescents, as they are the most feasible method of measuring physical activity at a population level. They also provide a simple, practical means to measure habitual physical activity amongst this population (Florindo et al., 2006, Koo and Rohan, 1999). Subjective measures have the added advantage that information on the type, frequency and duration of physical activities can also be recorded, and attributed to specific periods of time. Questionnaire-based research designs are frequently used for large-scale epidemiological studies. They are affordable, quick and easy to administer, unobtrusive and versatile, able to obtain a range of physical activity-related information, and have general acceptability among participants (Kohl et al., 2000; Leenders, Sherman, Nagaraja, & Kien, 2001; Oliver, Schofield, & Kolt, 2007).

Nevertheless, major disadvantages of self-report instruments are, limitations associated with the accurate recall of information, and individual variations in the interpretation of physical activity (Adamo et al., 2009). Although useful for gaining insight into the physical activity levels of larger populations, self-report measures risk over or underestimating activity-related energy expenditure (AEE) and volumes of inactivity, due to their inherent subjective bias (Adamo et al., 2009). Child and adolescent physical activity behaviours are typically unplanned and unstructured, categorised as 'free-play'. A substantial proportion of regular physical activity during childhood is as a result of this free-play behaviour (Kohl et al., 2000). As this type of leisure time physical activity represents an important source of activity for children, it is frequently measured using questionnaires, activity diaries or interviews. Participants are required to report their activity behaviours at specific time points of the day, describing the duration, intensity or type of activity engaged in. Due to the sporadic nature of children's habitual physical activity, and the basis of self-report being primarily on the honesty and accuracy of the child, recall of the intensity, frequency and duration of physical activity can be problematic among children (Oliver et al., 2007).

The reliability of self-report measures has also been shown to differ significantly by age. Higher correlations of test-retest reliability are frequently observed among older children and adolescents compared to younger children (Kohl et al., 2000). Older children typically report fewer recall errors than younger children (Treuth et al., 2005), as a consequence making categorising young children's activity behaviours into specific time blocks more difficult. The lower cognitive functioning of younger children reduces their ability to accurately recall intensity, frequency and the duration of activities in particular (Sallis et al., 1990). Unlike adults, children are less time-conscious, and tend to engage in physical activities of more varied intensities, rather than at a consistent level (Welk et al., 2000a). The time period in which the test-retest reliability of survey measures are conducted also invites further weaknesses (Adamo et al., 2009). Studies which assessed the test-retest reliability of self-report questionnaires have mostly shown modest to high correlations when implemented over relatively short periods of time, as opposed to longer durations (Kohl et al., 2000).

In an attempt to overcome these measurement issues, data is also collected via proxy reports from parents, teachers or carers. Although these methods remove recall responsibility from the child themselves, more variable findings have been shown using parental reports of their child's physical activity (Kohl et al., 2000). Lifestyle interventions which have used parental proxy report as a means to assess physical activity often report that parents overestimate their own, and their child's, physical activity (Reilly et al., 2008). Objective measures of physical activity on the same children suggested that these differences may be spurious, as results typically favoured the intervention group as a result (Reilly, 2006, Reilly et al., 2008). Self-report measures are in danger, therefore, of quantifying an individuals' perceived physical activity as opposed to their actual physical activity.

Self-report instruments have been the most frequently validated measures of physical activity among children and adolescents (Kohl et al., 2000). Nevertheless, establishing undisputed validity remains a challenge, as there is no precise criterion among young children (Adamo et al., 2009). Objective measures of physical activity are often used to validate self-report instruments in an attempt to increase the precision and accuracy of the reported observations, which are crucial to ensure adequate generalisability of study findings. Conclusions about the measurement qualities of specific self-report instruments are inconclusive, however, as their reliability is affected by time, maturation, characteristics of the population measured as well as changes in the behaviour of study participants (Kohl et al., 2000). Objective measures of physical activity do not rely on the accurate and honest memory recall of the participant, something which can never be irrefutably established within subjective assessments (Booth et al., 2002a). Although useful in capturing the type, context and patterns of physical activity, issues with reliability and validity makes self-report measures limited in their application among pediatric populations.

#### 2.3.2 Objective Measures of Physical Activity

Objective measurement techniques are believed to offer more robust estimates of physical activity by avoiding the measurement issues associated with accurate recall and response bias of participants (Adamo et al., 2009). Objective measures include direct observation, accelerometers, pedometers and heart rate monitoring.

#### 2.3.2.1 Direct Observation

Direct observation involves witnessing behaviour and recording the detail of the activity in field notes, a diary or handheld computer device. Physical activity behaviour can therefore be recorded in a combined subjective and objective way. Direct observations can be obtained in the home and school-setting, and whilst impractical for large population studies, it is nonetheless a relatively unobtrusive method of enquiry for smaller studies of physical activity (Oliver et al., 2007). The main strengths of this technique are that contextual information relating to the general environment, the specific setting and any upper body movement can be obtained. Changes between habitual and laboratory settings can also be recorded, along with short-term and sudden changes in physical activity (Sirard and Pate, 2001). Direct observation is particularly useful for studies involving younger children, who may not have developed the cognitive abilities to accurately recall detailed information about their physical activity (Oliver et al., 2007). This method removes the dependency on proxy reports from parents or teachers, which have known limitations (Reilly et al., 2008). Objective techniques such as accelerometry, pedometry and heart rate monitoring fail to provide such detailed information.

Although direct observation is a relatively unobtrusive method, it is still inherently subjective, and may therefore be impractical for quantifying daily physical activity. Despite the high inter-observer reliability of direct observations tools, the test-retest reliability is much weaker (Kohl et al., 2000). The short, intermittent bursts of activity that are characteristic of children's physical activity makes high test-retest reliability unlikely, as children's behavioural patterns often differ on a day-to-day basis (Kohl et al., 2000, Oliver et al., 2007). The extent to which children alter their behaviour due to the research process remains unknown. Furthermore the variations in the reliability of direct observation techniques emphasises the need for stringent objective validation (Oliver et al., 2007). The process of observer training and data collection is also relatively time consuming, which can generate high costs (Oliver et al., 2007). For large

studies, in particular, those dispersed over a broad geographical distance, or data collected over long periods of time, direct observation is often inappropriate. Despite stringent coding methods, restrictions with coding protocols that are framed in periods of a few seconds have meant that continuous recordings of activity are not possible (Oliver et al., 2007). Consequently, the intermittent bouts of activity characteristic of this population may be inadequately assessed.

#### 2.3.2.2 Accelerometry

Accelerometers are sophisticated electronic devices that measure accelerations produced by body movement. Such instruments use piezoelectric transducers and microprocessors that convert recorded accelerations to a quantifiable digital signal, referred to as 'counts' (Trost, 2001). Accelerometry is a widely-used technique, and has the potential to overcome current methodological and accuracy issues associated with subjective self-report measures (Plasqui and Westerterp, 2007). Acceleration can be recorded in one (uniaxial), two (biaxial) or three (triaxial) dimensions (Bouten et al., 1994). It has the advantage that the intensity, frequency and duration of movement can be monitored for extended periods of time. Accelerometry is relatively unobtrusive to the lifestyle of the individual, something which is typically problematic amongst younger populations (Pate et al., 2006).

Accelerometers which have been widely used within the physical activity and child health literature include uniaxial accelerometers such as the Caltrac accelerometer (Muscle Dynamics Fitness Network, Inc., Torance, CA), and the current most commonly-used accelerometer, the Actigraph (Actigraph, Fort Walton Beach, FL) (also known as MTI, CSA, WAM). These monitoring devices measure accelerations in one direction on a vertical plane. Triaxial accelerometers include the Tritrac RT3 (Stayhealthy Inc., Monrovia, CA, USA) and the Tracmor (Philips Research, Eindhoven, The Netherlands), which measure accelerations in the anteroposterior, mediolateral and vertical direction. These accelerometers have all demonstrated adequate reliability and validity for use with children and adolescents: Caltrac (Bray et al., 1994, Sallis et al., 1990); Actigraph (Janz, 1994, Mattocks et al., 2007, Mattocks et al., 2007a, Eston et al., 1998); TriTrac-RT3 (Hendelman et al., 2000) and the Tracmor (Hoos et al., 2003). The MTI Actigraph is the most widely used motion device within physical activity research, and has generated the largest body of evidence supporting its reliable use (de Vries et al., 2006).

Despite positive evidence for the reliable use of accelerometry to predict AEE among children and adolescents, there nonetheless exists a variation in the accuracy of accelerometer outputs to estimate energy expenditure (EE) across a broad range of activities (Pate et al., 2006, Ekelund et al., 2001, Ekelund et al., 2003). Both uniaxial and triaxial accelerometers can over and underestimate EE during the physical movements of certain activities. Activities, which exert a small force-displacement ratio, such as running, can lead to an overestimation of EE. During physical movements which exert a large force-displacement ratio, such as climbing stairs, an underestimation of EE can occur (Puyau et al., 2002). This is of particular importance to studies that wish to assess children's habitual physical activity, where short bursts of high intensity activity are frequent (Bailey et al., 1995). Triaxial accelerometers have the added advantage that they can also measure complex movements of varying directions in unstructured, spontaneous instances (Plasqui et al., 2005). For this reason triaxial accelerometers provide better evaluations of children's free-play activities than uniaxial accelerometers (Trost, 2001).

Notwithstanding the debate surrounding the technical accuracy of monitoring devices, methodological issues relating to their application and use has meant that the precise measurement of children's activity behaviour remains contested. In general, uniaxial and triaxial monitoring devices provide similar estimations of EE among child and adolescent populations (Trost et al., 2005). However, given that it is based on the highly transient nature of children's physical activity, triaxial accelerometry may be the most effective method of recording it. Despite this, the size and practicality of triaxial accelerometers invites major criticism of its use in field-based studies of physical activity. The relative sizes of the TriTrac-R3D and the Tracmor make them significantly larger than uniaxial accelerometers, such as the Actigraph, which in field-based settings is likely to contribute to the differences in findings (Trost et al., 2002). Children and adolescents are more likely to comply with study requirements if the monitoring device is unobtrusive, discrete and does not prevent behaviours involved in their normal daily life (Trost, 2001). As a result this type of objective measure can be difficult to implement in large epidemiological studies (Adamo et al., 2009).

Although accelerometers provide a measure of activity counts, there is no indication of the pattern of activity in terms of whether the recorded movement was as a result of spontaneous physical activity, or due to organised physical activity such as sports participation (Dencker and Andersen, 2008). In addition there is substantial intraindividual variation in physical activity among children and adolescents (Mattocks et al., 2007), possibly due to inconsistent patterns of activity among this age group. To gain a true reflection of the level, duration and intensity of children's physical activity, assessments of habitual physical activity in a free-living setting would need to be conducted. A large proportion of studies are conducted in controlled laboratory settings for a number of practical reasons, although this reduces the opportunity for varied activity. Unlike children's natural physical activity patterns, laboratory-based assessments often monitor continuous steady bouts of activity that are uncharacteristic of young children. Physical activity assessments that are conducted in habitual free-living settings are more reflective of the 'real life' physical activity patterns of children and adolescents (Jackson et al., 2003, Kelly et al., 2007, Metcalf et al., 2002, Nilsson et al., 2002).

Despite some methodological limitations with the use of accelerometry, it remains a relatively robust way to measure the trends in physical activity among children and adolescents. Accelerometers have consistently demonstrated good reliability and validity in both free-living and laboratory settings (Ekelund et al., 2003) as well as among populations from diverse ethnic backgrounds in a range of geographical locations (Dencker and Andersen, 2008).

#### 2.3.2.3 Pedometry

Pedometers are an alternative form of motion sensor common in field research. They are simple electronic devices used to estimate mileage walked, or the number of steps taken, over a specific period of time. According to health standards, the recommended number of steps for children aged 6-12 yrs is 12,000 daily steps for girls and 15,000 for boys to maximise their chances of maintaining normal body weight and health (Tudor-Locke and Bassett, 2004). However, pedometers provide no information relating to the intensity, pattern, or type of activity being conducted (Pate et al., 2006). In comparison to accelerometers, pedometers are more cost-effective, valid and reliable devices (Tudor-Locke et al., 2004, Welk et al., 2000b). Pedometers are an objective, unobtrusive, re-useable and unbiased instrument with the technology to store and measure physical activity with little inconvenience to the individual (Freedson and Miller, 2000, Raustorp et al., 2007). During the past decade several commercial brands of pedometers have become available, namely the Yamaz DW/SW series (Tokyo, Japan), NL2000 (New-Lifestyles Inc., Lees Summit MO, USA), Freestyle Pacer (Camarillo, CA, USA), Eddie Bauer Compustep II (Redmond, WA, USA), and the Walk4Life LS2505 (Walk4Life Inc., Plainfield, IL).

Evidence has suggested that pedometry does have reasonable reliability for use with children having been calibrated against numerous criterion measures. The Yamax SW-200 pedometer in particular has shown moderate to strong correlations with direct observation, as has the Digiwalker DW-200 with heart rate monitoring and VO<sub>2</sub>. Validations conducted within laboratory settings (Eston et al., 1998, Louie et al., 1999), nonetheless, do limit the generalisability to children's habitual physical activity behaviours (Sirard and Pate, 2001). Future research needs to validate the use of pedometers in free-living, habitual settings to strengthen the generalisability of pedometry as a tool to measure physical activity among children and adolescents.

#### 2.3.2.4 Heart Rate Monitoring

Heart rate monitoring is another form of objective measurement, which is a physiological parameter that estimates EE. Heart rate monitors are worn around the chest, and they record information about heart rate responses to physical activity during a specified observation period. Heart rate monitoring is not a direct measure of physical activity; rather it provides an indication of the relative stress placed upon the cardiopulmonary system following physical activity (Armstrong, 1998). This method was the first widely-used objective measure of physical activity in children (Rowlands and Eston, 2007). Heart rate monitoring has the advantage that an individuals' heart rate displays a strong and relatively universal relationship with physical activity intensity across different types of activity, at least at moderate to high intensities (Strath et al., 2000). The subjectivity inherent in self-report measures is removed through using this type of measurement technique.

A major weakness associated with the use of heart rate monitoring is the assumption that, beyond certain physical activity intensities, a linear relationship exists between heart rate and oxygen consumption (Sirard and Pate, 2001). Consequently, additional factors that can influence the heart rate-VO2 balance are often unaccounted for (Brage et al., 2007, Strath et al., 2000). Confounding factors include age, body size, proportion of muscle mass, emotional stress, anxiety levels, caffeine, medication, cardio-respiratory fitness, hydration and the measurement environment. The impact of these confounding factors are more significant during low intensity activities (Riddoch and Boreham, 1995). Given the fact that heart rate responses are secondary to the initial physical movement, during instances where movements are displayed as short sharp bursts of differing intensities, estimations of EE may be less accurate than during

sustained bouts of activity (Brage et al., 2007). This method is therefore less suitable in measuring younger children's physical activity behaviours.

Overall heart rate monitoring has been considered a reliable and effective measurement device (Sirard and Pate, 2001), and studies that have assessed the test-retest reliability of the instrument have reported moderate to high correlations. The advantages of this technique are that it is unobtrusive, requires minimal participant and experimenter intervention and is cost effective. A weakness within studies that have assessed the reliability and validity of heart rate monitoring is that they have typically been conducted in laboratory settings. This inevitably limits the interpretability of such EE estimations within free-living populations (Kohl et al., 2000). The inherent interference of internal and external factors on an individual's heart rate does limit this type of measurement for estimating AEE.

In an attempt to combat the weaknesses associated with the measurement of physical activity among children and adolescents, a combined measure using both heart rate monitoring and accelerometry has become a popular method (Brage et al., 2004). The limitations associated with heart rate monitoring are mainly due to biological variance, whereas the limitations associated with accelerometry are mostly biomechanical (Brage et al., 2004). A combined analysis of accelerometer counts and heart rate may counteract some of the limitations associated with each respective measure (Dencker and Andersen, 2008). The most popular commercially available monitoring device, the Actiheart (Cambridge Neurotechnology, Papworth, UK), is a small heart rate recorder with an integrated omnidirectional accelerometer. Although the cost of the Actiheart prevents its widespread use in small scale studies, it is nonetheless an excellent way to measure EE among free-living populations (Corder et al., 2005). Issues of cost and time restrict the practicality of this method, although heart rate monitoring does have the potential to provide a valid criterion measure of habitual physical activity in free-living children and adolescents.

#### 2.3.3 Summary

An ongoing debate exists as to the overriding benefit of objective over subjective measures of physical activity among pediatric populations (Kohl et al., 2000). Consequently, a mixed methods approach to quantify physical activity is considered an ideal way to achieve this. The complicated physiological and behavioural structure of physical activity patterns means that measurement of the outcome parameters (EE and physical activity level) remains increasingly complex (Plasqui and Westerterp, 2007). Although objective measures of physical activity are considered reliable and valid methods to quantify this behaviour, there is no current measure of physical activity that can record all aspects of the behaviour unquestionably to an exacting standard (Oliver et al., 2007). To gain a true reflection of the level, duration and intensity of children's physical activity, assessments of habitual physical activity in a free-living setting need to be conducted. Unlike children's natural physical activity patterns, laboratory-based assessments often monitor continuous steady bouts of activity uncharacteristic of young children. Given the rising trends in physical inactivity and associated risk of chronic diseases among children and adolescents, agreement on the exact dose-response relationship between physical activity and positive health outcomes is vital. The development and use of valid and reliable measures of physical activity among pediatric populations is now critical. This will increase the effectiveness of public health strategies to promote physical activity, as well as help ascertain the volume, intensity and frequency of activity that is necessary to predict a long-term healthy lifestyle. Table 1 illustrates the key attributes of subjective and objective measures of physical activity among children and adolescents.

Method	Valid	Affordability	Objective	Ease of	Compliance	Ability to Measure	Non-	Feasible	Suitable	Suitable
				Administration		Patterns, Modes &	reactive	in large	for <10	for >10
						Dimensions of PA		Studies	yrs.	yrs.
Self-Report	~	~~~		~~~	~~~	~~	~~~	~~~		~~
Proxy Report	~	~~~		~~~	~	~~	~~~	~~~	~~~	~
Diary	~	~~~	—	~~	_	~~~	~	~		~
Direct	~~	~	~	~~	~~~	~~	~	~	~~~	~~
Observation										
Accelerometer	~~	~	~~~	~~	~~	~~	~~~	~~	~~~	~~~
Pedometer	~~	~~	~~~	~~	~~	—	~	~~	~~~	~~~
Heart Rate	~~	~~	~~~	~	<b>v</b>	~~	~	~	~~~	~~~
Monitor										
DLW	~~~	—	~~~	~	~		~~		~~~	~~~

### Table 1: Key Attributes for Current Methods to Measure Physical Activity in Children and Adolescents

— Poor or Inappropriate 🗸 Acceptable 🗸 🗸 Good 🗸 🗸 Excellent - Adapted from Trost (2007)

# 2.4 Correlates of Physical Activity Participation among Children and Adolescents

The rapid decline in physical activity levels during childhood and adolescence has prompted investigations into factors influencing physical activity uptake, as well as the individual and environmental characteristics, which affect this. An individual's predetermined biology and personal choice of health behaviours may significantly influence a predisposition for overweight and obesity (Feng et al., 2010). However, these factors alone fail to explain the dramatic increase in physical inactivity among children and adolescents. While the reasons for this increase are not fully understood, there is increasing research focussing on the influence of the social and physical environment as possible influences on physical activity. Factors that have been linked to child and adolescent physical activity include: social factors (parental and peer support); physical environmental factors (access to facilities and physical activity programs, time spent outdoors and opportunities to exercise); biological factors and individual demographics (age, gender, body composition and socioeconomic status) and psychological factors (goal orientation, motivation and self-efficacy) (Ferreira et al., 2007, Robertson-Wilson et al., 2008, van der Horst et al., 2007, Sallis et al., 2000).

Despite popular emphasis on understanding and modifying individual-level characteristics of physical activity, more recent reviews have explored associations between the social and physical-environmental constructs with childhood inactivity (Beets, Cardinal, & Alderman, 2010; Dunton, Kaplan, Wolch, Jerrett, & Reynolds, 2009). Emphasis has now been placed on the role of the individual, sociocultural and physical environment in the uptake, promotion and restriction of physical activity participation. Environmental influences exist at a multitude of levels, although they are generally categorised at two distinct levels (micro and macro level) and consist of physical, socio-cultural, economic and policy influences (Ferreira et al., 2007). Socialenvironmental influences include parental attitudes to physical activity, parental physical activity levels and physical activity support/modeling from parents, teachers, siblings or peers (Spence and Lee, 2003). Physical-environmental influences include the availability and accessibility to physical activity programs, the provision of activity equipment and facilities and proximity to recreational resources (de Vet et al., 2010; Ferreira et al., 2007). Factors at the policy level include the existing physical activity organisations in the community, physical activity-related policies and the type of school/nursery the child attends (Ferreira et al., 2007). Finally, the economic

environment refers to parental socioeconomic status (SES), parental education level or parental income.

In Bronfenbrenner's Ecological Systems Theory (1989), multiple layers within the environment can be separated based on their proposed impact on an individual. Environmental influences closest to the individual were classified as functioning within the 'microsystem', and factors providing a connection between the environmental structures within the microsystem were classified as within the 'mesosystem'. Factors influencing the individual from within the outermost layer of the environment were classified within the 'macrosystem' (Bronfenbrenner, 1979, Bronfenbrenner, 1992, Berk, 2000). Microsystems are usually geographically distinct, such as the home, workplace and school. The mesosystem refers to factors that exist at the neighbourhood level. The macrosystem has a more unspecified infrastructure, and constitutes the larger sociocultural context such as transport systems, social class structure, cultural values and the community in which the individual lives (Spence and Lee, 2003, Berk, 2000). It is believed that more than one micro and macrosystem play a role in understanding physical activity (Spence and Lee, 2003), and there is always some degree of impact at the individual level. Currently, less is known about the direct role that environmental factors within the macrosystem play in physical activity behaviours among children and adolescents (de Vet et al., 2010), and there is significantly greater research into the influence of characteristics at the micro-level.

To support the development of effective interventions that promote a physically active lifestyle, it is imperative that a better understanding of the correlates of physical activity participation among children and adolescents is gained (Ferreira et al., 2007; Van Der Horst et al., 2007). This review will focus on the social and physical environmental correlates of physical activity at the home, school and neighbourhood-level.

#### 2.4.1 Parental Influences on Child and Adolescent Physical Activity

There is a substantial amount of research into the social influences on child and adolescent physical activity behaviours attributed specifically to the role of parents, siblings, peers and significant others. Parental influences on physical activity are particularly salient during childhood and adolescence, as children have less freedom and choice over their actions. Socioecological approaches in particular have been used to study the specific role socialisation behaviours of parents have on their child's decision to become, and remain, physically active (McMinn et al., 2008, Ornelas et al.,

2007). Socialisation processes associated with child and adolescent physical activity include: parental encouragement (Janz et al., 2003, Beets et al., 2010); social support for physical activity (Loprinzi and Trost, 2010, Neumark-Sztainer et al., 2003, Trost et al., 2003); modelling of activity patterns (Loprinzi & Trost, 2010; Ornelas et al., 2007); attitudes, values, and beliefs about their children's physical activity (Pearson et al., 2009, Welk et al., 2003) and parents' own physical activity levels (Davison and Birch, 2001). The role of the family in understanding and promoting physical activity has therefore received greater focus in research during the past two decades (Beets et al., 2010; Dwyer, Needham, Simpson, & Heeney, 2008; Oliver et al., 2010).

Socioeconomic status has been associated with a wide variety of social, cognitive and health-related outcomes in children (Cradock et al., 2009, Davis et al., 2008, Salmon and Timperio, 2007). It is a combined measure of economic and sociological factors relating to an individual's or family's educational level, annual income and occupational status. In terms of economic influences, parents have a major role in the uptake and maintenance of physical activity behaviours. Not only do parents elicit influence on children's overall psychosocial development, but they also act as 'gatekeepers' for access to physical activity resources (Welk et al., 2003). A major source of social support for physical activity is through parents' instrumental behaviours such as cost, lack of resources, lack of equipment and insufficient transportation. These are all major barriers to participation in physical activity among children and adolescents.

There is mixed evidence, however, supporting a positive association between parental SES and physical activity participation in youth (Ferreira et al., 2007). Inconsistent measurement strategies and combined measures of SES have meant that associations between parental SES and child and adolescent physical activity levels remain inconclusive. Assessment of the independent effects of parental education, income and occupational status has shown that mother's level of education and the family income level were positively associated with adolescent physical activity (Ferreira et al., 2007; Van Der Horst, Paw, Twisk, & Van Mechelen, 2007). Fewer effects among children have been found, and research has shown both positive associations (Gordon-Larsen et al., 2000, Kristjansdottir and Vilhjalmsson, 2001), as well as no associations (Booth et al., 2002b, Ferreira et al., 2007, van der Horst et al., 2007). The lack of observed associations with parental SES among children may be linked to the type of physical activity behaviour characteristic of young children, often informal in nature with limited financial constraint. During adolescence, however, physical activity participation can invoke greater demands on financial resources and access to facilities, all of which are mediated by factors associated with SES.

Parental support for physical activity can be categorised as either tangible or intangible. Tangible support describes overt behaviours that directly facilitate involvement in physical activity, and intangible support describes verbal encouragement and praise towards participation in physical activity (Beets et al., 2010). School and communitybased sports programs are a key source of regular physical activity for adolescents (Beets and Pitetti, 2005, Pelclova et al., 2010), however, transportation and access can mediate the uptake and maintenance of physical activity participation. Transportation is commonly reported as a tangible form of social support largely due to the location of many recreational grounds, parks and community centres. Unsurprisingly, increased transportation and access to resources have been positively related to children's (Davison and Lawson, 2006) and adolescents' physical activity participation (Hoefer et al., 2001). This form of instrumental support regulates children's opportunities to be active (Pugliese and Tinsley, 2007), and is vital for the maintenance of physical activity. Children from parents who are present during physical activity participation but not directly involved in the activity are consequently more active as a result (Duncan et al., 2005, Prochaska et al., 2002). Parental support for physical activity may therefore be of greater importance during childhood and adolescence, than the parents' physical activity level in itself.

Parental encouragement, however, can be defined as the persuasion, promoting or prompting of a child to be active (Pugliese and Tinsley, 2007). As a form of social support, encouragement has been consistently positively linked to physical activity during youth (King et al., 2008). Encouragement can occur prior to, and during, the activity behaviour and encompasses 'motivational prompts to foster involvement in activity' (Beets et al., 2010). Positive encouragement has been associated with an increased likelihood to continue participation in physical activity (Prochaska et al., 2002) and a higher intensity and frequency of physical activity (Bauer et al., 2008). Secondly, children and adolescents are twice as likely to be physically active if they have a parent who is supportive, as opposed to unsupportive, of their physical activity participation (Pugliese and Tinsley, 2007). In a longitudinal study assessing parental influence on children's physical activity over time, parental modelling was significantly correlated to child and adolescent physical activity levels (Alderman et al., 2010). This suggests that observational learning may act as a mediator for health-promoting behaviour (Pugliese and Tinsley, 2007).

Despite this, there are mixed results relating to the direct association between physical activity during childhood and adolescence, and parents' own physical activity levels (de

Vet et al., 2010; Ferreira et al., 2007; Gustafson & Rhodes, 2006). The strength of these associations is also moderated by gender and age. Parent's own physical activity levels appear more important during childhood than adolescence (Hanson and Chen, 2007, Ferreira et al., 2007, van der Horst et al., 2007). Adolescent physical activity levels have been found to be more closely related to sibling and peer physical activity participation (Keresztes et al., 2008, Lown and Braunschweig, 2008). Separate analyses of parent's activity levels has shown that fathers' physical activity levels are more positively associated with children's physical activity levels (Davison et al., 2003), whereas mothers' physical activity levels are more positively associated with girls (Aaron et al., 2002, Strong et al., 2005). These mixed associations may be attributed to the early socialisation processes involved during childhood, in which parental influence is much greater. During adolescence, however, additional social influences become more influential. Many physical activities occur outside the home environment, for example active transport, outdoor play and PE within schools, thereby reducing the overall influence of factors in the interpersonal environment at the home level (de Vet et al., 2010). As younger children spend a greater proportion of their time in the presence of their parents, there is increased dependency on parents for opportunities to be physically active.

Among older children and adolescents, the environmental influence at the school and neighbourhood-level may be more influential on their physical activity behaviours, and therefore need to be additionally studied in the context of these settings. Parents are considered 'gate keepers' to a physically active lifestyle during childhood (Welk et al., 2003), nonetheless, more detailed assessments are needed on the dose-response relationship between the type, intensity and level of parental influence. Future studies should address more specifically the varying contexts in which parents are the most salient factor. The aim should be to identify which interpersonal factors modify physical activity uptake, and how these associations vary over time. Although parents have been identified as a major source of influence during youth, less is known about the role and impact parents have on youth physical activity in populations from more diverse settings. Fewer studies have specifically addressed the association between ethnicity and physical activity participation. The limited data that does exist has shown either weak or no associations between ethnicity and physical activity levels among children and adolescents (Booth et al., 2002b, Gordon-Larsen et al., 2000). If parents mediate children's involvement in physical activity as a direct result of their own belief systems and social support, then determining the strength of this influence could help promote the uptake and maintenance of a physically active lifestyle (Alderman et al., 2010). Interventions designed to increase the physical activity levels of children and adolescents using parents as a mediator may therefore benefit from strategies to enhance supportive and encouraging behaviours.

## 2.4.2 School-Based Correlates of Child and Adolescent Physical Activity

The school environment is an important context within which to study the correlates of physical activity in youth, due to the significant amount of time children spend in this setting (Dunton et al., 2009a). Within the UK, attendance at school is compulsory between the ages of 5-16 years, and children and adolescents spend approximately half of their waking hours in school during an academic year (Fox et al., 2004). Environmental influences on physical activity at the school-level are attributed to the physical, policy, social and cultural domains within the school system (Gorman et al., 2007). Schools represent important physical, social, and normative environments in which children and adolescents observe, learn, and engage in health behaviours (Elder et al., 2007). For this reason, schools have become primary settings within which to implement physical activity interventions, and study the physical activity behaviours of youth.

Curriculum-based physical education (PE), after-school activity classes, within-school break times and the use of school sports facilities are all opportunities for physical activity within the school environment. Compulsory PE lessons within schools provide an excellent opportunity to study the correlates of physical activity and inactivity, as almost all students participate within this class. Physical education is delivered in a structured, routine environment, and is provided nationally as part of the school curriculum (Quick et al., 2009). The PE and Sport Survey (2008/09) assessed approximately 21,000 schools throughout England and revealed that across school years 1-13, 77% of pupils participated in at least 2 hours of curriculum-based PE per week. Furthermore, 50% of pupils participated in at least 3 hours of high-quality PE and out-of-school sport (Quick et al., 2009). As PE is timetabled weekly, and implemented in a controlled and organised setting (Hein and Hagger, 2007), it represents an ideal context to modify the activity behaviours of children and adolescents.

There is mounting evidence that PE-based strategies are effective for increasing physical activity. More frequent PE lessons (Sollerhed and Ejlertsson, 2008), increased time spent in MVPA during PE (Fairclough and Stratton, 2006, McKenzie et al., 2004) and PE lessons delivered by PE specialists (Sallis et al., 1997a, McKenzie et al., 2001)

have all been positively associated with increased physical activity among children and adolescents. Further, a greater number of PE lessons and increased time spent in PE have previously been positively associated with increased time spent in MVPA (Gordon-Larsen et al., 2000). Physical education is therefore considered a critical time, as it can influence children's knowledge and attitudes towards health habits, making a unique contribution to their daily physical activity patterns (Dale et al., 2000, Naylor and McKay, 2009).

The frequency of PE participation differs across age and gender, however. Children aged 12 years old were shown to have a higher frequency of PE participation in comparison to those aged 17 years old, and males were more likely than females to participate in PE at least once per week (Gordon-Larsen et al., 2000). Barnett et al (2006) studied the relative opportunities for physical activity participation according to elementary school principals and PE teachers. Their results showed that the variation in opportunities for physical activity was significantly related to the school principal's physical activity level, having a high interest among the school council in increasing physical activity within the school and a high interest among school principals in establishing physical activity links within the community (Barnett, O'Loughlin, Gauvin, Paradis, & Hanley, 2006). There were no significant associations found with the physical activity level of the PE teacher.

Evidence for the link between the frequency and duration of PE is ever-increasing, however, the provision of sports equipment and facilities is also associated with greater physical levels of children and adolescents (Gordon-Larsen et al., 2006). In a study measuring the effects of physical activity equipment on physical activity among children, it was shown that the amount of physical activity equipment available was positively associated with increased outdoor play in preschool children (Spurrier et al., 2008). The type of school (public or private) has also been positively related to child and adolescent activity participation (de Vet et al., 2010). Increased provision of resources and opportunities to partake in a range of physical activities is more notable among privately funded schools. Policy level influences within schools may therefore mediate the provision and opportunities for physical activity due to the ethos, belief systems and resources of the school towards activity. Schools with a high level of physicalenvironmental improvement, such as the inclusion of equipment (basketball hoops, football goals etc) and adult supervision have also been linked to increased physical activity among children (Sallis et al., 2001). The availability of physical activity equipment specifically during break times has also been positively associated with increased physical activity during such break times (van Sluijs et al., 2008).

This finding is supported by Ridgers et al (2010) who assessed children's physical activity levels during school break times and their association with factors that reinforced or enabled their activity behaviours. The findings revealed that children without access to physical activity equipment during the break engaged in greater amounts of sedentary behaviour and less moderate intensity activity than children provided with equipment. The larger the outdoor space available was positively associated with a decrease in sedentary behaviour and increase in vigorous activity (Ridgers et al., 2010). An observational study of leisure time physical activity among children and adolescents (McKenzie et al., 2000), also showed that use of physical activity facilities was greater during the school lunch-break, as opposed to during leisure time. Structured activities were more commonly engaged in during the school lunchbreak than during leisure time, and this was consistent across gender. Increased opportunities for organised, structured activities and greater availability of sports equipment may therefore increase participation in leisure time physical activity among children and adolescents (McKenzie et al., 2000). Barnett et al (2006) further demonstrated that the availability of sports facilities and the absence of barriers for storing physical activity equipment were associated with increased opportunities for physical activity within elementary schools. The implication is that opportunities for participation in physical activity may significantly relate to the type of school, physical activity provisions available and the physical activity-related policies in place (Barnett et al., 2006; de Vet et al., 2010).

Although school-based obesity prevention programs have shown positive influences on knowledge, attitudes and behaviours regarding physical activity and health in children and adolescents (Alderman et al., 2010), there is limited evidence as to the specific features of the school environment which impact on physical activity during childhood and adolescence (de Vet et al., 2010; Ferreira et al., 2007; Naylor, 2009). School policies are an integral part of the frequency, duration and content of school-based PE, which act to facilitate or hinder the implementation of physical activity interventions. The duration and frequency of PE lessons within schools are heavily dependent on the educational authority in place. The purpose of PE is not centred solely upon physical activity participation; it is also intended to address a series of educational targets and curriculum requirements (Naylor and McKay, 2009). In many cases, changes within the school system has meant PE is a low priority in the education system (Davison and Birch, 2001). Due to the increasing pressure to reach academic targets, the relative importance of health and PE within schools has largely been reduced (Kelder et al., 2003).

Irrespective of the challenges associated with school-based physical activity promotion, this environment remains an ideal setting for the study and modification of physical activity behaviours. Schools provide multiple opportunities to positively influence physical activity during childhood and adolescence (Elder et al., 2007). Nevertheless, the specific characteristics of this environment that are most closely linked to the potential outcomes remain unclear (Dunton et al., 2009a). The physical, social, cultural and political-environmental factors within schools are still largely unexplored (Ferreira et al., 2007), and future research needs to address more specifically the interaction of these factors.

## 2.4.3 Influences of the Built Environment on Child and Adolescent Physical Activity

The built environment encompasses all human-formed or developed areas within the physical environment, and has been independently associated with physical activity. Literature examining associations between the broader social and physical environment identified factors inversely related to adolescent physical activity participation as: inadequate transportation to recreational facilities and to physical activity resources (Dowda et al., 2009, Davison and Lawson, 2006), concerns about neighbourhood safety and a lack of proximity to public open spaces and sports facilities (Cohen et al., 2006; Gordon-Larsen et al., 2006; Salmon & Timperio, 2007). To date, the role of the physical environment in promoting and hindering physical activity behaviours has been widely studied in adult populations.

Amongst adults, increased physical activity has been associated with the percentage of physical activity resources, neighbourhood safety and street connectivity as well as the proximity of physical activity facilities (Saelens and Handy, 2008, Giles-Corti and Donovan, 2003). Areas with fewer recreational facilities, increased safety concerns and poor street lighting or uneven and hilly terrain were also perceived as barriers to physical activity amongst this population (Booth et al., 2005). Associations with physical activity amongst youth, however, have been observed with urban design features such as the physical elements within the neighbourhood and their arrangement and appearance (Carver et al., 2008, Feng et al., 2010). Associations have also been reported with the proximity, availability and access to physical activity resources and facilities (Brownson et al., 2009, Gordon-Larsen et al., 2006), traffic safety and levels of crime (Cole et al., 2007), and transportation systems such as street connectivity and

road type/traffic (Boone-Heinonen, Popkin, Song, & Gordon-Larsen, 2010; Brownson et al., 2009).

At the individual level, proximity and access to physical activity programs and recreation sites such as public parks have been independently associated with physical activity amongst adolescents (Gordon-Larsen et al., 2006, Cohen et al., 2006, Motl et al., 2007). A recent study by Tucker et al (2009) demonstrated that there was an increased likelihood of higher activity levels among children aged 11-13 years old if they had access to two or more neighbourhood recreation facilities. This was consistent across both subjective and objective measures. Children with access to more than two recreation facilities engaged in more minutes of after-school physical activity than children without access to two or more facilities (Tucker et al., 2009). Using data from the Trial of Activity for Adolescent Girls (TAAG) (Stevens et al., 2005), Cohen et al (2006) assessed associations between public park proximity, type and amenities with time spent in MVPA amongst adolescent girls. Access to a park within half of a mile, particularly with features supporting physical activity such as playgrounds, was positively associated with increased time spent in MVPA during non-school hours (weekends and after-school) (Cohen et al., 2006).

Levels of physical activity among adolescents appear to vary according to the volume and proximity of recreation facilities as well as the type of neighbourhood in which the individual resides. Having easy access via short distances to recreation sites has been positively related to physical activity during childhood and adolescence (de Vet et al., 2010). Specifically, this related to physical activity facilities within a 3km radius and street connectivity within a 1 km radius (Boone-Heinonen et al., 2010). In a study assessing the association between the frequency of activity sites and street connectivity with levels of MVPA among adolescents, Boone-Heinonen et al (2010) showed that, time spent in MVPA was independently associated with the number of recreation facilities. This association was however mediated by the radius within which the facilities were located and the level of 'urbanicity'. These associations were consistently found for facilities within a 3km radius. The strongest associations were, however, found for the number of facilities within a 1-5 km radius, and within non-and low-urban areas (Boone-Heinonen et al., 2010). Intersection density was most strongly correlated with adolescent MVPA within a 1km radius, in particular among males. According to Boone-Heinonen et al (2010), the observed associations with recreation facilities within a 3km radius could be a result of an increased incentive to travel among more active adolescents. The associations found with intersection density within a 1km radius may

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be attributed to more active adolescents engaging in street-based physical activities, such as running or skateboarding (Nelson et al., 2005).

Current research indicates that both perceived and objectively measured environmental indicators are associated with individuals' physical activity behaviours (Humpel et al., 2002, McCormack et al., 2004). Evidence has suggested that living in closer proximity to schools, increased population density, adequate pedestrian infrastructure and good traffic safety are consistently positively associated with active travel to school (Carver et al., 2005). Significantly, however, these associations were mediated by parental perceptions of neighbourhood safety. Although children who walk to school are typically more physically active than children who do not actively travel (Saelens and Handy, 2008), parental perceptions mediate this relationship. Parental perceptions of heavy traffic or crime and limited pedestrian crossings or lights were negatively associated with active travel among children (Timperio et al., 2004a, Ferreira et al., 2007). The contrasting influence of actual and perceived environmental features has meant neighbourhood safety has been extensively studied in the context of the built environment. As such, neighbourhood safety has been shown by to be a good indicator of a favourable social environment for children's physical activity to occur. Neighbourhood safety, social cohesion and a network of neighbours have been positively associated with children's overall physical activity, days of vigorous exercise and days with school-based PE (Franzini et al., 2009). Therefore, a positive social environment may have an equal role in promoting the physical activity behaviours of children and adolescents as with the physical environment alone.

Although correlates of the physical environment may have comparable importance for both children and adults, the underlying associations with specific features of the environment do differ. Among adults, proximity to resources and density of facilities are consistently important factors in the uptake of active commuting to and from school (Saelens and Handy, 2008). Among children, however, these factors, plus traffic safety and walkability of the route to school, are reported as more important correlates of active commuting (Saelens and Handy, 2008). Parents perceived barriers to active commuting have been reported as unaffected by the proximity to their child's school (Salmon et al., 2007b). Thus, the perceived barriers within the environment may be of greater importance than the actual physical barriers to active commuting. The difference in adults and children's perceptions of the environment may be due to children's beliefs about physical activity being based mainly on social factors. Physical-environmental factors, such as traffic safety and street connectivity, are likely

to be mediated through their parents' perceptions of the environment. This in turn then regulates the child's active behaviours. Although somewhat distinct, parental perceptions of neighbourhood factors are crucial to the physical activity levels of children and adolescents, and potentially contribute to restricting activity behaviours. As children and younger adolescents are still heavily dependent on their parents for access to physical activity resources, parental perceptions of street connectivity, transportation, street safety and traffic density can dictate the extent of physical activity participation amongst this population.

In an assessment of the association between parents' perceptions of the individual, social and environmental barriers to active travel, the proportion of children that actively commuted to school differed significantly by age (Salmon et al., 2007b). Older children were more likely to walk or cycle to school, and were less affected by parental perceptions of safety. The relationship between the age and parental perceptions of safety is unsurprising, due to the growing independence children are less autonomous in their actions, parents can restrict access to recreation facilities based on their own perceptions of the neighbourhood safety (Veitch et al., 2006). There is, however, less published research on how adolescents and their parents perceive neighbourhoods, and what relationship this perception has with regard to adolescents' physical activity (Carver et al., 2005). As parents have such a dominant role during childhood, their perceptions of the built environment could be targeted as a strategy to increase active commuting amongst youth (Tucker et al., 2009).

Although there is widespread support for the association between the provision of recreational facilities and neighbourhood design with child and adolescent physical activity (Boone-Heinonen et al., 2010, Davison and Lawson, 2006, Norman et al., 2006), it is inconsistently reported within the literature, and associations across studies vary (Saelens and Handy, 2008). Significant positive correlations between girls' total minutes of MVPA with the frequency of recreation facilities have been reported. Nevertheless, inverse associations were also observed with intersection density (Norman et al., 2006). These inconsistent results could be due to variations in neighbourhood definitions (Boone-Heinonen et al., 2010), and lack of correspondence between perceived and observed environmental factors (Boehmer et al., 2006). Data is often generated using self-report measures on individuals' perceptions of the environment (Brownson et al., 2009; Tucker et al., 2009), and often there is not a clear distinction between perceived, as opposed to actual, environmental correlates found. Such evidence is also frequently generated from single populations such as school

classes or communities, and the interdependence between populations may produce an overestimation of affect size and inflation of the study results (Ferreira et al., 2007).

A general assumption within studies is that the environment influences behaviour in one direction alone, and that reciprocal influences are typically unaccounted for. This may account for the inconsistency in some evidence relating to the social, physical, economic and policy-level impact, as the mediating influence of the individual is unknown (Ferreira et al., 2007). Distinctions between objective and perceived aspects of the social and physical environment have important practical implications for strategies to modify population-level activity patterns. Less is known about the complex role of perceived features of the environment, and the extent to which behaviour is determined by perception, as opposed to actual environmental constructs. Therefore, it is unknown whether physical activity behaviours are always operating at an individual or community level (Ferreira et al., 2007). It is unclear, therefore, exactly how environmental factors influence physical activity patterns and the contextual factors which meditate this (de Vet et al., 2010). Matching specific measures of the built environment to specific types of physical activity is crucial (Giles-Corti et al., 2005), as perceived environmental constructs are more amenable to change than the actual environment is (de Vet et al., 2010).

Evidence into the correlates of physical activity at the home, school and neighbourhood level indicates that a complex interaction between factors exists. The growing body of research focussing on the environmental correlates of physical activity during childhood and adolescence mostly consists of cross-sectional studies, with the aim of highlighting empirical associations (de Vet et al., 2010). Focussing purely on the empirical associations fails to explore the conceptual understanding of the causal mechanisms between environmental factors and physical activity. To identify factors within the built environment that determine physical activity behaviours, multilevel models may be required, not only to aid the development of population based interventions and public health policies, but to slow the increasing rates of physical inactivity. Perceptions of the built environment may play an important role in the uptake of health behaviours over and above that of the structure and design of the environment itself. Interventions promoting physical activity during youth may need to address individual perceptions of barriers to change in order to achieve a long-term behaviour change at a population-level.

#### 2.4.4 Summary

Despite associations between child and adolescent physical activity and the physical, social and policy-based environmental influences, a deficit in knowledge exists. Determining the level at which these correlates influence behaviour is challenging, and more context-specific behavioural outcomes are necessary to increase the likelihood of producing a long-term shift in the physical activity patterns among youth. There is a need for greater correspondence between behavioural outcome measures and specific features of the physical environment within physical activity research. Multilevel inventions targeting individuals, social norms, social policy and the built environment are suggested to be more effective strategies for explaining and changing health behaviours (Glanz et al., 2002). As such, there is strong evidence that a multilevel, ecological approach to promote physical activity may be an effective strategy among children and adolescents (van Sluijs et al., 2008).

Most public health challenges are too complex to be adequately understood from a single level of analysis; hence, a more comprehensive consideration of the multiple levels of influence on physical activity and related health outcomes is more appropriate. Aiming physical activity interventions at one level of influence only may fail to produce a long-term behaviour change as a result. Intrapersonal, interpersonal, physical and socio-environmental factors have all been associated with physical activity levels during childhood and adolescence (King et al., 2002). Ecological approaches to behaviour change are considered an effective strategy to study and improve child and adolescent's health behaviours, as multiple levels of impact can be taken into consideration. This, as a result, may lead to more effective population-level interventions aimed at increasing child and adolescent physical activity.

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### 2.5 Ecological Model of Health Behaviour

In light of the increasing levels of physical inactivity, theories relating to the correlates of physical activity have received greater focus within the physical activity literature. The shift in focus from individual-level correlates of physical activity to the broader social, physical, cultural and economic determinants of behaviour is consistent with ecological approaches to behaviour change. To date, investigations into the determinants of physical activity have been based largely on intrapersonal models of health behaviour (Sallis and Owen, 1997) and centre upon cognitive and social influences surrounding the individual. Among the most popular theories focused on individual-level interactions (e.g., attitudes, beliefs and affect) that have received some empirical support in the physical activity literature are: the theories of Reasoned Action and Planned Behaviour (Ajzen, 1991, Hausenblas and Carron, 1997), the Health Belief Model (Janz et al., 1997), the Transtheoretical Model (Prochaska and DiClemente, 1984) and the Self-Determination Theory (Deci and Ryan, 1985). Theoretical perspectives combining intrapersonal factors and micro-environmental influences such as the Social Cognitive Theory (Dzewaltowski, 1994, Bandura, 2001), have more recently gained increasing empirical support (King et al., 2002).

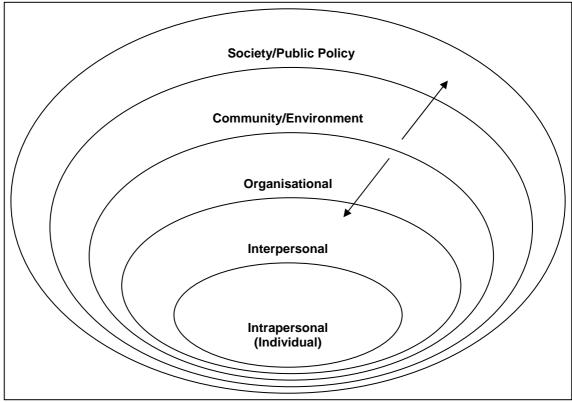
Health promotion programs that target individual behaviour change at the intrapersonal level alone often neglect the social and environmental context in which these behaviours exist and are reinforced. The limitations of focussing solely on individual-level strategies have been recognised within health promotion research, and multi-level approaches including biology, behaviour and the environment are now in fruition (Green, 2006, King et al., 2002). In comparison to multilevel approaches to modify behaviour, interventions targeting individual-level factors alone have made limited contributions to the decline in health-risk behaviours (Glanz et al., 2002). Such interventions have generally been found to explain a relatively small percentage of the variance in physical activity levels (King et al., 2002). Psychosocial models alone are now considered insufficient for targeting behavioural changes beyond solely those at the individual-level (Elder et al., 2007).

According to ecological principles, multiple levels of influence determine individual behaviours (Glanz et al., 2002, Sallis and Owen, 1997). This includes factors unique to the individual, external to the individual and the interaction between the two (Sallis et al., 1998). Ecological models of health behaviour are particularly salient within physical activity research, as the patterns and levels of physical activity have previously been

shown to vary according to the specific features of the environment they occur within (Elder et al., 2007; Humpel et al., 2002). Relatively little is known empirically about the environmental correlates and influences on health behaviours in general (Glanz et al., 2002), hence research based on social ecological frameworks is increasing. Levels of influence within ecological models can broadly be categorised into two domains: intraindividual and extra-individual (Spence and Lee, 2003). Intra-individual influences are situated at the level of the individual and include beliefs, attitudes and behaviours towards physical activity. Changes at the intra-individual-level would, for example, alter an individual's attitude toward physical activity (Spence and Lee, 2003). Extra-individual influences are located within the environment surrounding the person and include the structure and design of the built environment, as well as social and cultural contexts and policies. Changes at the extra-individual level would include the walkability within the neighbourhood and provision of physical activity resources. According to the ecological approach, changes at both the intra-individual and extra-individual level would increase the likelihood of physical activity uptake at a population-level (Spence and Lee, 2003).

Many models of behaviour change acknowledge the importance of internal factors and the social environment. Few, however, have specified explicitly the role of the physical environment (Gyurcsik et al., 2006). Stokols (1992) argued for a social ecological approach to health research and promotion, and outlined four key principles that are pertinent to understanding and influencing physical activity behaviour. Firstly, multiple features within the social and physical environment influence behaviour. It is the interrelationship between these features and the individual that mediates the uptake and maintenance of physical activity behaviours (Stokols, 1992). Accordingly, interpersonal (beliefs, morals), intrapersonal (cognition/emotions), social (family, peers) and environmental/organisational factors (physical environment, facilities) (McLeroy et al., 1988, Sallis and Owen, 1997) all function interchangeably to promote or hinder individuals' participation in physical activity (King et al., 2002, Casey et al., 2009a). Figure 3 illustrates the multiple levels of influence incorporated within the ecological model of health.

Figure 3: Diagram of the Ecological Model of Health



Adapted from McLeroy et al (1988)

Structural factors are believed to relate directly to the adoption of health risk behaviours. Through changes in social, environmental, and policy-level factors it is possible to positively influence individual health behaviours and alter population-level health outcomes (Cohen et al., 2000). Barriers to physical activity can also be categorised into these distinct categories (McLeroy et al., 1988). Intrapersonal barriers relate to individual characteristics such as attitudes towards physical activity and perceptions of ability. Interpersonal barriers refer to the quality of social networks and support systems generated by significant others such as family, friends and peers. Environmental and organisational barriers relate to social institutions and their organisational characteristics, such as school physical activity facilities and physical activity policies. Societal barriers relate to the regulations and authorities in place that hinder and promote access to activity resources (Gyurcsik et al., 2006). Gyurcsik et al (2006) used an ecological approach to study barriers to physical activity participation among adolescents. The results showed that barriers to physical activity were present at the intrapersonal, interpersonal, community and physical environmental level. However, the precedence of these barriers differed across age. Older children reported a greater number of barriers to physical activity participation, and from more diverse levels within the ecological model (Gyurcsik et al., 2006). Barriers to physical activity participation may therefore need to be characterised into distinct categories, as influences at the 47

individual, social and environmental level are not universal, yet systemically interconnected (Gyurcsik et al., 2006). In light of physical activity promotion, this strategy of behaviour change could consequently lead to more targeted, effective interventions.

A second assumption within ecological models is that the environment is multidimensional in nature, being either social or physical, actual or perceived, and having both direct and indirect effects on behaviour (Sallis and Owen, 1997, Glanz et al., 2002). Environmental features can have both a perceived and actual relationship with behaviour, making it a variable source of influence. The combined effect of perceived and actual barriers to physical activity can significantly hinder activity participation (de Vet et al., 2010, Hume et al., 2007). This, according to the social ecological model, has important implications for the design of strategies to promote physical activity participation. This is also related to the third assumption within ecological models, that the influence of the environment varies depending on the level of impact (Stokols, 2000). As a number of independent relationships have been identified as occurring at specific levels within the microsystem, mesosystem and macrosystem (Casey et al., 2009a), situational influences on physical activity patterns should therefore be analyzed at these different levels of the environment (King et al., 2002). Interactions between the social and physical environment differ in strength and direction according to individual health behaviours. Depending on the individual, home, organisational, community or population-level that is being targeted, the interrelationship between factors will differ.

To improve our understanding of the correlates of physical activity, more contextspecific outcome measures are needed within research, specifically at the environmental level (Giles-Corti et al., 2005). General models of health behaviour which predict overall physical activity have been criticised for failing to universally predict behaviours in a variety of contexts. The likelihood of accurately predicting a physical activity behaviour is greatly increased when the environmental features under investigation are hypothesised to be related to the predicted behavioural outcome (Giles-Corti et al., 2005). For example, a different conceptual framework would be used to explain the environmental correlates of walking for transportation purposes, as opposed to walking for recreational purposes (Pikora et al., 2003). A general model of health behaviour would therefore be insufficient to address the multiple levels and contextual impacts of the environment on physical activity.

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Although more recent research into physical activity has focused directly on specific behaviours during youth, most assessments of environmental correlates use 'context-free' behavioural outcome measures (Giles-Corti et al., 2005). Within a study assessing the relationship between perceived features within the environment and amount of walking in adults (Humpel et al., 2004), it was suggested that an all-encompassing approach to studying environmental correlates of physical activity may underestimate the strength of the relationship. Although based on adults, the results are important to physical activity research in general. It was reported that specific correlates of the neighbourhood better predicted walking behaviours in that neighbourhood than total physical activity overall (Humpel et al., 2004). This highlights the fact that in order to achieve more accurate interpretations of the environmental correlates of physical activity in children and adolescents, there is a need for greater focus on contextually specific outcome behaviours, as opposed to a general measure of physical activity in its entirety.

The final assumption within the ecological approach is that the individual-environment interaction is not linear and unidirectional; it is, however, reciprocal (King et al., 2002, Stokols, 2000). This means that there is a mutual influence between an individual's behaviour and their surroundings. Individuals influence their environment, which can lead to the then-altered environment influencing the individual's behaviour back (Glanz et al., 2002). As the relationship between physical activity and the environment is versatile and contextually specific, broad assumptions as to a direct relationship should be treated with caution. Physical activity occurs for a variety of different reasons and in a variety of different settings. Changes in physical activity behaviours at one particular level of the environment may influence consequent behaviours at another level. Although changes in the environment may increase patterns of walking for transportation, it is unknown whether this then displaces other forms of physical activity as a result (Saelens and Handy, 2008). A similar argument was presented in a metaanalysis assessing the relationship between parent socialisation behaviour and child and adolescent physical activity levels (Pugliese and Tinsley, 2007). Pugliese and Tinsley (2007) concluded that the influence of parents on their children's physical activity levels was reciprocal, and a bidirectional pattern of influence existed. Parental influence on physical activity patterns was not one-way; rather the more active children and adolescents may have prompted more engaged parents. This therefore disconfirms a one-way causality of influence (Pugliese and Tinsley, 2007).

Despite extensive research into the interpersonal correlates of physical activity, the evidence implies that it does not have a direct influence on physical activity behaviour

(de Vet et al., 2010). The shift in focus from the individual to the wider environment is a primary focus of the social ecological approach to behaviour change. The school and neighbourhood environment are now considered more promising settings within which to target physical activity interventions, and to investigate physical activity patterns during youth (de Vet et al., 2010). An ecological approach to behaviour change is believed to be a more effective strategy to improve population-level health (Cochrane and Davey, 2008), and better predict physical activity behaviour (Giles-Corti et al., 2005). Individual-level influences are not rejected within this approach, rather social and physical-environmental factors are also considered critical determinants of positive and negative health behaviours (Stokols, 1992).

#### 2.5.1 Summary

The ecological model of health behaviour acknowledges the complex interaction between an individual's actions and the multiple levels of impact within the environment (King et al., 2002, McLeroy et al., 1988, Sallis and Owen, 1997). To effectively promote individual health behaviours, social and physical-environmental factors that facilitate or hinder physical activity need to be examined according to their level of impact and direction of influence (Stokols, 2000). Based on the reciprocal nature of individual and environmental influences, strategies to increase physical activity should aim to identify the specific features within the environment which have the greatest influence (Stokols, 2000a).

By taking an social ecological approach to promote health and increase physical activity, a broader perspective on the determinants and mediators of behaviour is achieved (Stokols, 2000a). Taking an approach to promote physical activity that addresses influences at multiple levels within the environment may be a more effective strategy to change health behaviours at a population level. Thus, the ecological model of health behaviour is a key approach to promote physical activity and health-related behaviours among child and adolescent populations.

# 2.6 Interventions to Promote Physical Activity during Childhood and Adolescence

The development and evaluation of interventions promoting physical activity among children and adolescents has become an essential strategy to stop the decline in physical activity. Numerous different strategies have been implemented, yet the evidence suggests limited long-term results. Recommendations as to the best way to intervene remain tentative as a result (van Sluijs et al., 2007). Physical activity interventions in the past have typically been based on atheoretical principles of human behaviour (Kok et al., 2004, Noar and Zimmerman, 2005, Ory et al., 2002). Such interventions were formed on a basis of assumptions and predictions, rather than theoretical evidence of how humans behave. Evaluating the outcomes of such interventions is therefore difficult, and accurate replication almost impossible. Difficulties associated with assessing the effectiveness of physical activity interventions relate to the widespread variations in study design and implementation, the quality of scientific reporting and interpretation, the sample size used and the choice of measured outcome variable (Oude Luttikhuis et al., 2009). The challenge now within research is based on not only establishing which intervention strategy is most effective at increasing the physical activity levels of pediatric populations, but also the extent to which this decision could be affected by the methodological choices of the study design and implementation.

Previous attempts to promote physical activity among children and adolescents have traditionally been aimed at individual-level factors, and focused on increasing health-related knowledge and skills through education (Kremers and Brug, 2008, McLeroy et al., 1988). Such interventions can successfully modify individual behaviour during and immediately post-intervention, their long-term effectiveness, however, is often short-lived. Recent attempts to increase physical activity participation among children and adolescents have acknowledged the importance of the physical and social environment, and a multilevel approach to behaviour change is often taken. Social and physical environmental factors are believed to mediate potential long-term intervention effects, leading to a reoccurrence of previous physical activity behaviours (Spence & Lee, 2003). In line with approaches to promote physical activity at a population-level, the intervention strategies within this review have been grouped under three key settings: the school, the family and the community.

#### 2.6.1 School-Based Interventions to Promote Physical Activity

The World Health Organization specifically identified the school environment as a target for the promotion of physical activity during youth (World Health Organization, 2010). Recent systematic reviews of the effectiveness of physical activity interventions have focused largely on the school-setting (Dobbins et al., 2009, Kropski et al., 2008), a key environment to positively influence child health (Brown and Summerbell, 2009). Individuals in high-risk groups for physical inactivity that may have restricted access to recreational facilities within the community are still reachable within this domain (World Health Organization, 2004). Access to a large population of children and adolescents from diverse ethnic and socioeconomic backgrounds also becomes more feasible (Naylor and McKay, 2009). The majority of physical activity interventions aimed at children and adolescents have therefore been implemented predominantly within the school environment (Salmon et al., 2007c).

One advantage to school-based physical activity interventions is that the potential reach of the program is much wider than in community settings. Exposure to the intervention is therefore much more likely (Dunton et al., 2009a). Children and adolescents who may be at high risk for physical activity-related health risks, and those more likely to avoid participation in interventions promoting physical activity in the community, can also then be targeted. Not only can school-based interventions increase individuals' knowledge of the link between physical activity and healthy lifestyles, but a range of individuals can be accessed without the prejudice or stigmatisation associated with overweight and obesity (Dobbins et al., 2009).

Schools represent an important part of the social and physical environment that facilitate or hinder physical activity participation among children and adolescents. They play an integral role in shaping health knowledge, attitudes and behaviours towards a physically active lifestyle. Physical education within schools represents a natural environment within which to promote physical activity without displacing other initiatives or policies within the school system (Fairclough and Stratton, 2005a). It is therefore a prime target for activity-based interventions. Schools are, however, complex organisations, in which the principal goal is academic achievement. As a result, there are various economic and environmental limitations to the long-term implementation and effectiveness of interventions targeted within this setting. Common barriers to school-based interventions include restricted time for increased PE lessons, competing pressures of academic performance, a lack of resources for physical activity and a non-

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supportive school environment (Naylor and McKay, 2009). Although primary and secondary schools within the UK are required to provide PE as a compulsory part of the national school curriculum, this does not ensure that PE frequently occurs. Regulations to ensure students are physically active throughout the PE lesson do not exist, nor is time spent in MVPA a standardised part of the PE lesson (McKenzie et al., 2000a, McKenzie et al., 2006).

The common aim of school-based interventions is to increase the total proportion of children and adolescents that engage in physical activity, as well as increase their time spent in MVPA. School-based interventions typically address educational, environmental or 'whole school' factors (van Sluijs et al., 2007). Intervention strategies implemented within schools include changing the knowledge, attitudes and motivation towards physical activity (Fairclough and Stratton, 2005a, Timperio et al., 2004b), and modifying policies or practices within the school to provide increased opportunities for physical activity participation (Naylor and McKay, 2009). Strategies are often categorised as being either exclusively focussed, or having a combined focus on the curriculum, PE or environmental factors to promote physical activity (Salmon et al., 2007c).

Curriculum-only interventions centre upon an educational approach to increase physical activity. The aim is to modify the cognitive and interpersonal factors thought to precede physical activity behaviour and to provide the information necessary to motivate and enable individuals to change their activity patterns in the long-term (Kahn et al., 2002). Educational-based interventions are designed to change knowledge about the benefits of physical activity, increase awareness of opportunities within the school or community and to provide strategies to combat barriers and negative attitudes towards physical activity (Kahn et al., 2002). Evidence for increasing physical activity levels using education-based strategies is, however, inconsistent, and mixed effects are often reported (Dobbins et al., 2009). Lubans and Sylva (2006) evaluated the effects of a physical educational program aimed at 16-18 year olds known as the Lifetime Activity Program (LAP).

The aim of this 10-week program was to increase activity-related knowledge and social support for physical activity amongst peers. Educational sessions lasted approximately 90 minutes, and, in line with government recommendations (Department of Health, 2004), a further 60 minutes of MVPA per day was encouraged. The educational sessions were designed to promote the benefits of physical activity, goal setting strategies, the components of physical fitness and the principles of weight training

(Lubans and Sylva, 2006). The results showed that the time spent in MVPA significantly increased in the intervention group, whereas a decrease in MVPA was observed in the control group. Peer support for physical activity, exercise self-efficacy and personal physical activity ratings were also greater within the intervention group. These effects were not maintained over time, however, and in a 3 month follow-up the same intervention effects were not observed (Lubans and Sylva, 2006). Significant increases in the time spent in MVPA were no longer found and, although a positive trend for peer support for physical activity was greater among the intervention group, the results were no longer significant post-intervention.

Although the LAP intervention produced positive effects only in the short-term, positive effects of an education-based approach have previously been shown (Wilson et al., 2005). Wilson et al (2005) evaluated the effects of a student-focussed physical activity intervention aimed at adolescents aged 11-14 years old. The intervention was designed to increase physical activity participation, time spent in MVPA and psychosocial variables relating to motivation, self-concept, and self-efficacy (Wilson et al., 2005). The intervention was delivered for 2 hours after school across three separate days in the week. Components included homework assignments relating to nutrition, an objectively measured physical activity component encouraging MVPA and a taught component based on motivation strategies and behavioural skills to increase physical activity participation. The results indicated that vigorous intensity activity significantly increased on the intervention days in comparison to non-intervention days, and there were significant positive increases in motivation and self-concept for physical activity. Increasing adolescents' autonomy in their choice of physical activity may be associated with increased motivation and positive self-concept for physical activity, thereby increasing the time spent in vigorous intensity activity.

Although some studies have shown increases in general health, exercise knowledge and time spent in MVPA post-intervention, the positive effects of an education-only approach remains inconsistent (van Sluijs et al., 2008). Kelder et al (2005) implemented an adapted version of the Child and Adolescent Trial for Cardiovascular Health (CATCH) (Luepker et al., 1996, Perry et al., 1990, Zucker et al., 1995), which was an after-school program known as the CATCH Kids Club (CKC). This pilot study incorporated a physical activity, education and nutrition-based program aimed at children in grades 3-5. The physical activity component was designed to increase participation in a range of activities and to maximise the time spent in MVPA. The educational component focussed on modelling, monitoring, goal setting, skills training and the practice of healthy-eating behaviours. Based on the social cognitive theory (Bandura, 2001), the information was designed to equip children with health knowledge, skills, self-efficacy and intentions to make positive health choices. The nutrition component of the program was designed to inform children of the health benefits of certain foods and to educate them on the preparation and composition of healthy ingredients. The results indicated that only the physical activity component produced a significant effect, whereby the time children spent in MVPA significantly increased. The educational component of the program produced no significant positive effects. Although this was only a pilot study, there were no effects following delivery of health and physical activity-related information. This questions the overriding benefit of an educational approach to increase physical activity.

Unlike education-only approaches to increase youth physical activity, behavioural approaches are often implemented as part of, or in conjunction with, school-based PE. Focusing primarily on PE within schools, interventions typically use a strategy that alters the PE curriculum and school policies to allow for increased time spent in MVPA during the lesson. This is done by providing additional PE lessons during the school week, increasing the duration of the lesson or increasing the time spent in MVPA (Kahn et al., 2002). This method of increasing physical activity among children and adolescents has previously shown to be effective, and positive results have been found. In a 3 month intervention aimed at children aged 10-11 years old, Verstraete et al (2006) demonstrated a significant increase in the physical activity levels of children during the school lunchtime break via game cards promoting physical activity.

The study involved 7 elementary schools, of which 4 received the intervention and 3 represented the control group. Game equipment included activity cards with examples of games and physical activities to engage in, and the children were encouraged to play outdoors during the morning and lunchtime break. Using objective measures of physical activity it was shown that the provision of game equipment during the morning break was significantly positively associated with time spent in MVPA only amongst the girls. During the lunchtime break, however, the positive effects of increased time spent in MVPA was observed amongst both the boys and girls (Verstraete et al., 2006). The lack of evidence for increased time spent in vigorous intensity activity during the morning break may be related to the time allocated for this break-time. The longer duration of the lunchtime break provided a greater opportunity to complete the games on the activity cards, which could account for the higher intensity activity that was observed. The positive effects observed within this study do, however, have important implications for changes to environmental and policy regulations within schools. As was shown in the Gold Medal Schools intervention (Neiger et al., 2008), through changes in

environmental and policy-level factors it was possible to successfully modify the lifestyle patterns of regular physical activity. Interventions that promote physical activity through a supportive school environment may be more effective as a result.

Similar findings for the positive effect of environmental changes on physical activity behaviours were shown in a slightly earlier study, based on a behavioural and environmental approach to behaviour change. The study comprised a 2 year physical activity intervention known as the Middle School Physical Activity and Nutrition (M-SPAN) (McKenzie et al., 2004). The intervention combined an environmental, policy and social marketing approach to behaviour change (Sallis et al., 2003). The aim of this combined intervention was to increase the availability of low-fat foods, opportunities to be physically active and to promote healthy behaviours among adolescents. Based on a structural ecologic model of health behaviour (Cohen et al., 2000), school-based PE and leisure time physical were the targeted environments for increased physical activity supervision, provision of equipment and organised activity. It was found that the environmental and policy-level components were effective at increasing physical activity, but ineffective at increasing low fat food choices. Amongst boys, the amount of physical activity they engaged in increased during and outside of PE, whereas amongst girls the positive intervention effects were only observed for PE-based physical activity. As with previous school-based interventions, there were no effects on adolescents' physical activity levels outside of the school environment.

In an evaluation study of the PE-based component of the M-SPAN intervention (McKenzie et al., 2004), it was shown that the time adolescent's spent in MVPA during PE significantly increased as a result of physical activity component of the intervention. Overall, the intervention schools increased the time spent in MVPA during PE by 18% over the course of 2 years (McKenzie et al., 2004). The PE-based physical activity component of the M-SPAN trial was centred upon three core areas: curricular materials, staff development and on-site consultations. The staff development program was designed to increase awareness of health-related PE, assist teachers to implement PE curricula, develop PE teaching skills to promote physical activity and provide ongoing support for these changes. The results showed that lesson structure and context was unrelated to adolescent's physical activity levels, rather, the amount of time spent in fitness, games and free-play were positively associated. Effect sizes were, however, greater among boys than among girls. Increasing the opportunities to be active appeared more significant to adolescent activity levels than the duration, frequency or structure of the lesson itself. Consistent with evidence from Verstraete et al (2006),

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increased opportunities to be active amongst both children and adolescents may be a significant factor in their regular participation in physical activity.

The mixed findings from previous interventions suggest that interventions that predominantly target one component within the school environment may not be sufficient to change long-term physical activity patterns among children and adolescents. To address the limited success of previous interventions, multicomponent approaches to behaviour change have been adopted. This strategy in particular was demonstrated in the Child and Adolescent Trial for Cardiovascular Health (CATCH) program (Luepker et al., 1996). The CATCH program was a major approach to change the physical activity levels of children, implemented via school-based PE during 1991-1994 (McKenzie et al., 1994). This 2 and a half year PE intervention included 96 schools across the US, which was a school-based, multi-site, randomized trial aimed at children in grades 3-5 (aged 8-10 years old). The aim of the intervention was to increase opportunities for physical activity by assisting teachers in their implementation of PE lessons. The CATCH PE intervention incorporated additional PE curricula and equipment, consultations with PE teachers and professional staff development sessions. Results showed that improvements to the PE curriculum, professional staff development and on-site consultations with teachers increased the amount of physical activity during lessons with both the PE specialists and classroom teachers (McKenzie et al., 2001). By improving the implementation, design and structure of the PE lesson, and specifically developing sessions with PE teachers, an increase in the physical activity participation of children was observed. Due to the impact that the school environment and PE teachers can have on promoting physical activity, tailoring an intervention's structure and content to the target population may therefore increase its overall effectiveness (McKenzie et al., 2001).

Despite the positive effects of a PE-based intervention to increase the physical activity of children, the effects were only measured in the short-term, immediately postintervention. To assess the long-term effectiveness of the CATCH PE trial, a series of follow-up studies have since been conducted, highlighting that the increased time children spent in MVPA during PE was maintained post-intervention (Hoelscher et al., 2004, Kelder et al., 2003, McKenzie et al., 2003). A large follow-up study, referred to as CATCH-ON, was carried out during 1998-2000 to assess the sustainability and long-term effectiveness of the initial CATCH PE trial (McKenzie et al., 2001). Five years post-intervention it was shown that intervention schools were still achieving increased time spent in MVPA during PE, equating to approximately 50% of the PE class time. Better maintenance of physical activity levels were also observed among grade 3 children, as opposed to grades 4 and 5 (McKenzie et al., 2003). Importantly, however, the duration and frequency of PE was shown to be unrelated to increased time spent in MVPA. In fact, the implementation of curricular materials and staff development was sufficient to produce an increase in the time spent in MVPA during these lessons. The continued use of the CATCH PE program post-intervention was, however, associated with higher levels of teacher support implementing the program, the amount of training teachers received and fewer barriers for PE with the school (McKenzie et al., 2003).

The school environment represents an ideal setting within which to implement population-level physical activity interventions, yet there is mixed evidence to suggest that school-based interventions are effective at sustaining long-term physical activity and life-long health (Dobbins et al., 2009; Kahn et al., 2002; Reilly, 2008; van Sluijs et al., 2008). Despite some positive trends, limited evidence has been found for an education-only approach to increasing physical activity among children or adolescents (Dobbins et al., 2009), and the positive effects of a behavioural approach have been shown to vary (De Meester et al., 2009; Dobbins et al., 2009). Unlike previous interventions, which have targeted one specific component of the school environment, a combined educational and behavioural approach to increase physical activity is more frequently being delivered within schools. Amongst both children and adolescents, interventions that have aimed to increase physical activity during PE lessons, as well as incorporating curriculum or environmental changes, have been more effective at increasing physical activity than educational or behavioural interventions alone (Jago and Baranowksi, 2004).

Nonetheless, mixed findings from a number of school-based interventions question the long-term benefits of implementing interventions solely within this setting, and additional factors may mediate the intervention effects. Many of the changes in physical activity reported due to school-based interventions have mostly been limited to school-related physical activity. There is insufficient evidence to suggest a conclusive transfer from activity behaviours within the school environment to leisure time activity (Dobbins et al., 2009). The lack of behaviour change during leisure time may be due to the specific mechanisms used in the school-based interventions, which often focus exclusively on classroom or PE-based changes. To achieve a sustained increase in the physical activity levels of children and adolescents during school and leisure time, a combined school and family-based approach to physical activity behaviour change may be necessary (Christodoulos, Douda, Polykratis, & Tokmakidis, 2006; Harrison, Burns, McGuinness, Heslin, & Murphy, 2006).

#### 2.6.1.1 Family Involvement in School-Based Interventions

The family is considered a major source of influence during childhood, and parental involvement is suggested to be an essential component to any school-based physical activity intervention (Dietz and Gortmaker, 2001). Due to associations between parental support, encouragement and modelling of physical activity behaviours, an increasing number of interventions now include some degree of whole family or parental involvement (Skouteris et al., 2010). A school and family-based approach to behaviour change typically involves a combination of educational strategies, such as homework-based assignments promoting health behaviours, increasing the time spent in physical activity through reward systems and family-level behavioural management using physical activity log books (Kahn et al., 2002, Kitzman-Ulrich et al., 2010, Naylor and McKay, 2009). Changing the focus of interventions to incorporate the social environment in this way facilitates the modification of a range of behavioural factors, which may influence child and adolescent physical activity patterns (Kahn et al., 2002).

The positive effects of a school and family-based intervention aimed at children were demonstrated by Christodoulos et al (2006), who evaluated the effects of a 1 year teacher-led PE-based intervention aimed at 11 year old primary school children. The PE-based intervention incorporated a goal-orientated approach to physical activity, classroom-based health education, parental involvement in homework assignments, educational materials and the provision of healthy food snacks. Parents were also advised about the local community-based sports programs, and asked to encourage active travel to school in an attempt to promote leisure time physical activity. Postintervention it was shown that children's attitudes and intent towards physical activity participation was significantly greater among the intervention group, as opposed to the control group. The time spent in organised physical activity was also significantly greater among children within the intervention group (Christodoulos et al., 2006). There were no significant differences in the time spent in MVPA between groups. However, a greater proportion of children in the intervention group successfully achieved the recommended of 60 minutes per day of MVPA (Christodoulos et al., 2006). Nonetheless, the short-term effects of a combined health education and parental approach to increase attitudes and participation in school and leisure time physical activity were successfully shown.

Further positive increases on the time spent in MVPA among children were shown in the 16-week Irish 'Switch Off-Get Active' program by Harrison et al (2006). The program combined an educational and behavioural approach to increase physical activity, to reduce TV and screen time viewing and to lower the BMI of primary school children. This teacher-led health education intervention was incorporated as part of the school curriculum. The intervention involved promoting alternatives to TV and computer use via self-monitoring and goal-setting tasks (Harrison et al., 2006). Through parental support, children recorded their physical activity patterns and screen time viewing in an activity diary as part of their routine homework assignments. Physical activity and screen time viewing were measured using the Previous Day Physical Activity Recall (PDPAR) questionnaire (Weston et al., 1997). Results indicated that time spent in MVPA and self-efficacy for physical activity post-intervention significantly increased, whereas there were no significant effects on screen time viewing. The study did successfully demonstrate that a school-based health education strategy incorporating a self-monitoring and goal-setting focus with parental support significantly increased levels of physical activity in children.

Although there has been some positive evidence for the effectiveness of interventions that incorporate a family-level component, inconsistent findings from a number of interventions suggest that parental involvement may not have an overriding benefit (de Meester et al., 2009, Dobbins et al., 2009). Limited findings for the effects of parental involvement in an intervention aimed at primary school children were demonstrated in a study by Goran and Reynolds (2005). Taking an educational approach to health behaviour change, Goran and Reynolds (2005) implemented an 8-week computer-based curricula program to increase physical activity among 8-11 year old children, known as the Interactive Multimedia for Promoting Physical Activity (IMPACT). The intervention was designed to combine an interactive learning-based component with classroom and family-based physical activity assignments. The aim was to increase physical activity, decrease sedentary behaviour, prevent increases to children's body mass index (BMI) and modify physical activity-related psychosocial variables.

Using objectively measured physical activity, it was shown that light intensity activity significantly increased amongst girls, decreased amongst boys, and moderate intensity activity decreased amongst all participants (Goran and Reynolds, 2005). Involvement of parents to promote physical activity through knowledge, attitudes and activity behaviours did not produce a significant effect on the study results. According to Goran and Reynolds (2005), a possible explanation for these findings is that, in order to produce significant changes in MVPA, greater social and physical environmental changes may be necessary. This includes the provision of activity equipment, access to physical activity resources or support from peers. All of which have previously been related to increases in children's physical activity (Christodoulos et al., 2006; Verstraete

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et al., 2006). Increases in children's light intensity activity may be more responsive to smaller environmental changes such as those within the IMAPCT program, which could account for the intervention effects observed.

Further inconclusive evidence for the positive effect of parental involvement in physical activity interventions were reported in a study evaluating the effects of a 2 year program aimed at middle school adolescents (Haerens et al., 2006). The intervention was designed to increase physical activity through a combined change in the school environment with education, through interactive computer-based feedback (Haerens et al., 2006). After 1 year, self-reported physical activity levels and objectively measured MVPA significantly increased among adolescents, whereas fat intake decreased. The aim of the study by Haerens et al (2006) was to evaluate the intervention effects 2 years post-implementation, when external guidance from researchers was reduced and autonomy among intervention schools to implement the program independently was increased. The physical activity component within the intervention was designed to increase opportunities for non-competitive physical activity throughout the school day. Additional physical activity equipment was provided, and intervention schools encouraged active travel to school. Adolescents completed a computer-based adapted version of the International Physical Activity Questionnaire (IPAQ) (Craig et al., 2003), and received tailored feedback relating to their intentions, attitudes, self-efficacy, social support, knowledge, benefits and barriers related to physical activity. The parental component within the intervention was intended to provide a supportive environment for healthy behaviours outside of school. Parents were included in meetings to discuss health behaviours, and they completed the computer-tailored intervention for physical activity and fat intake, as did their children.

The results after 2 years showed that the intervention effects had been maintained, and adolescent physical activity levels, time spent in MVPA or fat intake neither increased nor decreased since the results at year 1. Importantly, however, the effects of parental involvement did not result in additional effects, as results were consistent across the intervention and control group. Explanations for this finding are speculative only, as data relating to the type and level of parental involvement during the trial were absent (Haerens et al., 2006). It is unknown whether the absence of any effects were due to a reduction in parental involvement during the second year of intervention, or that parental involvement is unrelated to adolescent physical activity. The evidence does suggest, however, that an intervention tailored specifically to an individual, along with changes in the physical, socio-cultural and political environment can produce sustained increases in physical activity and time spent in MVPA over time.

Despite associations between youth physical activity levels and the home environment, few interventions have been implemented exclusively at the home level. There is also insufficient evidence for the benefits or isolated effects of an additional family component (de Meester et al., 2009, Dobbins et al., 2009, O'Connor et al., 2009, van Sluijs et al., 2008). There is promising evidence for the benefits of social support for physical activity (Flodmark et al., 2006), nevertheless, the exact level and type of parental involvement is inconclusive. Interventions based on a combined school and family approach appear to have slightly better results when targeting adolescents, as opposed to children (van Sluijs et al., 2008).

Among children, positive intervention effects appear largely due to health education lessons and changes in environmental constructs. This included parental involvement and support, and fun, fitness and goal oriented activities during PE (Christodoulos et al., 2006; Harrison et al., 2006; Jurg, Kremers, Candel, Van der Wal, & De Meij, 2006; Verstraete et al., 2006). Interventions that produced positive effects amongst adolescents mostly included health education to improve physical activity-related knowledge, social support from peers and direct environmental changes within PE (Haerens et al., 2006, Lubans and Sylva, 2006, Simon et al., 2008, Tsorbatzoudis, 2005). The differences observed across child and adolescent studies may, however, be due to the greater number of high quality interventions implemented among adolescent populations (Lubans et al., 2008). Adolescents are consistently reported as less active than children, therefore this older population may invariably have a greater scope for change as a result (van Sluijs et al., 2008).

The physical-environmental, socio-cultural and economic factors associated with increased physical activity among children and adolescents relate specifically to: increases in the opportunities for physical activity, provision of activity equipment, access to a range of activities within PE, support from parents and peers and increased active travel to school (de Meester et al., 2009). However, economic restrictions within the school system can limit opportunities and facilities for physical activity. The implementation and long-term maintenance of curriculum and policy-level changes can become problematic as a result. Financial constraints within the school system have previously been associated with a reduction in the frequency and duration of PE lessons within the school curriculum (de Vet et al., 2010) and termination of after-school sports programs (Shaya et al., 2008). This inevitably has a negative effect on the opportunities for physical activity participation. Increasing the frequency and duration of PE lessons within schools is not always feasible, due to the academic pressures to

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achieve certain standards of schooling. To produce more sustainable intervention effects in the long-term, it may be necessary to broaden the focus of interventions to include a community-based component. Targeting multiple levels of the physical environment in this way allows for a broader range of social contexts where children and adolescents engage in physical activity to be addressed. Appropriate modification of specific features within the community could positively influence opportunities for physical activity, and lead to a transfer of physical activity from within the school environment into leisure time. A permanent shift in the behaviour patterns of children and adolescents may be more likely as a result.

### 2.6.2 Community-Based Interventions to Promote Physical Activity

Although family and school-based interventions remain useful targets for physical activity promotion, broader community-based interventions are also needed. The lack of evidence for increased leisure time physical activity following school-based interventions (de Meester et al., 2009, Dobbins et al., 2009, Kristjansdottir and Vilhjalmsson, 2001), suggests that school-based interventions may target behaviours relevant only to the school environment. Alterations in the school environment such as lesson content, specific teacher training, provision of extra equipment and increased frequency of PE, mostly show some positive effects on physical activity. Few intervention effects have been observed in the overall physical activity levels of children and adolescents, however (van Sluijs et al., 2008). As such, the positive health messages and improvements in physical activity behaviours learnt during the school day do not appear to translate into the home or community environment. The role parents and communities play in the provision of activity may therefore be unaccounted for (Dobbins et al., 2009). Interventions that also target community-level factors in combination with school and family-based influences may be necessary to make a significant positive change to physical activity outside of the school setting.

Unlike school or family-based interventions, programs implemented within the community aim to influence larger populations, targeting social and physical environmental factors as opposed to individual behaviours. As a result, such programs are typically delivered over a longer period. The goal is to change physical activity behaviours through modifications in social networks, organisational policies, the social and physical environment and access to physical activity resources and facilities (Kahn et al., 2002). Environmental and policy approaches within the community are designed to foster activity opportunities, social support and cues to promote healthy lifestyle

behaviours. As such, community-based interventions which modify physicalenvironmental, social-environmental and policy-level factors may lead to more positive health behaviours being adopted among children and adolescents (Kahn et al., 2002).

In a community-based study of the effects of the California Safe Routes to School (SR2S) project, a retrospective cross-sectional analysis was conducted to investigate the relationship between urban design changes and active travel to school (Boarnet et al., 2005). The SR2S project was designed to increase pedestrian and bicycle safety routes surrounding local schools. The intention was to promote active travel among children in grades 3-5. The study by Boarnet et al (2005) was conducted across 10 different schools in California, which had varying types of urban design change as part of the SR2S project. Changes in urban design included the installation of new pavements, additional pedestrian crossings and signalling and the introduction of traffic signals. Using proxy report, data were collected from parents at 1 month and 18 months post-implementation of the SR2S project to assess changes in their children's transportation to school. Data were compared with parental proxy reports on children who did not pass the SR2S project en route to school. The study revealed that a higher proportion of children (15%) walked or cycled to school post implementation of the SR2S project than children who did not pass the project changes (4%). The positive impact of urban design modifications on children's activity behaviours was highlighted in this study. In particular, the evidence highlighted the positive influence on children from diverse settings, of differing demographics and varied environment settings (Boarnet et al., 2005).

Positive intervention effects on physical activity were also shown in a combined community and school-based intervention aimed at adolescent girls, known as the Trial of Activity in Adolescent Girls (TAAG) (Stevens et al., 2005). This 2 year intervention was designed to link schools to community organisations to target the age-related decline in MVPA among adolescent girls (Stevens et al., 2005). The intervention was based on a socioecological framework (Sallis and Owen, 1997), and the program was designed to increase the time spent in MVPA. Intervention components included changes in social support, increased self-efficacy, positive outcome expectancies of physical activity and behavioural skills to promote increased MVPA. The program was implemented at the school and community-level, and was delivered in addition to the regular school-based PE. To achieve the program goals, TAAG health education classes were used to alter levels of self-efficacy, outcome expectancies and behavioural skills. TAAG PE classes were used to promote MVPA for a minimum of 50% of the lesson time. Through social marketing, TAAG promotions used media,

promotional events and school-based messages to promote physical activity among girls. To ensure maintenance of the program post the initial 2 year delivery period, 'Program Champions' were trained to continue the existing intervention activities and promote the intervention to policymakers and community-level implementers (Webber et al., 2008).

Two years post-implementation, the results indicated that there were no significant differences in the average minutes of MVPA between 8<sup>th</sup> grade girls in the intervention and control group. After 3 years, however, the average minutes of MVPA remained about the same for the intervention group yet decreased among the control group. Amongst both groups, however, the average minutes of MVPA decreased during the 6<sup>th</sup> - 8<sup>th</sup> grade. The decrease among the control group equated to approximately 15%, whereas amongst the intervention group this decrease was only approximately 6%. Differences in the time spent in MVPA were only observed in the intervention group, however, no differences were observed for the total minutes of physical activity. After 3 years of the TAAG intervention, modest differences between adolescent girls in the intervention and control group were observed. The time spent in MVPA was greater within intervention schools overall. The greatest differences in MVPA between the intervention and control groups were observed during the hours 2-5pm, specifically when most of the TAAG programs were delivered. Overall, the TAAG intervention was effective at increasing the time spent in MVPA amongst adolescent girls. The differences observed were small, however, and significant differences were only observed 3 years post-intervention implementation.

Further evidence for the modest effects of the long-term implementation of communitybased interventions was shown following the VERB campaign (Huhman et al., 2005, Huhman et al., 2010). During 2002-2006, the Centers for Disease Control and Prevention (CDC) launched a national public health intervention known as the VERB campaign. The campaign was designed to encourage children aged 9-13 years old to engage in physical activity each day (Wong et al., 2004). The VERB campaign was a social marketing strategy designed to promote the benefits of physical activity, increase self-efficacy and target social influences such as family/peers. This was achieved through the media, internet, school and the local community. Physical activity was measured using the Youth Media Campaign Longitudinal Survey (YMCLS), which is a self-report telephone survey. Leisure time physical activity during the previous week, organised physical activity during the previous week and physical activity the day before the survey were all measured. Psychosocial factors included the child's outcome expectancies for physical activity participation, their level of self-efficacy towards barriers to physical activity and social influences such as social norms for physical activity participation.

At 1 year post-intervention, no overall effects on children's leisure time physical activity were observed. Increases in population-level sports participation or previous day physical activity also failed to be identified (Huhman et al., 2005, Huhman et al., 2007). At 2 years post-intervention, however, significant positive effects were shown for leisure time physical activity during the previous week, previous day physical activity and expectations about physical activity participation (Huhman et al., 2005, Huhman et al., 2007). As the intervention effects were stronger 2 years post-intervention, Huhman et al (2010) assessed the total effects of the VERB campaign since its launch in 2002. Three cohorts of children and parents were used. One cohort was recruited in 2002 pre-intervention implementation, and two new cohorts were introduced during 2004 and 2006, 2-4 years post–intervention.

It was shown that a higher proportion of children aged 10-13 years reported previous day physical activity if they had been exposed to the intervention every day, than those who had not. This positive dose-response association was consistent across data collected in 2004, 2005 and 2006 (Huhman et al., 2010). Leisure time physical activity during the previous week was also significantly positively correlated with campaign exposure in 2004 and 2005, and organised physical activity was consistently unrelated to campaign exposure at all three measure points (Huhman et al., 2010). A similar dose-response relationship was observed across the three psychosocial variables. Increased exposure to the intervention significantly increased children's outcome expectancies, level of self-efficacy and influence of social factors. This dose-response association also emerged among adolescents aged 13-17 years who were originally targeted by the campaign in 2002. However, the positive effects decreased over time (Huhman et al., 2010). Overall, the VERB campaign produced some modest effects on child and adolescent physical activity as a result of campaign awareness sustained over the intervention period. Limited results at 1 year post-intervention do question the immediate short-term effectiveness of community-based media campaigns, and suggest that interventions taking this approach need to be implemented in the long-term in order to produce statistically meaningful results.

Although there is evidence for some positive effects of community-based interventions, the effects are typically small, and the long-term maintenance of intervention effects are inconsistent (de Meester et al., 2009, van Sluijs et al., 2008). Positive effects of community-based interventions appear to increase over time, however. The short-term

assessments of such interventions show either weak or no intervention effects, whereas significant increases in physical activity are often shown after a longer intervention implementation period (Huhman et al., 2010, Webber et al., 2008). Community-based interventions, which are delivered over an extended period, may successfully increase physical activity among pediatric populations, and lead to more positive long-term health benefits.

The physical environment is an important setting for the modification of physical activity behaviours, as community-based interventions can reach whole populations and have the potential for a substantial level of impact. Children and adolescents spend a considerable amount of time in community settings, and are exposed to a wide range of situations, information and they interact with an array of different individuals. It is unknown what isolated effects these factors have on child and adolescent physical activity patterns, and further exploration of the unique and combined role of behavioural and social factors is necessary (Kamath et al., 2008). It is unclear whether social and physical environmental factors have a mediating or moderating effect on physical activity behaviours, and what interaction these factors may have. Systematically identifying the most important social and ecological factors affecting physical activity participation during youth may increase the effectiveness of community-based interventions. Through a multilevel approach to behaviour change, individual and environmental factors can be targeted simultaneously. This could potentially enhance the reach and effectiveness of physical activity interventions aimed at children and adolescents in the long-term (King et al., 2002).

## 2.6.2.1 Multicomponent Community-Based Interventions to Promote Physical Activity

Among larger populations, community-based strategies can be, to some extent, effective at increasing physical activity behaviours. To achieve the greatest positive impact, however, multiple environmental modifications should be combined to create multicomponent interventions (King et al., 2002). In comparison to programs implemented at one level alone, the strongest intervention effects have been observed following school-based interventions, which include an additional family or community-level component. Therefore, to effectively change the long-term physical activity behaviours of children and adolescents, a multicomponent approach to behaviour change is argued to be the most promising strategy (Kelly and Melnyk, 2008, Naylor and McKay, 2009, van Sluijs et al., 2008).

Positive findings for the effects of a 6-month multicomponent community-based intervention aimed at children were shown as part of the Mind, Exercise, Nutrition, Do it (MEND) Program (Sacher et al., 2010). The aim of the intervention was to promote individual-level behaviour change through educational nutrition sessions, behavioural skills training, motivational encouragement and non-competitive exercise. This randomised control trial (RCT) took a whole-family approach to behaviour change through a 9-week MEND educational and physical activity program, followed by a 12week free family swimming pass. Measures were taken at baseline, 6 months and at a 12-month post-intervention follow-up. Physical activity was measured using self-report completed by both the parents and children. Results at 6 months showed significant differences in physical activity participation between the intervention and control group, 14 hours and 11 hours per week respectively. At 12 months, an increase of approximately 4 hours per week was observed, since baseline measures, and sedentary behaviour had decreased by approximately 2 hours per week (Sacher et al., 2010). The positive effects of a multicomponent community-based intervention were thus successfully demonstrated. Although the post-intervention follow-up period was relatively short, the positive increases in physical activity and decreases in sedentary behaviours were sustained.

Positive increases in adolescent physical activity were also shown in a multicomponent school-based intervention known as the Lifestyle Education for Physical Activity Program (LEAP) (Pate et al., 2005). The intervention was implemented during 1998-2000 in 24 high schools in South Carolina. The program specifically targeted the duration and intensity of physical activity among adolescent girls in grades 8 and 9. This RCT was framed on the social ecological model of health behaviour, and incorporated six core intervention components: PE, health education, the school environment, the school health services, staff health promotion and family/community involvement (Pate et al., 2005). The intervention was delivered primarily through two routes. Firstly through an instructional approach, which involved changes to the content and delivery of PE and health education. This LEAP PE program was intended to increase self-efficacy and physical activity enjoyment, teach physical and behavioural skills to maintain an active lifestyle and to encourage girls to engage in MVPA for at least 50% of the PE lesson. The second route was through an environmental approach, which was designed to create a supportive environment for physical activity among girls. The environmental approach involved role modelling by staff members, increased physical activity information, promotion of physical activity by the school nurse and family/communitybased activities (Pate et al., 2005). Physical activity was assessed using a 3-day

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Previous Day Physical Activity Recall (PDPAR) questionnaire, adapted from the original 7-day PDPAR (Weston et al., 1997). The results at follow-up when participants were in the 9<sup>th</sup> grade showed that the LEAP program successfully increased regular participation in vigorous physical activity among adolescent girls. Based on self-report data, approximately 45% of the intervention group versus 36% of the control group achieved on average at least one 30-minute bout of vigorous physical activity per day. intervention The LEAP took а combined behavioural. educational and family/community-based approach to increase physical activity, thereby providing positive evidence for a multicomponent approach to increase physical activity among adolescent girls.

A multicomponent strategy that used a community-based intervention, known as the Intervention Centred on Adolescents' Physical activity and Sedentary behaviour (ICAPS), also produced a positive increase in adolescent physical activity (Simon et al., 2006). Based on the socioecological perspective, the program combined an individual, social and physical environmental approach to behaviour change. The program was delivered through health education, promotion of lifelong health behaviours and increased opportunities for physical activity during school and after-school hours. Families were incorporated through regular meetings to encourage support for physical activity, active travel to school and reduction in sedentary time. The community-based component included free access to local recreational facilities and the provision of additional transport systems to increase access.

The aim of the intervention was to change knowledge, attitudes and motivation towards physical activity. Furthermore, it aimed to encourage social support by parents, peers and PE staff, and provide environmental, structural and institutional situations that promote physical activity. The intervention was implemented over a period of 4 years, and the focus of the study by Simon et al (2006) was to evaluate the effects after the first 6 months. At 6 months, it was shown that the proportion of adolescents that engaged in supervised physical activity outside of the school environment increased from 64% to 83%, whereas it was unchanged in the control group. The proportion of adolescents who engaged in more than 3 hours per day of sedentary behaviour decreased from 34% to 28%. Although in its preliminary stages, the short-term effectiveness of this multicomponent intervention appeared effective at increasing the physical activity of adolescents outside the school environment. Incorporating the school, family and community to increase leisure time physical activity may lead to more effective intervention results. However, evaluation of the long-term effectiveness of the ICAPS intervention is still needed.

Positive effects of multicomponent interventions aimed at adolescents have previously been shown, although, mixed findings of the impact of a multicomponent intervention aimed at children were reported in the JUMP-in intervention (Jurg et al., 2006). The intervention was aimed at Dutch children from low socio-economic backgrounds, and combined theory, environmental modifications, parental influences and communitybased involvement to increase physical activity. The intervention consisted of six program components, which included: school-based sport activities, in-class exercises to promote self-esteem, awareness and enjoyment of physical activity, planning skills for the children and parents and an activity week including sports activities including parental participation (Jurg et al., 2006). Physical activity was measured using selfreport questionnaires, and, following 1 year of the intervention, physical activity significantly increased amongst 6<sup>th</sup> grade children. There were no significant increases in physical activity among 4<sup>th</sup> and 5<sup>th</sup> grade children, however. The only intervention effects observed among 4<sup>th</sup> grade children were a positive increase in the perceived advantage, and habit, for physical activity uptake. The study showed that the JUMP-in intervention was effective at increasing physical activity among older children in the sample, although, ineffective at increasing the physical activity among the younger children. The overall effects were modest and based on self-report. This study does provide, however, some mixed evidence of a multicomponent approach to increase physical activity.

Limitations and methodological weaknesses of intervention designs make drawing conclusions on the effectiveness of interventions within different environments challenging (Dobbins et al., 2009). The inherent difficulties in conducting research within the community, and challenges associated with measuring physical activity, may contribute to the variability in findings across interventions (Dobbins et al., 2009). In general, there is a lack of post-intervention follow-up amongst community-based interventions, and difficulties associated with randomisation, blind assessment and the reliability and validity of outcome measures. This in turn limits the generalisability of conclusions and policy-level recommendations. Long-term evaluations are imperative for community-based research, in particular for interventions that report positive effects on physical activity immediately post-intervention (Dobbins et al., 2009).

The most positive findings for a multicomponent approach to behaviour change have been shown with older children and adolescents (Pate et al., 2007, Young et al., 2006, Simon et al., 2006), yet there is inconclusive evidence for the overriding benefits of a multi-component approach among children (de Meester et al., 2009, van Sluijs et al., 2008). In a systematic review of interventions to increase physical activity among children and adolescents among studies, which utilised a multicomponent approach to increase physical activity in children, few reported significant positive findings. Interventions that target more than one health behaviour appear less effective in changing physical activity, in particular when physical activity is a secondary outcome measure (de Meester et al., 2009). There are known distinctions between actual and perceived environmental barriers to physical activity uptake (Ferreira et al., 2007; Timperio, Crawford, Telford, & Salmon, 2004), and future research should consider the impact of these differences.

The feasibility and potential for community-based interventions should not, however, be dismissed. Although traditional cognitive approaches combined with environmental strategies may increase physical activity participation among adolescents and older children (van Sluijs et al., 2008), more structural, environmental or policy changes might be needed to change younger children's physical activity behaviour. Intervention strategies that are predominantly school-based, but involve the wider community, have shown encouraging results (Jurg et al., 2006; Simon et al., 2006). If changes within the physical environment are combined with changes to an individual's perception of their environment (Lubans et al., 2008), multicomponent strategies may produce more long-term positive effects on child and adolescent physical activity.

### 2.6.3 Summary

Despite some evidence for the positive impact of interventions aimed at children and adolescents, there remains relatively limited quality data to ascertain which type of intervention is most effective at promoting physical activity. Fewer studies have evaluated the long-term program effects post-intervention, limiting the ability to draw accurate conclusions and generalise the study results (Timperio et al., 2004b, Reilly, 2008). It is inevitable that intervention effects vary somewhat across children of different ages as biologically, physiologically and psychologically they will differ, based on their stage of development at the point of assessment (Oude Luttikhuis et al., 2009). If physical activity interventions are to be effective at changing the life-long behavioural patterns of children and adolescents, differences in the age and developmental stage of the target population need to be addressed. A multidimensional ecological approach to physical activity promotion has become a more popular strategy to intervene (van Sluijs et al., 2008), as the context of the behaviour and setting of the intervention are equally represented. Exclusively targeting the school, family or community in an attempt to

increase physical activity and health behaviours has produced inclusive and limited results. A combined physical activity, environmental and behavioural approach involving the school, family and community appears to be a more effective strategy of behaviour change.

## 2.7 Summary of the Literature Review

Prior to summarizing the evidence presented throughout this chapter, it is essential to highlight that a systematic approach to reviewing the current literature was not taken. Systematic reviews are considered the gold standard for synthesising a large body of evidence due to the potential for researcher bias in the selection, sourcing and presentation of the argument. In order to minimise any potential effects of researcher bias in the presentation of this literature, a thorough assessment of current and recent systematic reviews was undertaken. These systematic reviews, along with papers on the topic in general, were used as a guide in which to frame and summarise the evidence presented within this chapter. Taking this approach has meant a more objective review of the evidence surrounding child and adolescent physical activity has been presented, yet the limitations of taking an unsystematic approach have been acknowledged.

Irrespective of the advances in knowledge surrounding child and adolescent health, the message remains largely unchanged over the course of the last two decades. Potentially the most effective way to improve child and adolescent health is through a behavioural pattern of regular physical activity, maintained throughout life. It is of primary importance, therefore, to identify the most effective ways to increase and sustain physical activity during youth. It is known that interventions targeting multiple levels and domains within the environment are more likely to create an improvement in health behaviours (Casey et al., 2009b, Naylor et al., 2006). It is unclear, however, what role specific factors at each level have on individual physical activity behaviours, or the best way to measure these. Measuring how much of the change in physical activity levels is due to a shift in physical activity behaviour, and how much of this is attributed to the intervention itself, is extremely problematic. As such, the effectiveness of interventions has come under greater scrutiny, and assessment of the long-term impact of interventions is essential.

Program evaluation is an essential part of intervention implementation as it adds an important dimension to the efficacy conclusions that are drawn. Program evaluation

differs from traditional research in that its primary aim is to improve a program through assessments of the importance, relevance and worth of an intervention, as opposed to just the measurable outcomes (Koplan et al., 2002). Program evaluation forms the basis of this thesis, and mixed methods within a case study design will be the strategy used to conduct this research. The lessons learnt from this case study will be informative about existing physical activity programs within the community, as well as the development of new ones. The findings will highlight the strengths and weaknesses of program design, and the internal and external validity issues related to community-based physical activity interventions. The patterns of physical activity observed among children and adolescents are embedded in the social and cultural fabric of society (Davison and Birch, 2001). By taking a more holistic approach to scientific understanding throughout this thesis, a broader understanding of physical activity promotion among children and adolescents can potentially be achieved.

The following chapter presents the epidemiological study conducted to assess differences in the type, timing and context of physical activity among active and inactive adolescents. This study was conducted prior to the case study evaluation of the Tribe Project in order to gain a better understanding of differences in adolescent physical activity behaviours, and the context within which to intervene effectively.

## CHAPTER 3: THE ASSOCIATION BETWEEN THE TYPE, CONTEXT AND LEVELS OF PHYSICAL ACTIVITY AMONGST ADOLESCENTS

This chapter presents the epidemiological study conducted prior to the case study evaluation of the Tribe Project. This is a complete copy of the paper, which has been published in the Journal of Physical Activity and Health. The reference for this paper is as follows:

Koorts, H., Mattocks, M., Ness, A., Deere, K., Blair, S. N., Pate, R., & Riddoch, C. 'The association between the type, context and levels of physical activity amongst adolescents' *Journal of Physical Activity & Health*, 2011, 8, 1057 – 1065

## 3.1 Abstract

**Background:** Little is known about how the type and context of physical activity behaviours varies amongst adolescents with differing activity levels. The aim of this study was to assess differences in the type and context of physical activity behaviours in adolescents by level of objectively measured physical activity.

**Methods:** Cross-sectional analysis of 2728 adolescents (1299 males, 1429 females) participating in the Avon Longitudinal Study of Parents and Children (ALSPAC). The mean (SD) age was 13.8 (+0.1) years. Physical activity was measured using an Actigraph over 7 days. Adolescents were categorised into tertiles of activity (less, moderately, and highly active) using counts/min and min/d of moderate to vigorous activity (MVPA). Activity type was reported using the Previous Day Physical Activity Recall (PDPAR) questionnaire. Differences in the type and context of activity by activity level were analysed using Chi squared.

**Results:** Highly active boys reported more job, outside and sports activities on school days (P<0.05), and more sports activities on non-school days (P<0.05). Highly active girls reported more outside activities on school days (P<0.05).

**Conclusions:** Identifying the type and context of physical activity behaviours associated with more active adolescents, can help inform policy and physical activity interventions aimed at increasing activity levels in adolescents.

### 3.2 Introduction

Low levels of physical activity are ubiquitous in Western societies and have major implications for health (Department of Health, 2004). Despite recommendations that children and adolescents spend 60 minutes per day in moderate to vigorous physical activity (MVPA) (Department of Health, 2004), a large proportion of children and adolescents fail to achieve these levels (Riddoch et al., 2007, Strong et al., 2005). This may impact public health, as a physically active childhood has many established benefits, including improved bone health (Brooke-Wavell and Stensel, 2008), a reduced risk of obesity (Gillis et al., 2006, Trost et al., 2003), and a lower risk of developing type II diabetes (Dwyer et al., 2008b). A physically active childhood has also been linked to higher activity levels in later life (Hulens et al., 2001, Telama, 2009).

It has also been reported that boys are generally more active than girls, and participate in greater amounts of MVPA (Trost et al., 2002, Nader et al., 2008). It is also known that boys and girls exhibit different daily patterns of physical activity (Nilsson et al., 2008). However, very little is known about how the type and context of physical activity varies between adolescents of differing activity levels. Research to date has shown that school and after-school based physical activity programs have a mixed impact on the physical activity levels of children and adolescents (Pate and O'Neill, 2009, Timperio et al., 2004b, van Sluijs et al., 2007). There is limited evidence on the associations between the school and after-school environment, and the physical activity levels of adolescents (Ferreira, 2007; Salmon, 2007). Hence, our understanding of the range of determinants likely to influence adolescent's activity levels is incomplete (Mattocks et al., 2008a). Knowledge of the type and context in which active adolescents achieve their higher activity levels has the potential to improve our ability to formulate more effective interventions and public health policies.

The aim of this study therefore was to assess differences in the type and context of physical activity in adolescents of differing objectively measured activity levels.

### 3.3 Methods

### 3.3.1 Study Population

The analysis was conducted using data from adolescents participating in the Avon Longitudinal Study of Parents and Children (ALSPAC), a birth cohort study located in the southwest of England (<u>http://www.alspac.bris.ac.uk</u>) (Golding et al., 2001). A total of 14541 pregnant women were recruited, resulting in 14062 live births, with an estimated due date between April 1991 and December 1992 (Golding et al., 2001). Detailed data have since been collected from the children, their mothers and partners. From age 7 onwards, the children have been invited to attend research clinics, in order for further physiological and psychometric data to be collected (Mattocks et al., 2008a, Golding et al., 2001). All adolescents who attended the ALSPAC study clinic at age 13 were asked to wear an Actigraph accelerometer for 7 days. Data was collected during January 2005 to October 2006. Ethical approval for the study was obtained from the ALSPAC Law and Ethics Committee, and Local Research Ethics Committees.

#### 3.3.1.1 Physical activity Measurement

Physical Activity was measured at about age 14 years using the Actigraph accelerometer (Actigraph; LLC, Fort Walton Beach, FI), worn over a 7-day period. Data were collected from January 2005 to October 2006.The Actigraph is an electronic motion sensor comprising a single plane (vertical) accelerometer, which is small and light and was worn on the right hip. Actigraphs were initialised to start recording at 5am on the day following each clinic visit. A measurement epoch of 1 minute was used, and the adolescents were asked to wear the Actigraph during waking hours and only to take it off for showering, bathing, or any water sports (Mattocks et al., 2008b). A daily timesheet was provided to record the times the Actigraph was put on and taken off, and the reason for doing so. Participants were also asked to record any times (in minutes) that they swam or cycled each day. Actigraphs were posted back, and data were downloaded using the Actigraph Reader Interface Unit and software (Mattocks et al., 2008b). The Actigraph has been comprehensively validated for use with children and adolescents, against heart-rate telemetry (Janz, 1994), indirect calorimetry (Puyau et al., 2002, Trost et al., 2005) and doubly labelled water (Leenders et al., 2001).

### 3.3.1.2 Derivation of Physical Activity Variables

Two physical activity variables were calculated; total physical activity, measured as the average accelerometer counts/min over the period of valid recording, and the average minutes of MVPA recorded per valid day of activity measurement. Minutes of MVPA per day, was selected as the primary outcome variable as current physical activity recommendations are framed in terms of time spent each day in MVPA (Department of Health, 2004) and we have previously shown that MVPA may be a more important determinant of obesity than counts/min (Ness et al., 2007). The cut point for MVPA (3600 counts/min) were derived from a calibration study of 246 children in which Actigraph counts/min were compared with oxygen uptake (Mattocks et al., 2007a). Data was considered valid if the Actigraph had been worn for at least 10 hours per day for at least 3 of the 7 days. This is a level previously shown as providing good power and reliability (Mattocks et al., 2008b). Ten or more minutes of consecutive zeros were regarded as periods in which the monitor was unworn, and these were deleted from each file (Riddoch et al., 2004). If on any one day the average counts/min was less than 150 or the average counts/min more than 3 SDs above the mean (Tremblay et al., 2005), we excluded this day of recording because we considered this level of physical activity to be behaviourally implausible (Mattocks et al., 2008b). Although a weekend day was not specified in order to fulfil validity criteria, 84% of children had at least 1 weekend day of recording (Mattocks et al., 2008b). Participants were categorised into gender-specific tertiles of activity, (T1 = less active, T2 = moderately active, T3 = highly active) firstly by min/d of MVPA and secondly by counts/min. Gender specific tertiles were used as boys are consistently shown to be more active than girls (Brodersen et al., 2007, Nader et al., 2008) and have different patterns of physical activity (Nilsson et al., 2008). Analyses were conducted for both sets of data, and MVPA and counts/min were adjusted for the accelerometer season of wear, and MVPA for the average minutes wear time. As the results for the counts/min and min/d of MVPA showed a similar pattern, we report only the results for MVPA.

### 3.3.1.3 Questionnaire Data

During the research clinic visit, participants completed a computer-based questionnaire in which they recorded their previous day's activities. For all participants, the day for which activity information was collected was two days before the first day of accelerometer measurement. The tertiles of activity from the accelerometers were generated after completion of the questionnaire. The questionnaire was based on the Previous Day Physical Activity Recall questionnaire (PDPAR) (Weston et al., 1997), adapted to be suitable for British children. Questions on the amount and intensity of physical activity were omitted, as the purpose was to provide information on the type and context of activities. The questionnaire took around ten minutes to complete. Six different categories of activities were presented to the children; each category had a drop down list of activities. Comprehensive lists of activities were compiled from available databases of children's activities, including other questionnaires, national surveys, Sport England databases. Participants were asked to tick the activities in which they had participated, during the previous day. For each selected activity, they also reported the time of day it was performed. Table 2 shows the six different categories of activity that were included in the questionnaire. Table 3 shows the different times of day, on a school day and non-school day that were included in the questionnaire.

 Table 2: Categories of Activity and Activity Examples, Presented in the PDPAR

 Questionnaire

Category of Activity	Example of Activity
Housework	Tidying up, meal preparation, gardening
<b>Outside Activities</b>	Skateboarding, riding a bike
Active Job	Paper round, Girl Guides, Scouts
Sedentary time	Listening to music, homework, computer games
Sports Participation	Netball, table tennis, football
Active Travel (Walk)	Car, cycling, bus

# Table 3: Times of the Day on a School and Non-School Day, Presented in the PDPAR

Time of the Day	School Day	Non-School Day
1	Get Up – Start School	Getting Up – Breakfast
2	Start School – Lunch	Breakfast – Lunch
3	Lunch Break	Lunch – Evening Meal
4	Lunch – End School	Evening Meal – Going to Bed
5	End School – Evening Meal	
6	Evening Meal – Going to Bed	

### 3.3.1.4 Statistical Analysis

Means and standard deviations (SD) were calculated for normally distributed variables, medians and interquartile ranges (IQR) were calculated for variables not normally distributed. Each activity reported by the child was recorded as one 'occasion' of activity. The total number of reported occasions of activity was then calculated within each of the six activity categories. The total number of reported occasions of activity was used for the analysis. This process was repeated for school and non-school days, appropriate to the day the participant was reporting, and also within each time segment of the day. Differences between the proportions of activities in activity tertiles were analysed using the Chi squared test. MVPA was adjusted for minutes worn to account for variations in wear time and both MVPA and counts/min were adjusted for season of measurement. All statistical analyses were conducted using SPSS v.14 for Windows and Stata 10.

### 3.4 Results

A total of 11,267 adolescents were invited to the 13-year clinic, of which 6152 attended. Questionnaire data was obtained from 4344 and accelerometer data from 3759. Questionnaire and accelerometer data were available from 3304 adolescents. Participants with less than 600 minutes per day of valid accelerometer data over a period of at least 3 days were excluded from the analysis, N = 576 (302 boys and 274 girls). Some small differences have previously been found between the characteristics of those who provided valid accelerometry data and those who did not. There were differences terms of age, weight, body mass index, sex and pubertal status; however the size of these differences were small (Mattocks et al., 2008b). The final sample with complete and valid data from both accelerometer and questionnaire was 2728 children (1299 boys and 1429 girls). This represents 44% of those attending the clinic.

Questionnaire data representing a school day were collected from 1715 participants (840 boys and 875 girls), and from 1013 participants (459 boys and 554 girls) on a non-school day. The questionnaire stipulates school days and non-school days only, and the accelerometer records data on a weekday and weekend day only. Although we are unable to report whether the questionnaire data was collected on a week or weekend day, 84% of the children had at least one weekend day of accelerometer recording. The mean (SD) age of the participants was 13.8 ( $\pm$ 0.1) years therefore they are referred to

as 14 year olds. Table 4 shows the descriptive and physical activity data for those participating in the study. It can be seen that boys had higher levels of total activity compared to girls. Table 5 shows the minutes of MVPA by tertile, on both school days and non-school days.

Table 4: Descriptive Statistics of PA Levels by Gender

	All	Boys	Girls	р
	N = 2728	N= 1299	N= 1429	
* Age (Years)	13.8 (0.1)	13.8 (0.1)	13.8 (0.1	p = 1.00
Total physical activity (counts/min)	478 (377 – 609)	539 (425 - 677)	431 (345 - 536)	< 0.001
Total physical activity weekdays (counts/min)	490 (386 – 624)	563 (440 - 693)	426 (331 - 543)	< 0.001
Total physical activity weekend (counts/min)	399 (274 – 582)	426 (285 - 626)	375 (268 - 532)	< 0.001
MVPA (min/day)	19 (11 - 31)	23 (14 - 36)	17 (9 - 26)	< 0.001
MVPA weekdays (min/day)	21 (12 - 34)	25 (15 - 39)	18 (10 - 28)	< 0.001
MVPA weekend (min/day)	11 (4 - 24)	13 (5 - 29)	9 (3 - 20)	< 0.001
* Total Wear Time (min/day)	790 (55.2)	793 (56.3)	787 (54.1)	< 0.001
* Weekday Wear Time (min/day)	804 (62.5)	806 (62.6)	802 (62.4)	< 0.001
* Weekend Day Wear Time (min/day)	747 (79.7)	756 (81.1)	738 (77.3)	< 0.001

MVPA - moderate to vigorous physical activity. *P* values relate to sex differences. Data are median and interquartile range (IQR). Asterisk indicates data are mean and standard deviation (SD).

	Total	T1: Less Active		T	T2: Moderately Active			T3: Highly Active		
		Ν	Median	(IQR)	Ν	Media	n (IQR)	Ν	Media	n (IQR)
School Day										
All	1715	571	9	(6, 12.2)	572	20.5	(17.4, 23.5)	572	36.7	(31.2, 46.4)
Boys	840	280	12	(8, 15.1)	280	25	(21.2, 28.2)	280	42.2	(36.2, 51.5)
Girls	875	291	7.4	(4.8, 9.8)	292	17	(14.6, 19.5)	292	30.5	(26.2, 38.2)
Non-school Day										
All	1013	337	7.3	(4.1, 10)	338	18.1	(15.3, 21.4)	338	37.1	(30.3, 46.7)
Boys	459	153	9.3	(5.1, 12.3)	153	21	(17.7, 25.6)	153	42.1	(34.6, 47.7)
Girls	554	184	6.3	(3.5, 8.4)	185	15.9	(13, 18.8)	185	30.8	(25.2, 41.6)

## Table 5: Physical Activity Levels, mins/d of MVPA, by Activity Tertile

Figures 4 to 7 show the distribution of physical activity, by activity type, and activity tertile, on school and non-school days, for boys and girls. In comparison to less and moderately active boys, highly active boys reported more job, outside and sports activities on school days, and sports activities on non-school days. In comparison to less and moderately active girls, highly active girls reported more outside activities on school days. Overall, differences between the activity tertiles were greater on school days compared to non-school days.

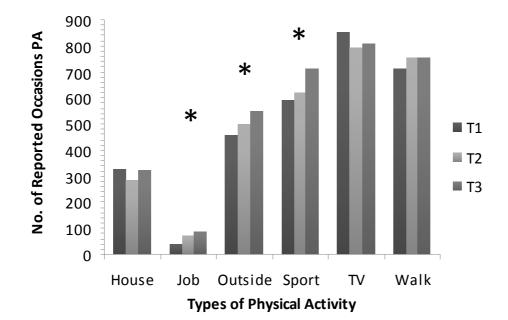
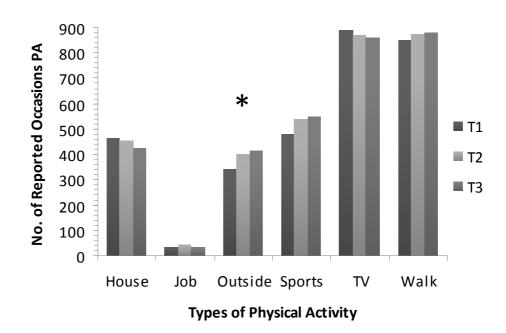
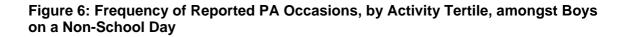


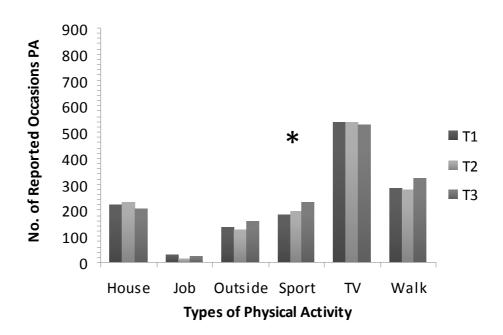
Figure 4: Frequency of Reported PA Occasions, by Activity Tertile, amongst Boys on a School Day

Activity tertiles delineated by accelerometer average mins/d of MVPA. \* indicates differences between tertiles, p<0.05. T1 = least active tertile Figure 5: Frequency of Reported PA Occasions, by Activity Tertile, amongst Girls on a School Day



Activity tertiles delineated by accelerometer average mins/d of MVPA. \* indicates differences between tertiles, p<0.05. T1 = least active tertile





Activity tertiles delineated by accelerometer average mins/d of MVPA. \* indicates differences between tertiles, p<0.05. T1 = least active tertile

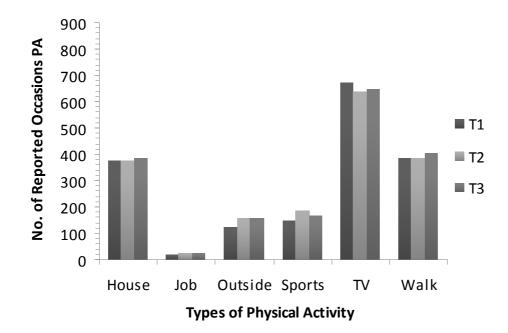


Figure 7: Frequency of Reported PA Occasions, by Activity Tertile, amongst Girls on a Non-School Day

Activity tertiles delineated by accelerometer average mins/d of MVPA. \* indicates differences between tertiles, p < 0.05 T1 = least active tertile

Tables 6 to 9 show the frequency of activity occasions, across tertiles, at different time periods on school days and non-school days. There were no differences observed amongst boys or girls of differing physical activity levels, and the frequency of physical activity participation. Analyses were also conducted for physical activity tertiles defined by counts/min (Appendix A). The frequency of physical activity occasions observed for counts/min was broadly similar to those for the average mins/day of MVPA, (data not shown).

	Total occasions of physical activity performed at six different times on a school day.							
	Getting Up -	Start School -	Lunch Break	Lunch - End of	End School -	Evening Meal - Go		
	Start School	Lunch		School	Evening Meal	to Bed		
T1: Less Active	759	270	466	145	819	523		
T2: Moderately Active	745	300	481	153	794	552		
T3: Highly Active	796	322	488	150	879	597		
<b>Observed Differences</b>	X <sup>2</sup> = 1.81	$X^2 = 4.58$	$X^2 = 0.53$	$X^2 = 0.22$	$X^2 = 4.59$	$X^2 = 4.99$		
between T1, T2 & T3	df =2 p = 0.40	df =2 p = 0.10	df =2 p = 0.77	df =2 p = 0.90	df =2 p = 0.10	df =2 p = 0.08		

## Table 6: Daily Distribution of Boys' PA by Activity Tertile, mins/d of MVPA, on a School Day

Table 7: Daily Distribution of Girl's PA by Activity Tertile, mins/d of MVPA, on a School Day

	Total occasions of physical activity performed at six different times on a school day.							
	Getting Up -	Start School -	Lunch Break	Lunch - End of	End School -	Evening Meal - Go		
	Start School	Lunch		School	Evening Meal	to Bed		
T1: Less Active	782	225	453	129	856	617		
T2: Moderately Active	782	264	471	141	900	634		
T3: Highly Active	800	270	466	146	870	611		
<b>Observed Differences</b>	$X^2 = 0.27$	$X^2 = 4.72$	$X^2 = 0.37$	$X^2 = 1.10$	X <sup>2</sup> = 1.15	$X^2 = 0.46$		
between T1, T2 & T3	df =2 p = 0.87	df =2 p = 0.09	df =2 p = 0.83	df =2 p = 0.58	df =2 p = 0.56	df =2 p = 0.80		

	Total occasions of physical activity performed at six different times on a school day.							
	Getting Up – Breakfast	Breakfast – Lunch	Lunch – Evening Meal	Evening Meal – Go to Bed				
T1: Less Active	320	374	385	299				
T2: Moderately Active	301	380	409	287				
T3: Highly Active	335	395	415	327				
Observed Differences	X <sup>2</sup> = 1.82	X <sup>2</sup> = 0.61	X <sup>2</sup> = 1.25	$X^2 = 2.77$				
between , T2 & T3	df =2 p = 0.40	df =2 p = 0.74	df =2 p = 0.54	df =2 p = 0.25				

## Table 8: Daily Distribution of Boy's PA by Activity Tertile, mins/d of MVPA, on a Non-School Day

Table 9: Daily Distribution of Girl's PA by Activity Tertile, mins/d of MVPA, on a Non-School Day

	Total occasions of physical activity performed at six different times on a school day.						
	Getting Up – Breakfast	Breakfast – Lunch	Lunch – Evening Meal	Evening Meal – Go to Bed			
T1: Less Active	422	474	472	361			
T2: Moderately Active	420	480	493	378			
T3: Highly Active	442	468	487	385			
Observed Differences	$X^2 = 0.69$	X <sup>2</sup> = 0.15	$X^2 = 0.48$	$X^2 = 0.81$			
between T1, T2 & T3	df =2 p = 0.71	df =2 p = 0.93	df =2 p = 0.79	df =2 p = 0.67			

## 3.5 Discussion

The main finding of this study is that most active boys participated in more job, outside and sport related activities on school days and sports activities on non-school days, than the least active boys. The most active girls participated in more outside activities on school days than the least active. The frequency of activity participation during different times of the day was unrelated to boy's or girl's activity tertile. Time spent in sedentary activities was also unrelated to the boy's or girl's activity tertile.

Involvement in paid work during adolescence has previously been associated with lower levels of leisure time physical activity in youth (Vilhjalmsson and Thorlindsson, 1998). In this study, involvement in an active job or volunteer work was associated with higher activity. It may be that any reduction in leisure activity resulting from the job may be compensated for by increases in activity in other domains, e.g. informal play. The activities considered as 'job' activities were a mixture of both paid (e.g. paper-round) and un-paid (e.g. Boy Scouts) activities, which might be conducted either indoors or outdoors. A positive association between the time spent outdoors and increased physical activity has previously been suggested (Dunton et al., 2007) and our results are in agreement with this.

A key and consistent finding in this study is that the more active boys reported playing more sport. It has previously been suggested that leisure time physical activity and sport may be important contributors to higher physical activity levels (Bowles et al., 2007). Further, studies exploring environmental correlates of physical activity have shown that participation in school PE classes and after-school community recreation programs are linked to higher levels of activity (Gordon-Larsen et al., 2000). Our results reinforce the potential importance of formal or informal participation in sport as a means of achieving higher activity levels in boys of this age.

In addition to the positive associations discussed above, some of the areas where we detected no associations are also worthy of mention. Previous studies investigating TV viewing and its relationship to physical activity have typically reported weak associations (Marshall et al., 2004, Smith et al., 2008). This study did not find any meaningful differences between the TV viewing habits of adolescents by activity tertile. Similar to previous studies of TV watching where gender differences have been typically small (Smith et al., 2008), we found no gender differences in TV viewing. These findings therefore suggest that the frequency TV viewing is not necessarily associated with an

inactive lifestyle. In particular the practice of using the frequency of TV viewing as a marker of a sedentary lifestyle may be inappropriate (Biddle et al., 2004).

Active travel has also been previously suggested as an important way to increase physical activity levels in children (Cooper et al., 2005). We have previously reported that children who regularly walk to school accrue more minutes of MVPA during the school week than children who travel by car (van Sluijs et al., 2009). However, we found no differences in the frequency of active travel by activity tertile in this study. This contrast may be due to age difference (12 years vs. 14 years) or due to the differences in the questions asked regarding active travel. There is mixed evidence to support a positive association between active travel and increased physical activity levels (Davison and Lawson, 2006). It may be that the distance and duration of active travel is a critical factor in determining whether adolescents actively commute, and the data from this study is unable to shed any light on this. It is likely that both individual and environmental factors have important influences on adolescents' active commuting patterns (Cooper et al., 2005).

We found no differences in the reported activities amongst boys or girls by time of day. These findings are inconsistent with the results of a recent study which found that 40% of non-school physical activity occurred between the hours 15.30 and 18.30 (Atkin et al., 2008). The findings are also inconsistent with a further study that reported positive associations between physical activity and attendance at after-school community activity programs (Gordon-Larsen et al., 2000).

### 3.5.1 Strengths & Limitations

Key strengths of the study are the large sample size, and the use of accelerometers to objectively measure physical activity. Limitations include potential bias caused by cohort attrition and non-response. Due to the large volume of data collected, it was not possible to examine each Actigraph file individually to check for errors, although files with apparently anomalous values were checked when they were imported into the Access Macro. Spurious files were also removed at the data cleaning stage (see Methods section). This may have resulted in some spurious files being accepted as valid. Valid accelerometer data was more likely to come from those of more socially advantaged backgrounds (Mattocks et al., 2008b). We have previously reported however, that both of these potential sources of bias are likely to be minimal (Riddoch et al., 2007). It is acknowledged that accelerometers are unable to accurately record

swimming, climbing, lifting and cycling activities, however a previous ALSPAC study of the same children when they were aged 12 (Mattocks et al., 2008a) found that removing those children who reported swimming and cycling (by self-report) from the analysis did not change the results. Further limitations are the one minute epoch used in this study may reduce the amount of vigorous activity reported since children typically move in short discontinuous bursts (Puyau et al., 2002); the computer based questionnaire provided a retrospective account of activity, which may lead to some misreporting (Oliver et al., 2007); there was no distinction in the questionnaire whether the 'previous day' was a weekday or weekend day.

## 3.6 Conclusions

This study has demonstrated some clear differences in the type and context of activities amongst adolescents, by tertile of objectively measured physical activity. Job, outside and sports activities were more commonly reported among the more active adolescents, and may be the means by which they achieve their higher activity levels. These findings may have implications for public health, as physical activity interventions could be more effective if targeted at specific activities. Although the school environment provides a monitored and structured environment in which to implement interventions, it seems that consideration of physical activity behaviours outside of the school environment may also be necessary to achieve a long term, sustained increase in boys' and girls' physical activity levels.

### 3.6.1 Acknowledgements

We are extremely grateful to all the families who took part in this study, the midwives for their help in recruiting them, and the whole ALSPAC team, which includes interviewers, computer and laboratory technicians, clerical workers, research scientists, volunteers, managers, receptionists and nurses. The UK Medical Research Council, the Wellcome Trust and the University of Bristol provide core support for ALSPAC.

### 3.6.2 Funding Source

This research was specifically funded by grants from National Heart, Lung and Blood Institute (R01 HL071248-01A).

### 3.7 Summary

In this chapter, differences in the type, timing and context of physical activity among active and inactive adolescents were assessed. Using quantitative data it was shown that the more active adolescents achieved their higher activity levels via outdoor (e.g. skateboarding, riding a bike) and sports-related activities. Based on the findings from this study, interventions targeted to promote physical activity within sport or outside contexts may lead to more informed interventions as a result. By evaluating the effectiveness of interventions that promote physical activity within sport or outside domains, a better understanding of the design, implementation and long-term sustainability could be achieved. To gain further insight into the effectiveness of interventions targeting sports or outside-related behaviours, a community-based sports program was chosen as the focus for an in-depth evaluation. This evaluation centres upon the Team Bath Tribe Project and forms the basis to the remainder of this thesis.

Although the findings from the current study are useful in understanding the context of physical activity during adolescence, the structure of the questionnaire and quantitative methods used limit the detail of the findings. As a result, the determinants of adolescents' participation in sport and outside-related activities and the specific form that these activities may entail remain unknown. To gain a more in-depth understanding of the determinants of sports or outside-related behaviours, and the specific form that these activities may take, an additional qualitative component to the research may have been more appropriate. To build on the findings from the current study, and gain a more detailed account of the ways in which children and adolescents engage in physical activity, a combined quantitative and qualitative approach may be more appropriate. A mixed method case study was therefore chosen as the strategy to conduct the in-depth evaluation of the Tribe Project. Such an approach provides the opportunity to gain a more in-depth and contextualised understanding of a sports-based program to promote physical activity during youth.

Case study research is a useful way of exploring the rationale, design, implementation and outcomes of interventions (Yin, 2003). By using a mixed method case study design, a more detailed and contextual understanding of the program's impact would be gained (Greene, 2007, Yin, 2003). According to Greene (2007), mixed methodology can lead to a more comprehensive understanding of social phenomena as the validity and credibility of the study is increased, the results produced are broader and more considerate of the complexity of human behaviour. Furthermore, different perspectives and methods of assessing the phenomena can be applied. The assumption is that a mix of methods will generate a better, more in-depth understanding than a single method alone. Conducting a mixed method case study evaluation of the Tribe Project is essential, therefore, as the theoretical principles of the program, and real life experiences of it, can be equally assessed (Yin, 1994). The findings from this case study would build upon the current evidence relating to the context of physical activity during adolescence, and increase our understanding of the impact of interventions designed to promote physical activity within sports domains.

The following chapter presents the methodological approach taken to conduct the indepth evaluation of the Tribe Project, and the rationale for the study design that was used.

# CHAPTER 4: CASE STUDY OF THE TRIBE PROJECT: RATIONALE AND DESIGN

# 4.1 Introduction

In this chapter, the methodological approach taken to conduct this in-depth evaluation of the Tribe Project is presented. This chapter outlines the data used to address the research questions, and the qualitative and quantitative analysis methods used to achieve this. The final part of this chapter addresses the reliability and validity issues surrounding this case study and the ethical implications for the particular type of methodology used. As stated in the introductory chapter, the aim of the present research is to conduct an in-depth evaluation of a community-based program to promote physical activity. Using a mixed methods case study design, the purpose is to evaluate its potential impact at both the individual and organisational-level.

# 4.2 The Research Paradigm

Historically, the fundamental aim of social science research has been to develop plausible explanations for social phenomena, to predict and control behaviour (Denzin and Lincoln, 2000). Throughout the process of conducting social research, the researcher's assumptions about human knowledge and behaviour play a complex and integrated role. These assumptions influence the meaning of the research questions, the reason for the methodology, and the interpretation of the data (Crotty, 1998). Social research is often dichotomised between quantitative and qualitative methodology, each with contrasting philosophical viewpoints and research paradigms. A research paradigm was described by Thomas Kuhn (1962) in 'The Structure of Scientific Revolutions':

"the underlying assumptions and intellectual structure upon which research and development in a field of inquiry is based' (Kuhn, 1962).

Research paradigms were later defined by Lincoln and Guba (1985) as:

"...a set of basic or metaphysical beliefs that represent a distillation of what we think about the world, but cannot prove. Our actions in the world,

including actions that we take as inquirers, cannot occur without reference to those paradigms" (Lincoln and Guba, 1985, p. 15).

Depending of the paradigm adopted, the interpretation and conduct of the social research will differ. Research is traditionally rooted in the philosophical paradigm that frames the aims of the study (Greene, 2007) and the social context within which it occurs. This was summarised by Patton (1978):

"A paradigm is a world view, a perspective, a way of breaking down complexity of the real world. As such, paradigms are deeply embedded in the socialization of adherents and practitioners: paradigms tell them what is important, legitimate and reasonable" (Patton, 1978, p. 203).

The social context within which behaviour occurs, and the assumptions and beliefs of the researcher, are all framed by the paradigm within which they occur. Lincoln and Guba (1985) argue that the researcher's position within research alters depending on the 'paradigm era' that they are placed in. These paradigm eras are dependent on the sets of beliefs grounded at that time, and are considered to be contextually bound. Identifying the paradigm within which the social research is conducted is a vital component of understanding and interpreting human behaviour. This is a crucial stage of the research process, as paradigms directly relate to fundamental questions associated with ontology, epistemology and methodology within the research. Guba and Lincoln (1994) refer to ontology as the basic set of assumptions about what we can know about reality and about the relationship between knowledge and reality. Methodology specifies how the research may practically go about studying whatever is believed can be known (Guba and Lincoln, 1994).

Due to rapid developments in social science, different paradigms have taken precedence (Greene, 2007). The three main paradigms in question are positivism, post-positivism and constructivism. Depending on the paradigm adopted, the epistemological, theoretical and methodological approach to research will vary. Guba and Lincoln (1994) explain that paradigms can be classified as positivism, post-positivism, critical theory and constructivism. Crotty (1998), however, argues that in addition to the previous paradigms, interpretivism also classifies a different set of philosophical assumptions. Irrespective of the different classifications within social research, there is a consensus that consideration of the paradigm that frames the research is essential. This is critical to determining the criteria according to which the

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research problem is defined, and how it is solved theoretically and methodologically (Denzin and Lincoln, 1994). The three main paradigms as proposed by Guba and Lincoln (1994) are discussed below.

Positivism is the practice of empirical science. The goal of increasing scientific knowledge is to describe the phenomena experienced by observation and measurement. The assumptions are that the universe is deterministic, therefore driven by cause and effect, so can be understood by careful observation (Crotty, 1998). Positivism emphasizes an objectivist approach to studying social science, and places importance on research methods focusing on quantitative analysis, surveys and experiments. In positivism, the social world is seen as being 'real', whereby it exists independent of our knowledge of it, and human behaviour is predictable and planned (Greene, 2007). Generalisable, causal explanations for human behaviour are assumed, and truth is obtained when empirical data supports theoretical predictions (Greene, 2007). Post-positivism, however, disagrees with the fundamental principles of positivism, and stresses the subjectivist approach to studying social phenomena (Hughes and Sharrock, 1997). Importance centre's on a range of research techniques, centering upon qualitative analysis such as interviews and direct observations.

In an attempt to challenge previous thought, however, critical theory became to be used as an umbrella term for a series of alternative paradigms (Guba and Lincoln, 1994). Critical theory emphasises the belief that all knowledge is historical and therefore biased. Knowledge is believed to consist of a 'series of structural/historical insights that will be transformed as time passes, and do not accumulate in an absolute sense (Guba and Lincoln, 1994). A major criticism of traditional models of social research is that the earlier research paradigms failed to question or transform pre-existing situations. Critical theory views ontology in terms of historical realism, whereby reality has been shaped over time and framed into a series of structures, now considered as 'real' (Guba and Lincoln, 1994). In terms of epistemology, critical theory asserts that the investigator and investigated objects are interactively linked due to the values the investigator imposes on the research. All research findings are therefore 'value mediated' and responsive to the complex interaction between the researcher and participant. The stringent methodological practices of empirical-based research are believed by critical theorists to have ignored the external influences on the researcher and that which is being researched (Kincheloe and McLaren, 1994). The dialogue between the researcher and participant is fundamental to the construction of knowledge, however (Guba and Lincoln, 1994).

Constructivism, on the other hand, argues that each individual constructs their own view of the world based on their perceptions of it (Guba and Lincoln, 1994). As perceptions and observations are personal constructs, they are inevitably imperfect and cannot follow a structured pattern. General knowledge is believed, therefore, to consist of perceptions and observations on which there is a majority consensus. Constructivism views ontology in terms of relativism, whereby there are no universal laws or absolute truths; reality is constructed. In terms of epistemology, the assumption is that knowledge of reality is value-laden and subjective, and the goal is to understand multiple realities. Taking this paradigm in social research, the methodology would be mainly interpretative, based on discourse and mostly qualitative (Guba and Lincoln, 1994).

Research seeking an in-depth, contextual understanding of social phenomena is considered within either an interpretivist or constructivist framework (Crotty, 1998, Guba and Lincoln, 1994). Research seeking a precise, quantitative assessment of social behaviour assumes that actions are driven by cause and effect (Crotty, 1998), and is considered within an objectivist framework. In order to meet the aims of this case study, the assumptions, design and implementation of this research has been framed by both interpretivist and objectivist principles is acceptable within social research as they both have the same objective of understanding the world in which we live (Haase and Myers, 1988, Sale et al., 2002). As quantitative and qualitative methodologies share a common logic, the same rules of inference therefore apply (King et al., 1994).

# 4.2.1 The Duality or Dualism of Social Science Research

Social science in most Western societies has been dominated by a positivist paradigm. Assumptions on how to study human behaviour have been based on standardised and quantitative designs and methods (Phillips and Burbules, 2000). During the 1960's the positivist paradigm became heavily-contested, however, and assumptions based on structural understandings became more popular (Harre, 1981). The belief that science presented ultimate knowledge of reality was no longer accepted as truth, rather science was amongst a plurality of ways in which to represent reality (Hughes and Sharrock, 1997). Interpretivism, constructivism, and phenomenology are now in duality with positivism, and the previous philosophical paradigms associated with qualitative and quantitative research have since been questioned (Schwandt, 2000).

Quantitative research is a methodology associated within the positivist paradigm. Positivism sees the measurement of data as a means of categorizing observations into a form suitable for mathematical quantification. Positivism adopts an approach to scientific knowledge whereby social behaviour is measured in an attempt to create a chain of causality consistent with natural science (Finch, 1986). Quantitative methodology stresses manipulation, control and causal reasoning between observed variables. The value of this approach lies in hypothesis testing and the manipulation of pre-defined variables that are assumed to be related by cause and effect (Smith, 2008).

A positivist view of ontology would assume the nature of reality is stable and a law like reality (Guba and Lincoln, 1994). It considers human beings to be rational individuals, whereby their behaviour is governed by the same social laws, therefore consistent behaviours patterns are observed for all individuals (Sarantakos, 2005). In terms of epistemology, the positivist paradigm defines its assumptions as objectivist. It argues that meaning does exist in the world and that knowledge reflects reality. Knowledge and fact are assumed to exist in a way that is not time and context-specific, therefore independent of an individual's knowledge (Guba and Lincoln, 1994). Taking this paradigm, the methodology used in research would assume:

"precise, empirical observations of individual behaviour in order to discover...probabilistic causal laws that can be used to predict general patterns of human activity" (Neuman, 2000, p. 66).

The measurement of knowledge and reality is based on objective assumptions through quantitative measurement and for the purpose of generating hypotheses (Guba and Lincoln, 1994).

Qualitative research as a methodology, however, is associated within the post-positivist paradigm. In contrast to positivism, post-positivism asserts that reality is socially constructed, as opposed to being objectively determined. Interpretivists disagree with the assumption that social behaviour is consistent with natural science, thus can be represented by cause and effect. The assumptions are that mental or cultural sciences are different to natural sciences, and the aim was to understand social phenomena rather than predict the causality (Schwandt, 1994). Constructivists support interpretivists' emphasis on the 'experienced' world, and believe that what we conceive to be objectivist knowledge or truth is manifested from our own perspectives. Human experiences are context-bound and:

"there is no unique 'real world' that pre-exists and is independent of human mental activity and human symbolic language" (Schwandt, 1994, p. 125).

As post-positivism attempts to explain reality as a product of subjectivity, a qualitative approach is typically the methodology used (Crotty, 1998). The post-positivist view of ontology would assume multiple shifting realities exist based on individual's subjective experiences (Denzin and Lincoln, 2005). In terms of epistemology, interpretivist assumptions lie within subjectivity, which assumes that meaning exists in our interpretations of the world and knowledge is purely an interpretation. Unlike positivism, which believes the world is constructed by observable social actions, interpretivism believes that the subjective meanings and values attached to social behaviours are the important focus of social research (Sarantakos, 2005). Taking this paradigm within social research, the methodology would emphasise the importance of the researcher's perspectives and the interpretative nature of social reality (Guba and Lincoln, 1994). A comparison of quantitative and qualitative methodologies within social research is outlined in Table 10.

Criterion	Quantitative Methodology	Qualitative Methodology
Perception of Reality	<ul> <li>Objective; 'out there'</li> <li>Perceived uniformly by all</li> <li>Governed by universal laws</li> <li>Based on integration</li> </ul>	<ul> <li>Subjective; in people's minds</li> <li>Socially constructed</li> <li>Perceived and interpreted differently by people</li> </ul>
Perception of Humans	<ul> <li>Rational Individuals</li> <li>Obeying external laws without free will</li> </ul>	<ul> <li>Creators of their world</li> <li>Making sense of the world</li> <li>Not restricted by external laws</li> <li>Creating systems of meanings</li> </ul>
The Nature of Science	<ul> <li>Deductive</li> <li>Based on strict rules &amp; procedures</li> <li>Relies on sense impressions</li> <li>Objective and value free</li> </ul>	<ul> <li>Inductive</li> <li>Based on common sense &amp; reason</li> <li>Relies on interpretations</li> <li>Subjective and not value-free</li> </ul>
The Role of Value/Context	<ul> <li>Value neutral and value free</li> <li>Independent of context</li> </ul>	<ul><li>Value bound inquiry</li><li>Context and time specific</li></ul>
The Purpose, Focus & Methods of Social Research	<ul> <li>Employs quantitative methods</li> <li>Aims to explain social life</li> <li>Aims to predict the course of events</li> <li>Aims to discover social regularities</li> <li>Cause-effect links</li> <li>Extensive use of statistical methods</li> </ul>	<ul> <li>Employs qualitative methods</li> <li>Aims to interpret social life</li> <li>Aims to understand social life</li> <li>Aims to discover people's meanings</li> <li>Interactive processes</li> <li>Discursive data analysis</li> </ul>

# Table 10: A Comparison of Quantitative and Qualitative Methodologies

Adapted from Sarantakos (2005, p. 42)

# 4.2.2 The Role of Theory in this Research

A general belief within social science research is that all knowledge is theory-laden, and all methods are theory-driven (Mitchell, 1993). Anfara et al (2006) argue that the key characteristic of social science, in contrast to natural science, is the multiple theoretical approaches that are taken (Anfara and Mertz, 2006). Theories are used to explain how and why things are the way they are, and have been defined as:

"an organized body of concepts and principles intended to explain a particular phenomenon" (Leedy and Ormrod, 2005, p. 4).

The role of theory within research can be used to develop scientific knowledge in four key ways (McMillon and Schumacher, 2000). Firstly to provide a simple explanation about the observations and their relation to a phenomenon in question, secondly by validating existing knowledge on the phenomena, thirdly to provide a framework for theory verification and development and lastly to generate further research into areas warranting further investigation. Yin (2003) proposes that:

"The complete research design embodies a "theory" of what is being studied" (Yin, 2003, p. 29)

Hence, research methodologies and theoretical frameworks can be considered as intrinsically linked.

The role of theory in quantitative research is well-established (Creswell and Plano Clark, 2007), whereby a deductive approach to the relationship between theory and research is assumed. The assumptions are that theory exists prior to the research, and the empirical evidence is used to test and revise this theory. Within qualitative research, however, the role of theory has far less clarity. Theory is an integrated part of the research methodology and epistemology, and not an independent set of beliefs on the periphery to the research. According to Denzin and Lincoln (2005), theories are fundamentally linked to the underlying research paradigm, and this framework directly relates to the theoretical, ontological, epistemological and methodological perspectives in the study. Qualitative research typically emphasises an inductive approach to the relationship between theory and research, that is, research comes before theory and aims to generate theoretical propositions on social behaviour from the data. The aim, therefore, is to understand and explain social phenomena through a meaning-centred approach (Neuman, 2000).

Unlike other qualitative research designs, Yin (2003) argues that case study research needs identification of the theoretical perspective at the onset of the study, as it affects the research questions, analysis and interpretation of findings. Smith (2008) describes this theoretical framework as the blueprint for the study, as case studies cannot always be statistically generalisable. Case studies can, however, be analytically generalisable based on the theoretical framework used (Smith, 2008). The role of theory in case study

research is two-fold; theory verification and theory development (Yin, 2003, Willig, 2001). A theory verification piece of research starts with a theoretical framework, which is then used to inform the development of the hypotheses, and the research, is then used to test these hypotheses. This type of research approach is described as deductive. A theory development piece of research aims to generate theory from the data collected, and this is considered an inductive approach. Neither strategy is overtly more accurate that the other, rather both approaches are appropriate for the respective methodological standpoints. Depending on the type of research design adopted, therefore, the role of theory within it will vary.

# 4.2.3 Combining Qualitative and Quantitative Research Methods

By definition, mixing qualitative and quantitative research methods involves the integration of two unique approaches. This includes the contrasting philosophical paradigms. theoretical assumptions, methodological traditions. personalised understandings and value commitments (Greene, 2007). Fundamentally, mixed methods research is not driven by the aim of converging different paradigms, or opposing theories. The aim is, nonetheless, to facilitate a more diverse way of thinking. The conventional model of social research stipulates either a qualitative or a quantitative approach, with no indication of a combination of both. Mixed methods research, however, actively pursues multiple ways of thinking, and includes multiple standpoints and ways of making sense of the social world (Greene, 2007). The assumption is that a mix of methods will generate a better, more in-depth understanding than a single method alone. Greene (2007) argues that mixed methods research can substantially enhance our understanding of social phenomenon, as it produces what can be referred to as 'empirical puzzles'. Empirical puzzles refer to a situation where the results from opposing approaches do not converge, and this leads to further investigation, which may have previously been overlooked. A further importance of mixed methods research is that two opposing philosophical paradigms have to be considered, instead of accepting purely a qualitative or quantitative paradigm alone (Greene, 2007).

The criticisms and challenges to positivism are largely based on its reductionist view of nature, and the categorising of observations for the purposes of mathematical analysis (Bryman, 2008). The debates surrounding positivism and post-positivism are based on issues such as whether social science theories could attain the categorical certainty of natural science theories (Hughes and Sharrock, 1997). Critics believe that establishing

the reliability of the data collected and measurements used is conceivable, though the categorisation of observational data into a numerical form gives limited guarantee of the studies' validity (Hiles, 1999). Anti-positivists argue that positivism presents a restricted view of human beings and their behaviour as passive, determined and controlled. The individual's choice, freedom and differences are therefore ignored. Interpretivism and constructivism are also criticised, however. This is on the basis that these approaches lack criteria and objectivity, fail to privilege the views of participants and separate the views of the researcher (Schwandt, 1994).

The relationship between philosophy and assumed beliefs about knowledge, truth and reality are heavily debated within philosophy and social science (Guba and Lincoln, 1994, Hughes and Sharrock, 1997). As emphasized by Kuhn (1970), qualitative and quantitative research strategies are 'incommensurable' according to their paradigm, as they reflect very different epistemological and ontological assumptions. The debate surrounding the combination of qualitative and quantitative research methodologies has since become known as the 'paradigm wars' (Bryman, 2008) as the two contrasting approaches to social research are argued to be incompatible (Smith, 1983). A contrasting perspective, nonetheless, is that the different methodologies and paradigms can be complementary, rather than competitive, to each other (Neuman, 2000). The intention is to use the different paradigms respectively, but acknowledge their differences and be explicit about where they are to be applied (Greene and Caracelli, 1997). On this basis it would not be accurate to advocate any one view on the relationship between philosophy and social research per se, as actually neither can be indisputably correct (Hughes and Sharrock, 1997). Pluralism in competing research paradigms and methodologies has the effect of strengthening the reliability of the research, providing a broader concept of reality, and the merits of both methods can then be challenged.

The purpose of the current research was to conduct a mixed-methods case study evaluation of a community-based physical activity program. The aim of conducting an in-depth case study using mixed methodology was to develop a more detailed and contextualised understanding of the case in question. Using mixed methodologies also facilitated triangulation of the study findings, thereby increasing the research validity (Richardson, 1996). The evaluation was based on evidence from multiple perspectives within the case, collected using both qualitative and quantitative methods. By taking a quantitative approach within this case study, the intention was to measure items, which children and adolescents perceive as influencing their physical activity-related behaviour in the Tribe Project. By also taking a qualitative approach in this case study the intention was to understand the Tribe Project through the meanings participants assign to their experiences. Evidence gained from the contrasting participant groups could also then be used for the purposes of triangulation. Consistent with complex public health campaigns, and health promotion interventions, a broad range of both qualitative and quantitative approaches are often necessary for in-depth assessment (Steckler et al., 1992, Baum, 1995, Sale et al., 2002). Combining both qualitative and quantitative research methods to evaluate the Tribe Project is particularly useful due to the complexity of measuring the program's impact, and the range of perspectives needed fulfil this.

The first key aim of this case study was to explore each component of the RE-AIM framework through interviews with key informants in the Tribe Project. Using an interview technique, a unique description of the structure, design and implementation of the Tribe Project could be achieved. It would also be possible to establish the potential impact of the program based on evidence from a range of participants, at multiple levels within the case. Using qualitative methodology in this way, a more insightful portrayal of participants' experiences would be gained from the various standpoints within the case. The second aim of this case study was to assess the reasons why the children and adolescents who attend the Tribe Project chose to do so, and which factors are important to them whilst attending. Previous studies have focussed predominantly on the underlying individual factors related to physical activity behaviour, whereas the focus within this case study will be on the more social and physical-environmental determinants of physical activity. Using structured, written questionnaires a better understanding of what influences children and adolescents to participate in physical activity programs such as the Tribe Project will be gained.

Qualitative and quantitative research methods still represent differing paradigms and as such, there are epistemological challenges associated with combining both techniques. However, this does not mean that quantitative and qualitative methodologies cannot be mixed within a single study for the purposes of complementarity (Sale et al., 2002). Whilst the strengths of one approach may compensate for the weaknesses of another, it is the distinctions between qualitative and quantitative methods that make mixed methodology a reputable approach (Sale et al., 2002). Unlike qualitative or quantitative methods alone, mixed methodology assumes that there are multiple, legitimate ways of conducting research. As opposed to capturing the same phenomena using different methods, different aspects of the same phenomena are captured uniquely by the respective approach (Sale et al., 2002).

Social behaviour is unsurprisingly complex, and mixed method approaches are the most plausible means by which to understand human behaviour (Greene, 2007). Only by applying both quantitative and qualitative approaches within research can the breadth, depth, and richness of human behaviour be fully captured (Creswell, 2003, Greene, 2007).

# 4.3 Case Study as a Research Strategy

Case study as a research strategy is a useful way to examine contemporary events in their real-life context. They are used to study the:

"particularity and complexity of a single case, coming to understand its activity within important circumstances" (Stake, 1995, p. xi).

Case studies are multi-perspective analyses (Feagun et al., 1991), and they represent a unique method of enquiry. The views of key informants are considered not only in their own right, but also in terms of how they integrate as part of a larger picture. This process is characteristic of case study research. The case study method has continually been developed by researchers (Denzin and Lincoln, 2005, Merriam, 2009, Stake, 1995, Yin, 2003). It has since become a popular method in social science research.

Hiles (1999) argues that what defines human science is not its methodology, but its paradigm, and research is frequently criticised for its methodology without any consideration of the paradigm within which it is set. Case study research takes an idiographic approach, whereby it focuses upon the particular. The research starts with a detailed description of individual cases based on their uniqueness, before moving on to generate interpretations and conclusions (Stake, 1994). Case studies also take a holistic perspective whereby the case can only be understood within its physical, social, and cultural context. The meanings of the various characteristics of the case depend on their relationships with others, as well as the context within which they occur. Case study research perceives the world as an integrated system that does not allow the researcher to study parts of it in isolation (Willig, 2001). According to Hamel (1993), there is a difference between the object of study and the case itself. The object constitutes the phenomenon of interest, and the case is selected to understand better the object of the study. In the context of the research within this thesis, the case is the

impact of a community-based physical activity program aimed at children and adolescents, and the object of the case is the Tribe Project.

There are two defined approaches to conducting case study research: naturalistic or pragmatic (Yin, 2003). The approach taken in this current case study is naturalistic, as it was carried out in a real-world context and focuses on a single case as the unit of analysis. The case was also approached with an open mind, and without previously defined hypotheses. The benefit of using this approach within case study research is that patterns can emerge naturally from the data without exacting research questions. Pragmatic case study research, on the other hand, is more focussed, beginning with a well-defined research question that guides data collection and analysis (Willig, 2001). The motivation preceding a case study can also vary depending on the intentions of the findings and current knowledge relating to the event. Yin (1993) proposed that there are three well-defined types of case study: exploratory, explanatory and descriptive. Exploratory case studies are useful when there is no underlying theory attached to the research, and the aim is describe either the incidence or prevalence of a certain phenomenon. Explanatory case studies aim to generate explanations for the occurrences with which they are concerned. The aim is to address links over time, rather than just the frequencies or incidences of an event (Yin, 2003). Descriptive case studies, however, are concerned with providing a detailed description of the phenomenon within its context. The case is not explored in order to predict theoretical assumptions, rather theory is used to guide the data collection (Willig, 2001).

Following the research from Yin (1993), Stake (1995) developed these ideas, proposing that three additional types of case study can be considered: intrinsic, instrumental and collective. Intrinsic cases represent nothing but themselves, and the cases are chosen because they are interesting in their own right. The researcher wants to know about them in particular, rather than about a more general problem or social phenomenon (Stake, 1995). Instrumental case studies, however, represent cases that are an example of a more general phenomenon. They are selected to provide the researcher with the opportunity to study the phenomenon of interest, and the individuals who are experiencing the phenomenon constitute the suitable cases for analysis (Willig, 2001). Collective case studies describe a situation where a number of cases are investigated. It can be considered as an instrumental study, yet relates specifically to a number of other cases. The cases may be similar or dissimilar, however, they are chosen for the potential better understanding that will be gained and theories produced (Stake, 1995).

There are two key ways of classifying the approach taken in case study research based on the number of cases to be studied, and the number of units to be analysed (Yin, 2003). Case studies can therefore be classified as either single or multiple, holistic or embedded. Holistic case study designs are centred upon the analysis of one unitary case. Embedded case study designs, however, involve more than one unit of analysis (Yin, 2003). A single case study may contain several units of analysis to form part of the same case, and these are understood as the 'embedded' units of analysis. Using these classifications, the four basic types of case study designs include: single case (holistic), single case (embedded), multiple case (holistic) and multiple case (embedded) (Yin, 2003). The design selected within a case study is primarily based, however, on the nature of the research question to be addressed, the philosophical assumptions underpinning the research and contribution to knowledge that is expected.

# 4.3.1 Mixed Methods Research

Mixed methods research has been defined as:

"a research methodology with philosophical assumptions as well as methods of inquiry. Its central premise is that the use of quantitative and qualitative approaches, in combination, provides a better understanding of research problems than either approach alone" (Creswell and Plano Clark, 2007, p. 5).

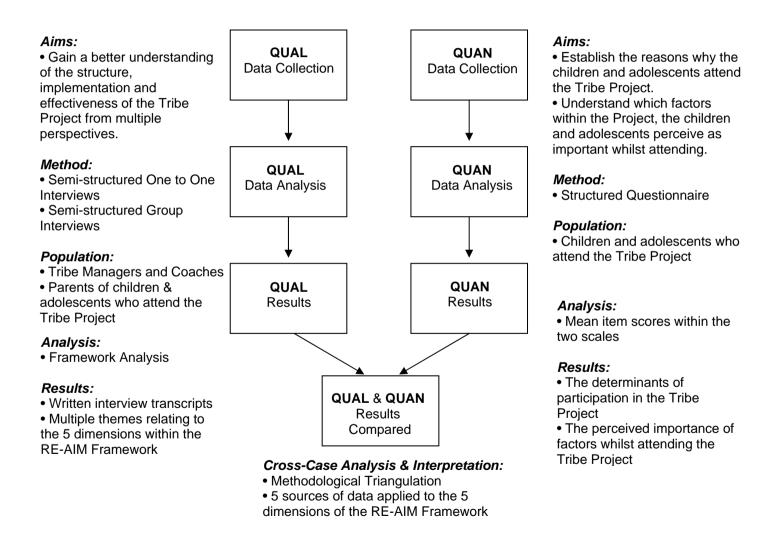
The advantages of using a mixed method case study are that different types of data can be used to address the same research question, and data can be collected from a range of individuals involved in the case. The fundamental aim is that the study will produce a better understanding of the complexity of social behaviour (Greene, 2007). According to Greene (2007), this premise is achieved because the validity and credibility of the study in increased. The results produced are broader and more considerate of the complexity of human behaviour and different perspectives and methods regarding the same phenomenon can be applied. Conducting a case study evaluation of the Tribe Project using mixed methods is thus essential, as the theoretical principles of the program, and real life experiences of it, can be equally assessed (Yin, 1994).

Mixed method data analysis within a case study typically involves either data transformation or data triangulation. Creswell (2007) describes three strategies used to

integrate qualitative and quantitative data within a study: sequential, concurrent and transformative. Sequential designs elaborate on, or expand, the findings from one method with the other. The data from one method is used to inform the design and data collection from the other method. In concurrent designs, the quantitative and qualitative data are collected and analysed independently of one another, and equal weighting is placed on both strategies. Data transformation is used when one type of data is transformed into the other form to provide an overarching interpretation based on one methodology (Creswell and Plano Clark, 2007).

This mixed methods case study used a concurrent triangulation design (Creswell, 2003) in which the two different methodologies were employed independently to answer the research questions. Qualitative data were collected from the Tribe managers, Tribe coaches and Tribe parents to generate a detailed understanding of the case. Quantitative data were collected from the children and adolescents participating in the Tribe Project to assess their reasons for participation, and their perceived importance of factors whilst attending the program. This type of approach uses the convergence of evidence as the rationale for the design. Greene (2007) argues that, with a design intended for triangulation purposes, the predominant task is identifying where the evidence from different sources does or does not converge, and interpreting this as such. Within case studies based on a concurrent design, the qualitative and quantitative data do not serve to have an influence on each another during the design, data collection or analysis phases (Greene, 2007). Both methods are weighted relatively equally in the study, and are implemented in short succession to reduce the likelihood of the social situation altering over time (Greene, 2007). The decision to collect mixed methods data was based on the potential increase to the study's validity following methodological triangulation of data (Denzin, 1970). Figure 8 shows the implementation of the qualitative and quantitative phases in this case study, based on this concurrent triangulation design (Creswell, 2003).

#### Figure 8: Diagram of the Qualitative and Quantitative Phases in this Case Study



# 4.3.2 Triangulation

Different strategies to combine and integrate quantitative and qualitative methodologies can be classified into three key approaches: triangulation, facilitation and complementarity (Bryman, 2008, Hammersley et al., 2000). Triangulation refers to the use of qualitative and quantitative techniques as a means to corroborate the findings from one another respectively. Facilitation is used to describe the approach where one source is used as the basis for the development of research strategies in the other. Complementarity describes a process whereby the two approaches provide different types of data which complement each other (Hammersley, 1996).

Triangulation is a valuable method of corroborating evidence of the same phenomenon by viewing it from different perspectives, rather than converging on a single consistent account of the event (Yin, 2003). Triangulation was initially viewed as a way of trying to corroborate the accounts of one person or group using the accounts of others (Smith, 2008). It has since been considered as a way to combine and compare multiple data sources, data collection or analysis, and research methods or inferences to strengthen the validity of the interpretations (Denzin and Lincoln, 2005). Combining multiple sources of evidence using this strategy is a way of:

"enriching and completing knowledge and transgressing the epistemological potentials of the individual method" (Flick, 1998, p. 230).

Denzin (1970) used the terms data triangulation, investigator triangulation, theoretical triangulation and methodological triangulation, which can be implemented using 'within-method' and 'between-method' triangulation. Within-method triangulation refers to the use of different types of the same method to investigate a research issue, such as a quantitative study using two contrasting scales in the questionnaire. Between-method triangulation describes the use of contrasting research methods to answer the research question, such as questionnaires and interviews.

Between-method methodological triangulation was used within this case study of the Tribe Project. This particular type of methodological triangulation was used to confirm the findings generated through one particular method by another. Integrating different methodologies in this way can improve the study's validity, and overcome the biases inherent with quantitative and qualitative methodologies alone.

"When two or more methods that have offsetting biases are used to assess a given phenomenon, and the results of these methods corroborate one another, then the validity or credibility of the findings is enhanced".

A unique feature of triangulation is the equal priority placed on the quantitative and qualitative data and analysis, which involves either concurrent or simultaneous collection. As there are often multiple dimensions within a single case study, the importance of triangulation in case study research was emphasised by Willig (2001, p. 76):

"Case study research should always involve a certain amount of triangulation, since case studies concern themselves with the complex relationship between the contextual and temporal dimensions of an event".

The rationale for methodological triangulation is to increase the validity of a study by using different methods to measure the same phenomenon. Triangulation accommodates the various dimensions of the case, along with the context and time within which it is bound. This makes triangulation an ideal way to approach case study research (Stake, 1995). Willig (2001) explains that case studies inevitably generate only partial accounts of individuals; therefore, they can never fully capture the social situation in its entirety. Triangulation, however, acts to clarify meaning by identifying the differing interpretations of reality (Willig, 2001, Flick, 1998), invariably producing a more complete picture of the case as a whole. There are three types of outcomes when using triangulation: results that do converge, results that only partially converge and results that are contradictory. The core premise is that all methods have inherent biases and limitations, so that the use of only one method to assess a given phenomenon will inevitably yield biased and limited results (Greene, 2007). As triangulation seeks convergence or corroboration of results from multiple methods of data collection, it is unlikely that the use of a single method would generate data that does justice to the complexity of it (Willig, 2001). Justifiably therefore, methodological triangulation was an appropriate way of interpreting and validating the diversity and quantity of the data collected within this case study of the Tribe Project.

## 4.3.3 The Phases of Research in the Case Study

As stated previously within this chapter, a concurrent triangulation design was used as the basis for this case study. The qualitative data provided an overall picture of the structure, organisation and implementation of the Tribe Project. The quantitative data provided an insight into reasons why the children and adolescents participated in the Tribe Project, and the factors important to them whist attending.

The gualitative and guantitative data were collected independently of one another and in short succession to avoid encountering any major developments or changes to the case during this phase. By collecting the qualitative data first, the evidence further supported the theoretical model, which was going to be used during the quantitative phase. When asked to discuss the motivation for attending the Tribe Project, interviewees described factors which corresponded to the socioecological model of (Sallis and Owen, 1997): interpersonal, intrapersonal, health social and organisational/environmental factors. This re-affirmed the previous decision that the socioecological model was an appropriate model to use in assessing the determinants of participation and importance of factors within the Tribe Project. This was reiterated when interviewees were asked to describe what motivated their children to continue participating in the Tribe Project. The interviewees described the motivation to continue attending the Tribe project in the context of what was considered as being important to them. These factors again corresponded with the socioecological model of health behaviour, and further supported the previous decision to base the scales in the questionnaire on this model.

Ordering the data collection in this way played a complementary role in the case study research design. The information gathered from the qualitative data collection was useful in re-affirming the theoretical underpinnings to the quantitative data collection. The interview data were invaluable to the development of this case study, and aided the collection of questionnaire data. Throughout the interviewing process, it became evident that the implementation of the different Tribe sports varied within the Project, and a broad-brush approach to the quantitative data collection would be inappropriate. Based on this information gained through the interviewing process, the quantitative data collection schedule was amended to remove any previous bias to participant response rates. The qualitative and quantitative data collection phases were carried out independently, and were not used to *inform* each other. Nevertheless, ordering the data collection in this way provided unforeseen advantages.

#### 4.3.3.1 Qualitative Data Collection

The purpose of the qualitative data collection phase was to focus specifically on the 'why' and 'how' type questions in the case. These related specifically to the design, implementation and effectiveness of the Tribe Project. The aim was to explore the Tribe Project as a whole in a deeper, more meaningful way. The information collected from participants during the interviews provided an insight into the way the Tribe Project was run. A much clearer picture on how the Tribe sports sessions were implemented and the practicalities involved with collecting the quantitative data were gained. The interview data were analysed using framework analysis (Ritchie and Spencer, 1994), specifically based on the RE-AIM framework of program evaluation (Glasgow et al., 1999).

The primary aim of this research phase was to assess the impact of the Tribe Project at the individual and organisational-level, based on assessment of the *Reach, Effectiveness, Adoption, Implementation* and *Maintenance* of the Tribe Project. A more detailed description of the methods used during this qualitative data collection phase is presented in Chapter 5.

#### 4.3.3.2 Quantitative Data Collection

The quantitative data collection phase was designed to answer the 'what' type questions in this case study. The aim was to assess the determinants of participation in the Tribe Project and perceived importance of factors whilst attending. The data from the questionnaires was designed to add to the evidence already collected through the interviews as part of the main case study analysis of the Tribe Project. Descriptive statistics alone were calculated due to the non-independent data within the sample. Participants could complete multiple questionnaires as part of this data collection to represent the multiple sports they could participate in through the program. For this reason, mean item scores across the two scales were calculated. A more detailed analysis into the factorial validity of the scales could be conducted using factor analysis (FA); however, a larger sample of children and adolescents attending the Tribe Project would be needed. For the purposes of this research, calculating the mean item scores across the questionnaire scales was sufficient to achieve the research goals and successfully contribute to the in-depth evaluation of the Tribe Project overall.

The results from this questionnaire were used to assess the *Reach, Effectiveness, Adoption* and *Implementation* of the Tribe Project. The *Maintenance* of the Tribe Project was not assessed as part of this data collection.

The key research questions that were addressed as part of the quantitative data collection were:

RQ1: 'Which factors determine the children's and adolescents' participation in the Tribe Project?'

RQ2: 'Which factors are most important to the children and adolescents whilst attending the Tribe Project?'

A more detailed description of the methods used within this quantitative data collection phase is presented in Chapter 6.

# 4.3.3.3 Combining the Qualitative and Quantitative Data

The final phase of the case study was to compare, integrate and triangulate the two sets of data to address the main aim of the research. Combining the qualitative and quantitative data in this way meant it was possible to rigorously assess the data and increase the reliability and validity of the conclusions. The first stage of this process was to assess the interview data from each participant group (Tribe managers, Tribe coaches and Tribe parents), and integrate the findings into the RE-AIM framework. For each component of the RE-AIM framework, the data were triangulated across the participant groups and a general assessment of convergence was made. The questionnaire data were assessed independently to the interview data, and the findings were integrated into the RE-AIM framework where applicable.

This process was repeated for the evidence collected from the remaining three data sources (archival records, documentation and direct observations). There was a varying amount of evidence for each component of the RE- AIM framework. However, all the data that correlated to each part of the model was collated to produce the final case study results. The results following integration of the qualitative and quantitative data into the RE-AIM framework are presented as part of the cross-case analysis of the Tribe Project (Chapters 5 - 9).

## 4.3.4 Development of the Research Questions

Development of the research questions within this case study was driven by the research paradigm underpinning this research, current literature on the correlates of child and adolescent physical activity and evidence of the effectiveness of programs to promote physical activity among this population.

Investigations into the determinants of physical activity have to date been largely based on intrapersonal models of health behaviour (Sallis and Owen, 1997). Recent theories have emerged taking into account the external influences upon the individual. Environmental and situational factors are now considered as having a role in the determining physical activity behaviours in children (King et al., 2002), and the socioecological model has become more prevalent (Sallis and Owen, 1997). To effectively increase physical activity participation, the cultural and social contexts within which they occur need to be considered (Ball et al., 2006). Ball et al (2006) argue that measuring the behavioural determinants of physical activity from more than one perspective has the potential to provide a much greater insight into the relative importance of personal, social and physical-environmental factors. The socioecological model emphasises that individual behaviour patterns are influenced not only by the individual's abilities and experiences, but also by the social and physical environment within which they are situated (Sallis and Owen, 1997). The socioecological model formed the theoretical basis to the quantitative data collection in this case study, and the quantitative research questions reflected this.

The RE-AIM framework was chosen as theoretical model within which to evaluate the individual and organisational-level impact of the Tribe Project. This evaluative framework was chosen for the purposes of this case study, as it is extremely useful in estimating the public health impact of community-based programs. It is also extremely useful for identifying health policies, whilst integrating them with promotion strategies to increase the likelihood of a program's success (Bopp et al., 2007, Jilcott et al., 2007, Planas, 2008). One of the difficulties in translating scientific research into real-world settings is the imbalance between internal and external validity (Green and Glasgow, 2006) which the RE-AIM framework is designed to take into consideration (Belza et al., 2007). There is furthermore a greater focus on the implications of the program setting and process of implementation, as opposed to the individual's experiences of it. Placing emphasis at the organisational and setting-level, as opposed to at just the individual-level, means that the quality and impact of behaviour change research in the future could be improved. Changing the focus of interest in this way does not remove the

importance of the other components of the design. However, the implementation of each component is considered as having greater importance.

In light of what is known about the promotion of children's and adolescent's participation in physical activity, the core aim of this research was to assess the individual and organisational-level impact of the Tribe Project as a program to promote physical activity among children and adolescents. Based on objectivist and interpretivist methodologies, a more detailed, contextual interpretation of individual's perspectives of the Tribe Project was intended. The case study research questions were developed in light of this.

## 4.3.5 Units of Analysis

Cases always exist within their relative social context, and the boundaries of a case study are therefore always arbitrary as a result (Bromley, 1986). It is essential, therefore, to define the units of analysis within a case study in order to outline the boundaries to inquiry (Yin, 2003). This single case study of the Tribe Project has multiple embedded units of analysis. The Tribe Project as a whole is considered as the main unit of analysis, which is primarily assessed at the organisational level. The Tribe managers, coaches, parents and children/adolescents attending the Tribe Project are the embedded-units of analysis. These embedded-units of analysis are assessed at the individual level. The reach, effectiveness, adoption, implementation and maintenance of the Tribe Project will be the primary focus of the case study, aimed at the level of the Tribe managers, coaches and parents. The reasons for participating and experiences of the Tribe Project will be aimed at the level of the Tribe children and adolescents attending the program. Evidence gained at the individual level will be linked to the evidence collected at the organisational level to produce an overall evaluation of the Tribe Project. Analysis was aimed at these levels due to individual's roles, experience, proposed contribution to the research and influence within the case.

# 4.4 Access to the Tribe Project

Access to potential case study projects is an essential part of case study research. The politics and procedures involved in this process can have a long-standing impact on the conduct of the research. Access to the Tribe Project was gained due to its long-standing links with the University of Bath's Department of Health and Sports Development

Department. The initial point of contact was made through the PhD supervisor, who contacted the Sports Development department informing them of the proposed research, requesting if they would be willing to take part. This decision was made based on the position and reputation that that the PhD supervisor held, and the good links that existed with the Department of Health and Sports Development Department. Following this initial point of contact, formal permission to conduct the research was gained during a meeting with the 'gatekeeper' of the Tribe Project. Punch (1994) argues that the reputation of the researcher's institutional background can be of considerable importance in gaining access to research projects. The role it plays may be one of vital importance, irrelevance or even harm, but nonetheless it remains crucial (Punch, 1994). In consideration of this, the academic background and research interests preceding the case study were explained to the gatekeeper of the Tribe Project. The purpose of the proposed research, the aims and objectives, methods of collecting the data and duration of the study were all discussed during this meeting.

Since no formal evaluation of the Tribe Project had been conducted since its launch in 2003, this research was welcomed by the Tribe Project managers. The potential benefit of the research to the Tribe Project was unanimously understood. Upon confirmation that the research could commence, full access to the Tribe Project was granted and there were no known restrictions to this access. The Tribe managers fully supported this case study evaluation of the Tribe Project and facilitated the procedures and requirements to complete it. Klein (1976) stated that:

"...social science is not engaged by industry or organisations, but by individuals in gatekeeping or sponsorship or client roles. The outcome therefore is always mediated through the needs, resources and roles of such individuals" (Klein, 1976, p. 255).

Negotiation at the onset of a research study is not a one-off event. Rather it remains a continuous process over the course of the research (Flick, 1998). In line with this approach, access to the Tribe Project and rapport with the Tribe managers were maintained throughout the course of this case study.

# 4.4.1 The Researcher-Participant Relationship

The researcher-participant relationship is of paramount importance when conducting social science research, as it is the precursor to establishing trust, rapport and authentic communication patterns throughout the course of the study. It is essential the researcher establishes trust, rapport and genuine communication patterns with participants in order to gain a accurate insight into the case (Janesick, 1994). A good relationship is crucial, as it can ensure access is granted, participants are willing and more open and honest answers are given. Where the researcher may be seen as a threat by participants, the data collected may be detrimental because of that threat (Janesick, 1994). The collection of case study data typically spans many different dimensions, involving many different types of informants and data collection techniques. All of these factors are affected by the type of relationship the researcher has previously formed (Janesick, 1994). Sensitivity to the position and socio-cultural context of participants may involve consideration of the reasons why particular views may or may not be expressed. This is essential to understanding the ways in which their views may be expressed (Seidman, 2006). To achieve an accurate evaluation of the Tribe Project it was essential, therefore, that good relationships were established at the onset of the research and maintained throughout the course of this case study.

Due to the location and setting of the Tribe Project, considerable access to the site was possible. This meant flexibility in terms of meeting participants, collecting the data, and undertaking field visits with limited notice was feasible. This proximity and contact with the case under investigation meant the researcher-participant relationship was improved, and familiarisation with the Tribe managers and coaches was achieved relatively quickly. This improved the conduct of this case study as a whole, as the ability to organise or rearrange visits and meetings at the participant's convenience was viable. The normal barriers associated with time constraints and notice periods were largely eliminated, therefore, and individuals could be contacted on a one-to-one basis. Familiarisation in this way, Willig (2001) argues, aids the breaking down of barriers and negative perceptions. This inherently improves the validity of the research, as the perception of the researcher is less threatening and individuals act in ways less reactive to their presence.

Although establishing a good researcher-participant rapport is vital, more importantly it is the maintenance of this rapport that can facilitate the intended research (Willig, 2001). This is of particular importance during case study research, as it is linked to the

participants' continued willingness to share information throughout the data collection phases (Janesick, 1994). During the qualitative phase, this was essential as proximity to the Tribe Project meant participants were able to pick the specific date, time and location most convenient to take part in an interview. Interviews could thus be arranged with minimal notice and inconvenience to participants, increasing the likelihood of their continued support for the research. Similar advantages were also apparent during the quantitative data collection phase. Having easy access to the Tribe sports sessions meant the questionnaire data could be collected at a time convenient to the Tribe coaches. This also meant factors associated with the implementation of the different types of sports could be accommodated. The ability to be flexible during the data collection process substantially improved the researcher-participant relationship and a much higher response rate was achieved overall. The Tribe coaches in particular became much more appeasing to the research process, as it was possible to accommodate their schedules with very little notice and cause minimal disruption to their daily roles and responsibilities.

Irrespective of the potential benefits of achieving a positive researcher-participant relationship, complete objectivity and neutrality are nevertheless impossible to achieve. The values of researchers and participants become an integral part of the research process, and neither are divorced from the behaviour in question (Smith, 1983). This is in line with constructivist beliefs, which acknowledge the interaction between the researchers and the researched. In line with these assumptions, the selection of subject matter and determination of the research questions are therefore not value-free (Kincheloe and McLaren, 1994, Richardson, 1996). The researcher acknowledges, therefore, that their role as a researcher acted as the main research tool within this case study, thereby influencing each stage of the research process.

# 4.5 Data Sources

In order that a more detailed understanding of the Tribe Project could be established, multiple sources of evidence were used as part of the evaluation. Qualitative and quantitative data were collected over a period of 12 months, sourced internally and externally to the Project. The following five sources of evidence were used: documentation, archival records, direct observations, semi-structured interviews and written questionnaires. The strengths and weaknesses of these data sources are discussed below.

## 4.5.1 Documentation

Yin (2003) explains that documentary evidence is a likely source of data for every case study, as it includes a multitude of different types of primary and secondary sources. Primary data sources typically include letters, minutes from meetings, written reports, working documents such as registers, progress reports and attendance records. Secondary data sources include other published studies on the same event, market intelligence reports and press cuttings. The advantage of documentary evidence is that it can be repeatedly reviewed and sourced over time. It exists irrespective of and prior to any research accessing it, and can include recordings of events over extended periods of time (Yin, 2003).

There are weaknesses associated with this source of evidence, however. Irretrievability of documents may be a concern, and it is unknown, which documents may or may not be accessible. This may be due to imposed barriers from the organisation, or practical access due to the age or location of the evidence (Yin, 2003). Bias is also an inherent issue when sourcing documentation, as it would have originally been written for a specific audience and purpose at the time. Documents are not literal recordings of events (Yin, 2003), and knowing the original purpose of a specific document may inform the interpretation of it. Even with such knowledge, however, this does not remove the potential bias in the information presented and that which was excluded. Bias in documentary evidence extends further in terms of selectivity bias, which relates to the choice of documents to be stored. Why some documents may be stored and others may have been discarded is remnant to the choices made by the organisation. One way of overcoming weaknesses associated with documentary evidence is to use it as part of a range of sources of evidence so the evidence can be corroborated and validated. Documents are themselves useful at corroborating other information collected from interviews, yet are equally important when the evidence is contradictory. This emphasises the need for further exploration to explain the divergence of evidence. Documents can also lead to potential further areas of exploration not previously considered.

Documentation remains a valuable source of data within case study research, irrespective of its known weaknesses. Documents can supplement existing evidence, yet compensate for the limitations of other methods. Evidence collected from qualitative methods such as interviewing can be compared to documentary evidence as a means to cross-validate the information gathered. Through this process, it is possible to explore the variations in what participants may say, and what they may actually do. To

avoid over-reliance upon documentary evidence, however, there needs to be a balanced approach to the integration and recognition of it. As a means to adding to existing knowledge, documentation can be invaluable. Nonetheless, Yin (2003) points out that it is essential to consider the original purposes, audience and objective of such material. It may have been written for the purposes of an alternative audience with an alternative objective. This needs to be taken into consideration when documentary evidence is evaluated (Yin, 2003).

Documentation from within the Tribe Project was sourced using two main strategies. Firstly, the Tribe Project managers members were asked to provide documents they had relating to the organisation, structure, funding, participants and implementation of the program. Documentation was also requested from the head coaches of the sports delivered through the Tribe Project. Documents were stored as part of the larger case study database and were represented in either paper of electronic format. Data included adverts of the Tribe Project such as leaflets, posters and holiday camp brochures, email correspondence between the Tribe managers and coaches and working documents such as the program participation and target attendance rates. Documentation was requested on a monthly basis from the Tribe managers and coaches to coincide with their monthly review of the Tribe Project. The second strategy of documentation retrieval was through internet searches for evidence relating to the Tribe Project. Specific searches on the University of Bath's website, and searches on information relating to the Tribe Project in general, were used. Due to rapid developments in information on the internet, weekly searches were conducted to ensure up to date information was obtained. Documentary evidence relating to the Tribe Project was collected over a period of 12 months and was used to assess the Reach, Effectiveness, Adoption, Implementation and Maintenance of the program.

# 4.5.2 Archival Records

Archival records are another useful source of evidence within case study research, and have similar strengths and weaknesses to documentary evidence. Evidence which is classified as archival data often takes the form of computer records, survey data and personal records (Yin, 2003). Other examples of archive data include service records, organisational records, maps, charts and population census data. Unlike documentary evidence, the precision of the archival records, relevance and ability to gain access to it will vary across each case study. Like documentation, however, access can be restricted due to issues with privacy, and there is an inherent bias attached to data of

this type. Yin (2003) makes the case that it is essential to consider why the record was originally produced, and for whom was the audience intended. Although archived data may appear somewhat relevant, the usefulness of the data may only be established once the evidence is considered in light of the purpose and audience it was originally intended (Yin, 2003).

Archival records relating to the Tribe Project were sourced in a comparable way to that of documentation. The archival records relating to the Tribe Project were also stored within the main case study database. Archival data that was collected included BANES Council census data relating to population statistics of the local area and the proportion and density of local schools. Census data were an important document for use within this case study, due to the known links between the Tribe Project and schools with BANES. As with the process of retrieving the documentary evidence, the archival records were collected over a period of 12 months and the data were used to specifically to assess the *Reach* and *Adoption* of the Tribe Project.

## 4.5.3 Direct Observation

Direct observation describes a situation where the researcher observes the phenomena of interest in order to draw upon information, which was not obtainable from other methods. Direct observations are typically made during site visits where behaviours and events can be viewed in the context within which they naturally occur. Direct observation can be arranged formally or informally, and notes are usually recorded in a field notebook. Formal direct observation can include the measurement of certain behaviours over certain periods of time, and usually involves the development of an observational protocol (Yin, 2003). Informal direct observations take place during field visits or when data collection is taking place.

There are many advantages to direct observation, as it generates insight and better understanding of a particular phenomenon being studied. It is furthermore a useful way of corroborating evidence from other sources and unveiling areas not previously considered as a potential source of investigation. Evidence from this data source can add significantly to the depth of a case study. By placing the evidence in the context and situation within which it naturally occurred, it adds realism and generates contextualised evidence. Direct observations record an event in actual time and in the context of the situation. Unlike other sources of data, direct observations add an element of 'reality' to the evidence (Yin, 2003). Weaknesses associated with type of data collection are, however, the potential time and cost restraints (Yin, 2003). The location of the case in question can make site visits time consuming and costly, reducing the opportunities for direct observations. The evidence collected can also be fairly selective, and therefore not representative of the entire case (Yin, 2003). As direct observations are often undertaken during data collection visits or pre-arranged site visits, the danger is that only one type of behaviour in one specific context is being observed. Any inferences made from this data may fail to consider additional behaviours that were unable to be viewed. It is unrealistic however to assume that direct observations can be made across every aspect of the complete case. Observational data serves best to support and add to other sources of evidence, as opposed to inferences made on it alone. Reflexivity is also a weakness when conducting direct observations, as it is unknown how the situation may have changed due to the researcher's presence.

As part of this case study, direct observations were made over a period of 12 months, spanning the first incidence of contact with a Tribe manager to the final stages of data collection 12 months later. The direct observations were informal in nature whereby they were recorded during general visits to the site, the data collection phases and following specific meetings with members of the Tribe Project. Due to the fact, the Tribe Project is located on the University of Bath campus; it was possible to access the site on regular occasions without the purpose of data collection or pre-arranged visits as a precursor. Direct observations were therefore made during situations where no formal interaction was in place, or known visit was due to occur. This potentially led to a more reflective account of the observation witnessed in the natural context within which it was occurring. Direct observations were recorded in a field notebook at the first opportunity after the event occurred. Notes from these observations were then written up in the form of a word document, which detailed the date, time and location of the observation, individuals involved and a brief title summarising the event. This document was then stored as part of the case study database. Data collected following direct observations was used to assess the Reach, Effectiveness, Adoption, Implementation and Maintenance of the Tribe Project.

# 4.5.4 Interviews with the Tribe Project Managers, Coaches and Parents

Yin (2003) argues that interviewing remains one of the most important sources of data collection within a case study. Using interviews as a method of data collection, the

participants and researcher engage in a much more interactive process. The respondent themselves can also influence the course of the research and ideas of the researcher in a variety of ways (Yin, 2003). Interviewing is a relatively fluid process of collecting data, as, although a purposeful line of enquiry exists, the 'how' and 'why' questions in a case study can be addressed in an unstructured way. Despite being a somewhat targeted and focussed method of collecting data, the interview itself can be relatively informal and the questions can be open-ended.

Interviewing is a useful way of focusing directly on the case and specific individuals within it. This can be a useful source for converging and diverging evidence across participants, in particular where there may be only a small group of key informants. Comparing interview data across participants is a useful way to strengthen a line of enquiry, it can although highlight the inconsistencies. Interviewing remains an insightful way to collect data, and can generate new inferences and relationships not previously considered. In this particular case study, the interview method was an excellent way to gather information on the specific components of the RE-AIM framework. It allowed for a systematic interview schedule that was consistent across all the interviews conducted. The choice of semi-structured rather than structured interview was chosen within this case study, as it offers greater flexibility to approach a range of respondents in different ways. Recording the interviews using a Dictaphone also meant accurate, verbatim accounts of the conversations were secured and the potential loss of data was avoided. This process also frees the researcher to record non-verbal cues and pay more attention to the conversation, as opposed to writing the interview down.

Interviewing can invite, however, certain biases due to the types of questions being asked. This can lead to response bias, as interviewees may predict the nature and intention of the research. Similarly, reflexivity may occur whereby interviewees provide socially desirable answers. The validity of the study can then compromised as a result. Interviews can also be subject to poor recall and inaccurate articulation, so can be considered as verbal reports only (Yin, 2003). Using other sources of data as a means of corroboration is a way to increase the reliability of the data collected.

To evaluate the individual and organisational-level impact of the Tribe Project effectively, greater insight into the structure, organisation and experiences of the Project was necessary. Semi-structured interviews were conducted with key informants to the case. This included the Tribe managers who have overall responsibility for the Tribe Project, the Tribe coaches who deliver the Tribe sports sessions and the Tribe parents whose children participate in the program. Qualitative methodology was deemed the

most appropriate method to address the study aims, as it allows patterns to emerge naturally from the data without having been specified in advance (Yardley, 2008). The main aim of this data collection was:

- To investigate the perspectives of the Tribe managers, coaches and parents regarding the *Reach, Effectiveness, Adoption, Implementation* and *Maintenance* of the Tribe Project

## 4.5.4.1 Methods

#### 4.5.4.1.1 Study Population

As an in-depth case study was the broad strategy for this research, it was necessary to collect data from a variety of different individuals who had a direct experience of the Tribe Project. Three participant subgroups formed the basis of this particular data collection: the Tribe managers, the Tribe coaches and the Tribe parents. The 'Tribe managers' represented the three main individuals who had overall control of and responsibility for the Tribe Project. The 'Tribe coaches' represented the student coaches who delivered the Tribe sports sessions and coaching to local schools within BANES. The 'Tribe parents' represented the parents of the children and adolescents who attended the Tribe Project. Data were collected from these three populations for the purposes of triangulation, the results of which are presented in Chapters 5 to 9.

# 4.5.4.1.1.1 Rationale for the Choice of Participants

#### Tribe Project Managers

The Tribe Project managers were chosen to take part in this study specifically because of their position within the case. The Tribe managers acted as key informants within this case study as they had overall control of and responsibility for the Project. Each of the Tribe Project managers represented a very specific and different role in the Project, and their contribution to the research was invaluable. It was important that they were included in this study as they represented some of the key informants to the evaluation of the Tribe Project.

## Tribe Project Coaches

The Tribe coaches were also recruited based on their specific role in the Tribe Project. The head coach from each Tribe sport was asked to participate, as they would have the greatest understanding and experience of implementing the Tribe sports sessions. In situations where there was no head coach representing the Tribe sport, or they were unavailable to participate in the study, the most senior coach(s) was recruited. It was important that head or most senior Tribe coaches took part in this study, as they were directly responsible for delivering the Tribe sports sessions. They would also be able to contribute to questions regarding the structure, design and implementation of the Tribe Project as a whole. As the case study was intended to run for a period of approximately 12 months, the Tribe coach's involvement within the research would span beyond that of just the interview phase. Their involvement in this case study had a two-fold importance, therefore. Firstly, to contribute directly to the evaluation of the Tribe Project via interviews, and secondly to facilitate the quantitative data collection phase. As a group, the Tribe coaches were key informants to the delivery and implementation of the Tribe Project. Although the Tribe managers were responsible for granting access to the Project as a whole, the Tribe coaches acted as gatekeepers to the individual Tribe sports sessions.

#### Tribe Project Parents

The Tribe parents represented an important source of data within this case study for two key reasons. Firstly, they had experiences as recipients of the Tribe Project and thus could contribute to understanding the organisation and implementation of it. Secondly, they could comment on the experiences and motivations of their children to participate in the Tribe Project. Evidence from the Tribe parents also contributed to understanding the structure, organisation and implementation of the Tribe Project as a whole. In addition to evidence from the Tribe managers and coaches, the Tribe parents also contributed to understanding the experiences and outcomes of participation in the program. Evidence from the Tribe parents therefore played a significant role during the triangulation phase of the cross-case analysis of the Tribe Project. Generating evidence from multiple sources on the same topic is vital for triangulation purposes.

### 4.5.4.1.1.1 Rationale for the Recruitment Methods

The Tribe managers and coaches were recruited based on their specific involvement in the Project, and the Tribe parents were recruited as an opportunity sample. A contact list of the Tribe managers and coaches involved in running and delivering the Tribe Project was used as a basis to approach participants. An email was sent to all the individuals explaining the purpose of the study, and requesting their participation in an informal interview (Appendix D). Arrangements were made individually with each participant so they could choose the date, time and location where the interview was conducted. This method was chosen for two reasons: firstly, to maintain a good researcher-participant relationship by avoiding participant inconveniencing, and, secondly, to provide participants with a sense of control during the research process. This can be extremely important in particular with qualitative research due to the personal nature of the information shared. By giving participants the ability to choose the location and time of this exchange, they are able to place themselves in an environment where they feel safe to answer freely, and can talk uninterrupted.

#### Tribe Project Managers

The three Tribe managers gave verbal consent to participate in this research during the preliminary meeting with the gatekeeper of the Tribe Project. Due to the extended time between this initial meeting and the actual qualitative data collection phase, the Tribe managers were sent a reminder email 3 weeks before the interviews were due to take place. A repeat request for participation was made, partly to reiterate the purpose of the study and interview procedure, but also to comply with ethical codes. It was essential the Tribe managers were aware that their participation was voluntary, and they were still free to withdraw from the study. Due to their precedence in the Tribe Project, and in line with the ethical implications of social research, it was essential that they did not feel coerced into participation. Despite the vital contribution they could potentially make to the study, it was imperative that their rights as a participant were upheld.

#### Tribe Project Coaches

Recruitment of the Tribe coaches was undertaken using a three-step process. Firstly, a list of all the Tribe coaches currently delivering the Tribe sports sessions was provided by the Tribe managers. This included their specific role/position as a Tribe coach, the sports they were currently coaching and their contact details. To introduce the intended research project formally, an email was sent to all the coaches in the Tribe Project. The rationale behind this was that it would then be possible to explain the purpose of the research, the research aims and objectives, how the coaches would be involved in the study and how long the data collection was expected to take. This was the most

appropriate method to use as the initial point of contact, as a large number of individuals could be contacted with the same information.

For the purposes of the actual interviews, only the head or most senior coaches were required to take part. It was however important that *all* the Tribe coaches were aware of the study. As the case study was due to be conducted over a period of 12 months, it was likely that all the Tribe coaches would be affected by the research at some point, even if they were not directly participating. Secondly, they would at some point in the latter stages of the research be involved in, or exposed to, the quantitative data collection phase. Ensuring all the coaches were aware of the research to be carried out meant they felt informed of and included in the study. This was a first step in the preliminary stages of establishing a positive researcher-participant relationship. As previously discussed, this relationship was a continuous process over the course of the case study.

Initial contact with the Tribe coaches was made during the early stages of the research process, when access to the Tribe Project was first granted. As with the Tribe managers, due to the extended time between this initial point of contact and the actual qualitative data collection phase, the specific Tribe coaches who were required to take part in an interview were again contacted individually. The purpose of this second email was firstly to remind the participants of the research, and, secondly, to request their voluntary participation in an interview. As these individuals were contacted specifically due to their role within the Tribe Project, it was important that they understood they still had a right to refuse participation. Despite the fact that overall permission had been granted from the gatekeeper to the Tribe Project, it was ethically imperative that the Tribe coaches did not feel coerced to participate. Contacting the Tribe coaches by email meant they were given the necessary information about the data collection procedure, and freedom to make an informed choice whether or not to take part. Following confirmation that they were willing to participate in an interview, an informal face-to-face meeting was arranged to discuss the details further.

## Tribe Project Parents

The Tribe parents were recruited in two separate ways. Firstly, all the Tribe parents were contacted via notification letters handed out to every child attending a Tribe sports session over a 2-week period (Appendix E). The notification letter informed the Tribe parents of the purpose of the study, and requested their involvement in an informal interview. The second method of participant recruitment was as an opportunity sample

following the results of the recruitment using this written invitation. For the Tribe sports, which did not have participant representation following the written notification, parents were approached at the remaining sports sessions and recruited as an opportunity sample. These two methods of recruitment were employed for the following two main purposes: firstly, to minimise the effects of volunteer bias, and secondly, to obtain participant representation from as many of the sports delivered through the Tribe Project as possible.

It is a common problem in social research that participants' motives for volunteering to take part in research not only makes them different to non-respondents, but may also mediate their responses. Participants who choose to, or choose not to, volunteer to take part in research can lead to what is understood as 'volunteer bias' (Neale and Eaves, 1993). Volunteer bias occurs when the sample of volunteers is not representative of the general population. Individuals who are willing to volunteer to talk about specific topics may respond to questions differently than those who were not willing to take part. Neale (1993) argues that recruitment of participants using an opportunity sample never constitutes a random sample of the population; due to the choice by some individuals not take part. Although it is generally assumed that sampling in this fashion is negligible as the variable of interest and liability to volunteer are independent, it is good research practice to facilitate the differences that this may pose (Neale and Eaves, 1993). By combining participants who volunteered to take part with those that were independently approached as an opportunity sample, the effects of volunteer bias would be reduced. A more representative account of the Tribe Project would also potentially be gained.

The second reason for using this sequential strategy was in light of the main aims of this research, to gain an in-depth understanding of the Tribe Project from a range of perspectives. Evidence from multiple informants within the Tribe Project would provide more depth of understanding to the case, and furthermore aid the triangulation of data. Mixing the recruitment methods in this way meant that data were collected from a range of individuals, which would potentially lead to a more balanced account of the Tribe Project. Thus, volunteer bias would be minimised, and the study validity potentially increased.

## 4.5.4.1.2 Interview Schedule

The interview schedule was written in August 2009, and was based on the RE-AIM framework (Glasgow et al., 1999). Literature on interviewing methods (Seidman, 2006,

Ritchie and Lewis, 2003) and the application of the RE-AIM framework (Belza et al., 2007, Buis et al., 2009, Dunton et al., 2009b, de Meij et al., 2008) was consulted. The interview schedule was centred upon the five dimensions of the RE-AIM framework and the same set of questions was used for each participant. The Interview schedule used during interviews with the Tribe parents was modified slightly, so questions were framed in the context of being a recipient of the Tribe Project, as opposed to being an organiser/implementer. The interview schedules for the Tribe managers, coaches and parents are shown in Appendix F.

#### 4.5.4.2 Procedure

## 4.5.4.2.1 Interview Administration

One to one interviews were conducted with the 3 Tribe managers, 5 Tribe coaches and 3 Tribe parents. Group interviews were conducted with 2 Tribe coaches and 7 Tribe parents. The group interviews among the Tribe parents were organised so there were two groups of 2 participants and one group of 3 participants. Semi-structured interviews were conducted with all the participants, lasting between 40 minutes to 1 hour. All the interviews were used for each interview. Semi structured interviews were conducted, as the flexible nature of this method allows for appropriate prompting and participants to expand on their answers where necessary.

## 4.5.4.2.2 Recording, Transcribing and Coding the Data

All the interviews were recorded using a Dictaphone so focus could also be placed on any additional non-verbal cues during the interview. Responses could also then be framed in the real words of the participant. The freedom of interaction provided by using a Dictaphone meant participants were able to respond to the questions in greater depth and duration, and build on their answers or digress where appropriate. On completion of the interviews, the written transcripts were entered into a qualitative data-analysis computer software-package (2008, QSR International PTY Ltd., Victoria, Australia). Transcripts were coded based on individuals' participant subgroup, a Tribe manager (code M), a Tribe coach (code C) or a Tribe parent (code P). Transcripts were also numbered 1-20 in addition to the participant subgroup code. Quotes taken from these transcripts were identifiable only to the researcher, and were based on the participant subgroup code and number. This coding style was used in order to facilitate 131 triangulation of the results, and to clarify instances of convergence or divergence of the evidence across participant subgroups.

## 4.5.4.3 Analysis

## 4.5.4.3.1 Framework Analysis

Framework analysis was the strategy used to code the interview transcripts, an approach that was developed by researchers at the UK National Centre for Social Research in the 1980's (Ritchie and Spencer, 1994). The approach uses a hierarchical thematic framework to classify and organise data based on key themes, concepts and emergent categories. Using the framework, the intention is to identify a series of main themes subdivided by a series of subtopics. The main themes are charted along with each subtopic, representing key summaries from the data set. These charts are then used to examine the data for patterns and connections (Ritchie and Lewis, 2003). Framework analysis is a useful method to demonstrate the analytical process in a systematic and coherent way. Although the core principles of framework analysis are inductive, the inclusion of *a* priori as well as emergent concepts is feasible (Ritchie and Lewis, 2003). Integrating the raw data into a conceptual framework in this way follows a five-step process (Pope et al., 2000):

- 1. **Familiarisation**: immersion in the raw data by listening to tapes, reading transcripts, and studying notes in order to list key ideas and recurrent themes.
- 2. **Identifying a thematic framework**: identifying all the key issues, concepts and themes through which the data can be examined and referenced
- 3. **Indexing**: applying the thematic framework or index systematically to all the data in textual form by annotating the transcripts with numerical codes from the index
- 4. **Charting**: rearranging the data according to the appropriate part of the thematic framework to which they relate.
- 5. **Mapping and interpretation**: using the charts to define concepts, map the range and nature of phenomena, create typologies and find associations between themes. This is used to generate explanations for the findings. The

process of mapping and interpretation is influenced by the original research objectives, as well as by the themes that have emerged from the data themselves.

The interview transcripts were indexed, integrated and interpreted according to the five components of the RE-AIM framework. As the purpose of this study was to collect detailed qualitative data to assess the individual and organisational-level impact of the Tribe Project, the RE-AIM framework was considered the most appropriate evaluation model to use. Following the preliminary stage of familiarisation with the interview transcripts, the RE-AIM framework was applied systematically to the data. Using the qualitative data analysis software (2008), the transcripts were individually indexed and annotated, based on sub topics within the five dimensions of the RE-AIM framework. The data were then charted individually for each participant (Appendix R), and compared within each participant sub-group (Tribe managers, coaches and parents). The data were charted in this way as each participant sub-group was believed to have shared characteristics due to their similar role/position within the case, and a similar pattern of experience was expected. Mapping and interpreting the data according to participant sub-groups also facilitated triangulation of data that occurred during the cross-case analysis phase.

## 4.5.4.3.2 Calculating the RE-AIM Components

On completion of the initial framework analysis, the five RE-AIM dimensions were assessed based on their individual evaluation criteria, and the following strategy was adopted.

### 4.5.4.3.2.1 'Reach' of the Tribe Project

To assess reach (the proportion of children eligible in BANES, and the proportion who participated in the Tribe project), participants were asked to comment on the representativeness of the children who attend the Tribe Project. Questions were framed in terms of demographics (sex, age, social class), and the segments of the population they think the Tribe Project is accessible and inaccessible to. Reach was assessed at the individual level.

#### 4.5.4.3.2.2 'Effectiveness' of the Tribe Project

To assess the effectiveness of the Tribe Project (the program outcomes), participants were asked to comment on the aims and objectives of the Project, and the extent to which these have been met. Secondly, the successes of the Project and evaluation measures in place were assessed at the individual level.

#### 4.5.4.3.2.3 'Adoption' rate of the Tribe Project

To assess the adoption rate of the Tribe Project (the proportion of settings or agents willing to initiate the program), the proportion of sports within the Tribe Project that adhered to the program principles, and the proportion of schools within BANES which had established links with the Tribe Project, were assessed. This was to ascertain how well each component of the Tribe Project adhered to its core principles, and was assessed at the organisational level.

## 4.5.4.3.2.4 'Implementation' of the Tribe Project

To assess the implementation of the Tribe Project (the extent to which the Tribe Project was delivered as the administrators had intended), questions relating to the consistency of coaching, organisation and implementation of the Tribe Project were used. Participants were asked to comment on whether the Tribe managers and coaches implemented the program correctly, barriers they faced when implementing the program and the strategies employed to overcome such challenges. Implementation was assessed at the organisational level.

#### 4.5.4.3.2.5 'Maintenance' of the Tribe Project

Maintenance of the Tribe Project was assessed at the individual and organisational level. At the individual level, maintenance refers to the long-term effects of the program on both targeted outcomes and quality of life indicators. Participants were asked to estimate the length of time the children typically attended the Tribe project, the long-term program effects and reasons for dropping out. Organisational maintenance refers to the extent to which the Tribe Project became institutionalised as a program of community sport and to which it was sustained over time. Participants were asked to comment on the routes and pathways during and after the Tribe Project, the challenges associated with these pathways and the strategies in place to overcome them.

# 4.5.5 Questionnaires Administered to the Children and Adolescents Attending the Tribe Project

Questionnaires are a low cost way of collecting data from a large sample of participants. The data is stable as it is quantitative, and there is flexibility in the administration methods. Questionnaires can be administered by post, telephone, face-to-face or online. It is also a useful means to collect data anonymously, potentially increasing the validity of participant answers. Questionnaires are a useful way to collect data on sensitive issues, or when large amounts of information on personal characteristics, are required. They have strong psychometric properties and typically employ standardised procedures.

There are weaknesses associated with questionnaires a data collection strategy, however, as mass administration across wide populations can affect participant response rates. Secondly, if the design of the questionnaire is not tailored specifically for the audience for which it is intended, there is a danger that participants provide socially desirable answers, random scoring or they may fail to finish at all. Questionnaires have also been criticised for the lack of in-depth answering obtained. It is unclear whether participants' failure to respond to certain questions is a result of sensitivity to the question, missing it accidentally, misunderstanding the instruction or because of boredom.

To evaluate the individual and organisational-level impact of the Tribe Project, greater insight into the reasons children and adolescents attend the program, and factors important to their participation, was necessary. In order to assess this, questionnaires were administered to the children and adolescents participating within the Tribe Project. A questionnaire was used as the method to collect data from participants within the Tribe Project, as the size of this particular population could not be interviewed individually. The results from this questionnaire were used as part of the in-depth evaluation of the Tribe Project. Three of the five dimensions of the RE-AIM framework were assessed: *Reach, Effectiveness* and *Implementation*. The Adoption and Maintenance of the Tribe Project were not assessed as part of this data collection.

The focus of this study, therefore, was to assess the determinants of participation in the Tribe Project, and the perceived importance of factors whilst attending. The key research questions that were addressed in this study were:

RQ1: 'Which factors determine the children's and adolescents' participation in the Tribe Project?'

RQ2: 'Which factors are most important to the children and adolescents whilst attending the Tribe Project?'

## 4.5.5.1 Methods

## 4.5.5.1.1 Study Population

During February 2010, the total population of children and adolescents attending the Tribe Project was estimated at 409<sup>1</sup> participants. A sample of this population was used within this study. Inclusion criteria for this study was that the children and adolescents had attended a minimum of one Tribe sports session from any of the sports delivered through the Tribe Project, and that they were aged between 7-14 years old. Children and adolescents were excluded from the study if they were participating in a sport run at the University of Bath, which was not specifically delivered through the Tribe Project. Participants of the Tribe Project were the focus of this data collection as they were the direct recipients of the program.

# 4.5.5.1.1.2 Rationale for the Recruitment Methods and Choice of Participants

The children and adolescents attending the Tribe Project were an important source of data within this case study, as they represent one of the primary targets for physical activity interventions. Successful promotion of physical activity among children and adolescents has to consider the complex settings within which their physical activity behaviours are embedded. The social context in which children and adolescents chose to be active inevitably has its own set of barriers to change (Feifer et al., 2006). The differences found within different settings such as the community, schools and primary care means that no one unifying theory can be the basis for an intervention's design. A multidimensional approach is often needed, as individuals within these settings often have different levels of readiness to change.

<sup>&</sup>lt;sup>1</sup> Data on the number of children who attend the Tribe Project, and information on their age and gender were not consistently recorded throughout the Tribe Project. The number of children reported as attending the Tribe Project is therefore based on estimates only.

For this reason, the determinants of children's physical activity include both internal factors such as motivation and enjoyment (Spray and Wang, 2001), and external factors such as environment and social norm (Standage et al., 2003). The interaction of these factors is complex, and it is essential to establish the reasons why the children and adolescents choose to participate in physical activity programs, and which aspects of them are most important to this population. Longitudinal studies of physical activity and health amongst children have shown that, although physical activity levels steadily increase during childhood (5-11 yrs), there is a steep decline during adolescence, 12 yrs and upwards (Kimm et al., 2000, Sallis, 2000, Janz et al., 2000, Salmon and Timperio, 2007, Telama, 2009). The Tribe Project is specifically aimed at children aged 7-14 years old, therefore assessing any difference amongst this population will be an important source of evidence for the case study evaluation of the Tribe Project.

The aims of this study were to assess the children's and adolescents' determinants of participation in the Project, and factors they perceived as important to their sustained participation. To address these aims successfully, it was necessary to collect data from this Tribe population.

## 4.5.5.1.2 Instrument Development

In order to address the two key research questions within this study, the socioecological model of health behaviour (Sallis and Owen, 1997) was chosen as the basis for the questionnaire. This decision was made following a review of the current literature (Gordon-Larsen et al., 2000, Casey et al., 2009a, Allender et al., 2006), evidence from interviews with the Tribe managers, coaches and parents and a pilot study. Evidence from the previously conducted interviews was used to inform the questionnaire development, as there were no existing measures in place to evaluate the Tribe Project, and to ensure that the items in the questionnaire were representative of the Tribe Project specifically.

Following interviews with the Tribe managers, coaches and parents, the socioecological model of health (Sallis and Owen, 1997) emerged as a theoretical framework most applicable to the purposes of this study. The determinants of participation in physical activity programs have been shown to be linked to the socioecological model of health (Casey et al., 2009a, Dwyer et al., 2008a), and to vary across gender and age (Allender et al., 2006). Ecological approaches to the understanding of physical activity behaviours among youth recognise the importance of the setting or context in which a particular

behaviour occurs (Glanz et al., 2002). Items within the two scales were therefore based upon interpersonal, intrapersonal, social and environmental/organisational factors (McLeroy et al., 1988, Sallis and Owen, 1997). A pool of 42 items, based on the four components of the socioecological model, was used to assess the reasons children and adolescents participate in the Tribe Project, and the factors perceived as important to them whilst attending.

#### Scale 1: Determinants of Participation in the Tribe Project

A 21-item scale was developed to assess the determinants of participation in the Tribe Project. Items were rated on a 5 point Likert scale ranging from 1, "never true for me" to 5, "really true for me". There were 5 items relating to interpersonal factors (beliefs and morals), 6 items relating to intrapersonal factors (goals and progression), 5 items relating to social factors (family and peers) and 5 items relating to environmental factors (physical environment, facilities).

#### Scale 2: Perceived Importance of Factors whilst Attending the Tribe Project

A 21-item scale was also developed to assess the perceived importance of factors whilst attending the Tribe Project. Items were rated on a 5-point likert scale ranging from 1 "unimportant" to 5 "very important". There were 5 items relating to interpersonal factors (beliefs and morals), 7 items relating to intrapersonal factors (goals and progression), 3 items relating to social factors (family and peers) and 6 items relating to environmental/organisational factors (physical environment, structure).

#### 4.5.5.2 Procedure

## 4.5.5.2.1 Pilot Study

The questionnaire was piloted in December 2009 with 10 children (6 boys and 4 girls), aged between 7-12 years old. The mean (SD) age of the participants was 8.4 ( $\pm$ 1.84) years. The purpose of the pilot study was to assess whether the format, ordering, language and length of the questionnaire were suitable for the children in the intended research population. Successfully satisfying this criteria would ensure that potential confusion or response bias would be reduced (Bradburn et al., 2004). As the population in this case study would be aged between 7-14 years old, there was concern that the questionnaire needed to be suitable for the youngest participants in this population. The

questionnaire was therefore specifically piloted with the younger age group in the case study, 7-10 year olds. Within this particular age group problems associated with the structure, format and language used in questionnaires can arise (Dillman, 2007). The design of questionnaires should fundamentally be motivated by the needs of the respondents (Bradburn et al., 2004), therefore the questionnaire was designed and formatted for the reading age of the youngest participants. The questionnaire was visually appealing with colours and pictures, had a simple consistent layout and had clear instructions at the start of each section.

Dillman (2007) argues that thoughtful formatting can address the respondents' motivations to compete the questionnaire. This is achieved by reducing their potential apprehension about being involved and aiding their completion of the questionnaire. This can also increase their likelihood to respond (Dillman, 2007). These factors were taken into consideration when designing the Tribe questionnaire. All the participants were given examples of how to answer the different questions, and they were purposely guided through the questionnaire to minimise any misunderstanding or random answering. The first four questions were related to the participants' age, gender and sport they participate in through the Tribe Project. The questionnaire was designed in this way to gather descriptive data on the participants attending the Project, and secondly, to ensure that the start of the questionnaire was straightforward and simple. To minimise social desirability, participants were told that there was no right or wrong answer.

This pilot study benefited the development of the final questionnaire by helping to refine the structure of it. The results of the pilot study showed that the format, ordering and length of the questionnaire were appropriate for children of this age group. Only the 7 and 8-year-old children showed some difficulties in understanding the questionnaire. The main issues that were found were regarding the language used in the items. Specifically this included the meaning of certain words, 'facilities' and 'feeling part of something'. In the first scale, which measured the determinants of participation in the Tribe Project, two items were altered "I like the *facilities* where I do the activity" was changed to "I like the *place* where I do the activity" and "I want to *feel* part of something", was changed to "*Being* part of a sports group is cool". In the second scale, which measured the importance of factors in the Tribe project, two items were altered "The *facilities* look clean and well looked after" was changed to "I feel *part of* the group" was changed to "I feel *part of* the group" was changed to "I feel *part of* the group" was changed to "a group". This alteration thus ensured all the items in the questionnaire were then appropriate for the intended population.

A second major alteration to the wording within the questionnaire was the use of the words 'Tribe Project'. It was observed over the course of this case study that some of the children participating in certain Tribe sports did not know what the 'Tribe Project' was, nor did they refer to their activity using this 'Tribe Project' term. During general conversations with the children attending the Tribe sports sessions, several asked, "What is the Tribe Project?" despite having attended for a year or more. For this reason, the questionnaire was altered to include the words '*sports club*', as opposed to "Tribe Project". This was to ensure all the participants understood the questionnaire, and their knowledge of being specifically part of the Tribe Project would not affect their ability to answer the questions.

Only the youngest children in the pilot study sample, those aged 7 years old, had difficulty understanding the instruction for their date of birth. So that the younger population could understand what was required of them, the questionnaire was amended so that they were required to provide the day, month and year of their birth, as opposed to simply asking them to state their 'date of birth'. A second issue relating to the questionnaire format was the use of a Likert scale. It was a common theme amongst the younger participants that they were unsure how to answer the likert scale questions. Following explanation of how to do it all the participants managed to complete the questionnaire unaided. To accommodate this finding, a practice question was included in the final questionnaire so the participants could practice how to answer questions on a scale of 1-5. The example was used related to an arbitrary event, 'When I get home from school I like to ... 'Participants needed to indicate whether the two items listed, 'I like to start doing my homework' and 'I like to watch television', was 'always true for me' or 'never true for me'. Including this practice question meant participants had the opportunity to familiarise themselves with questions using Likert scales, and could ask for clarification prior to commencing the remainder of the questionnaire. The final Tribe Project questionnaire used within this study is shown in Appendix J.

#### 4.5.5.2.2 Questionnaire Administration

Questionnaires were administered over a four-week period during February 2010. The questionnaires took a maximum of 15 minutes to complete, and were filled in individually by participants at the end of their Tribe sports session. Questionnaires were completed within the Tribe sports session groups, and all participants were given instructions on how to complete the questionnaire. The same researcher was

responsible for collecting all the data to ensure each participant was given the same set of instructions on completing the questionnaire. This strategy was particularly important for the younger children within the group. Consistency in the data collection procedure meant that all the participants were clear on what to do, potentially minimising random answering or response bias.

During interviews with the Tribe coaches, participants described how the different sports delivered through the Project functioned independently of one another. The sessions were implemented in very different ways, and the number of attendees in any one group could vary greatly. Based on this information, it was deemed that a 'one size fits all' approach to the quantitative data collection would be inappropriate. To accommodate the differences across the Tribe sports sessions, the timings of the questionnaire administration (being either immediately after the sports session, or fifteen minutes prior to the end) varied across the different sports. Secondly, questionnaires were completed either in the same location the Tribe sports sessions had been conducted, or in an available room close by. This was modified depending on the nature and location of the Tribe sports session. By adapting the data collection strategy to facilitate the structure and timings of each Tribe sport, the potential for a higher questionnaire response rate was increased.

### 4.5.5.3 Analysis

To assess the determinants of participation and the perceived importance of factors whilst attending the Tribe Project, mean item scores were calculated. Descriptive statistics alone were calculated, as this was the most appropriate strategy to assess this particular data. The attendees of the Tribe Project could participate in multiple sports through the program and, therefore, the participants within the sample could complete multiple questionnaires as part of this data collection (one questionnaire for each sport they participated in). Factor analysis is a common statistical technique used to analyse the interrelationships among a large number of variables within a scale. A more detailed analysis into the factorial validity of the scales could be conducted using confirmatory factor analysis (CFA); however, a larger sample of children and adolescents attending the Tribe Project would also be needed (e.g., a sample with a minimum of 5 participants per estimated parameter (Bentler and Chou, 1987)). Hair, Black, Babin & Anderson (2006, p. 16) defined factor analysis as:

"a statistical approach that can be used to analyse the interrelationships among a large number of variables in terms of their common underlying dimensions (factors)"

The intention is to find a way to condense the information contained in a number of original variables, into a smaller set of variables (factors), with a minimum loss of information (Hair et al., 2006). The non-independent data collected through of the Tribe Project questionnaires meant factor analysis was an inappropriate technique in this instance.

The mean item scores within the two scales were calculated by gender and age. The data were split according to gender and age. This decision was made for two important reasons. First, it is widely reported that boys are generally more physically active than girls (Trost et al., 2002, Nader et al., 2008). Second, there are differences in the frequency of physical activity participation among younger and older children (Kahn et al., 2008), and the determinants of participation in physical activity vary across these groups (Mattocks et al., 2008a).

### 4.5.5.3.1 Reliability and Validity Assessment

Scale reliability is the proportion of variance attributable to the true score of the latent variable (DeVellis, 1991). According to measurement theory, the relationships among items are logically connected to the relationship of items to the latent variable. If items within a scale have a strong relationship to their latent variable, they will have a strong relationship to each other (DeVellis, 1991). The reliability of each scale within this questionnaire was estimated by calculating its internal consistency. A scale is considered internally consistent by the extent to which the items within it are highly inter-correlated. Strong correlations between items imply strong associations between the scale items and the latent variable (DeVellis, 1991).

The first measure of reliability is the alpha coefficient, which assesses the consistency of the entire scale. This internal consistency is usually measured with Cronbach's alpha coefficient (Cronbach, 1951), and is a widely-used measure of reliability. The alpha coefficient is the proportion of a scale's total variance that is attributable to a common source, the true score of a latent variable underlying the items (DeVellis, 1991). The lower limit for Cronbach's alpha is generally accepted as 0.70 to consider a scale adequately reliable (Hair et al., 2006). It can, however, decrease to 0.60 in exploratory

research (Robinson et al., 1991). An issue, nonetheless, with the use of Cronbach's alpha to assess reliability is the positive relationship to the number of items in the scale. As such, Spiliotopoulou (2009) argues that caution should be taken regarding estimates of internal consistency based on alpha coefficients. Low alpha coefficients do not always infer problems with the construction of the scales. Likewise, large alpha coefficients do not always suggest adequate reliability as these reports may be due to the data characteristics of the construct, such as items that are close to identical in wording (Spiliotopoulou, 2009). As a result, the mean inter-item correlation score is also used to assess the reliability of scale items.

The mean inter-item correlation is another statistic for evaluating internal consistency. This measure, like the coefficient alpha, produces an index of item homogeneity. Unlike the coefficient alpha, however, it is not affected by scale length. As a general rule, mean inter-item correlations should exceed 0.30 to be deemed acceptable (Robinson et al., 1991). For a reliable scale the magnitude should generally fall between 0.15 and 0.50 (Robins et al., 2007). A further method to improve the reliability of a scale is to ensure sufficient statistical power to conduct the factor analysis. A general rule is that the variable to participant ratio should lie between 1:5 and 1:10 to produce reliable correlation coefficients and to conduct a factor analysis (Hair et al., 2006). A variable to participant ratio of 1:10 is deemed a more acceptable sample size.

Reliability was also partly assessed within this case study based on the participant to item ratio. The participant to item ratio ranged from 5:1 for 11-14 year olds, to 11:1 for 7-10 year olds. In order to produce reliable correlation coefficients Hair et al (2006) state that the accepted item to participant ratio is 10:1. Others argue, however, that the desired participant to item ratio could lie between 5:1 and 10:1 in order to produce reliable coefficients (Kline, 1994, Child, 1990). The participant to item ratio within this study satisfied this criteria, supporting the reliable use of the scales within this study.

Unlike scale reliability which addresses how much a variable influences a set of items, scale validity is concerned with whether the variable is the underlying cause of the item covariation (DeVellis, 1991). There are three main types of validity relevant to scale development: content validity, criterion-related validity and construct validity. For the purposes of this study, the content validity was assessed. The content validity of the questionnaire was defined as the degree to which the scale adequately reflected the socioecological determinants of physical activity behaviour. Content validity relates to the item sampling adequacy, or the extent to which a specific set of items reflects a

content domain (DeVellis, 1991). It is assumed that a scale has content validity when its items are a randomly chosen subset of all the appropriate items.

The content validity of the two 21 item scales was assessed based on a comprehensive literature search, interview data and expert review. A review of the literature indicated that dimensions of the socioecological model (interpersonal, intrapersonal, social and environmental/organisational factors) were associated with physical activity behaviours (Casey et al., 2009a, Dwyer et al., 2008a). Interviews conducted with the Tribe managers, coaches, parents were used to support evidence from the literature, and to confirm items relevant to the Tribe Project population. Both scales were also examined by external experts within the University of Bath's Department for Health to assess their content validity. These individuals had extensive knowledge about the role of the environment on physical activity, child and adolescent physical activity behaviours and questionnaire design. None of the items within the scale were changed following this expert review, and the questionnaire content was deemed an accurate reflection of the key study variables, and considered valid for the purposes of this research.

#### Scale 1 - Determinants of Participation in the Tribe Project

Reliability was determined by examining the internal consistency of the determinants of participation scale, by calculating the alpha coefficient and the mean inter item correlations. The underlying factor structure of this scale showed adequate internal consistency. The standardised alpha score for the 21 item scale was .786 and the mean inter item correlation was 3.629. For a reliable scale, a required alpha coefficient value of >.70 is necessary to determine reliability (Hair et al., 2006). The mean inter item correlation is generally accepted when exceeding 0.30 (Robinson et al., 1991). As this scale satisfies both criteria, it can be concluded it has an adequate degree of internal consistency.

Reliability analyses across participant groups indicated that the alpha coefficient of the scale amongst boys was .814 and the inter item correlation was 3.620. Across girls the alpha coefficient was .744 and the inter item correlation was 3.639. Across 7-10 year olds, the alpha coefficient was .763 and the inter-item correlation was 3.665. Across 11-14 year olds, the alpha coefficient was .827 and the inter-item correlation was 3.552.

Across the four participant groups, the scale was adequately reliable, therefore. Reliability analyses of the individual factor scores indicated that only the *'influence of family'* amongst 7-10 year olds produced an alpha coefficient of .588, which is less than

the recommended minimum of .70. For the purposes of group comparisons, however, reliability can be accepted at a lower magnitude than for individual comparisons (Stewart et al., 1992). An alpha coefficient >.50 is considered to be an acceptable measure of reliability (Helmstater, 1964, Nunnally, 1978, Chronbach, 1951). This factor (*'influence of family'*) comprised 3 items; therefore, the mean inter-item correlation score can be a more appropriate statistic for evaluating internal consistency. For this factor the mean inter-item correlation was 3.146, which is within the desired range for this score to be deemed sufficiently reliable (Robins et al., 2007).

#### Scale 2 - Perceived Importance of Factors whilst attending the Tribe Project

The scale measuring the underlying factor structure to the perceived importance of factors whilst attending in the Tribe Project showed good internal consistency. The standardised alpha score for the 21-item scale was .826, and the mean inter-item correlation was 3.879. As this scale satisfies reliability criteria (Hair et al., 2006), it can be concluded that it has a good degree of internal consistency. Reliability analyses across participant groups indicated that the alpha coefficient of the scale amongst boys was .835 and the inter-item correlation was 3.843. Across girls, the alpha coefficient was .813 and the inter-item correlation was 3.921. Across 7-10 year olds, the alpha coefficient was .800 and the inter-item correlation was 3.895. Across 11-14 year olds, the alpha coefficient was .871 and the inter-item correlation was 3.846. This scale was therefore adequately reliable across participant groups. Reliability analyses of the individual factor scores indicated that only 'recreational sport/environment and image/coach consistency' amongst boys produced an alpha coefficient of .494, which is less than the recommended minimum of .70. This alpha coefficient is just below the recommended lower level for group comparisons (> 0.50) (Nunnally and Bernstein, 1994, Helmstater, 1964). This factor comprised 3 items, therefore, the mean inter-item correlation score can be a more appropriate statistic for evaluating internal consistency. For the 'recreational sport/environment image/coach consistency' factor, the mean inter item correlation was 3.543, which is within the desired range for this score to be deemed sufficiently reliable (Robins et al., 2007).

#### 4.5.5.3.2 Calculating the RE-AIM Components

The specific research questions to be addressed within this study meant only three of the five dimensions of the RE-AIM framework were assessed. The RE-AIM dimensions assessed using the questionnaire data included the *Reach, Effectiveness* and

*Implementation* of the Tribe Project. The rate of *Adoption* and *Maintenance* of the Tribe Project were not measured. The strategy used to assess these four RE-AIM dimensions is as follows:

#### 4.5.5.3.2.1 'Reach' of the Tribe Project

The *Reach* of the Tribe Project was assessed through the first scale within the questionnaire, 'Determinants of Participation in the Tribe Project'. Participants were asked to indicate which items within the scale influenced their decision to attend the Project. Items related to interpersonal factors, such as '*My mum wants me to come*', intrapersonal factors such as '*I want to improve and join a team*', social factors such as '*I want to have fun and enjoy myself*' and environmental factors such as '*The University is a cool, fun place to be*'. Mean item scores were calculated across this 21-item scale, which then contributed to assessing the reach of the program.

#### 4.5.5.3.2.2 'Effectiveness' and 'Implementation' of the Tribe Project

The *Effectiveness* and *Implementation* of the Tribe Project were assessed using the second scale within the questionnaire, 'Perceived Importance of Factors whilst Attending the Tribe Project'. Participants were asked to rate their perceived importance of specific items whilst attending the Project. Items related to interpersonal factors such as 'I feel included in the group', intrapersonal factors such as 'I keep fit and healthy', social factors such as 'I have a nice, friendly coach', environmental factors such as 'I see the same coach each week'. Mean item scores were calculated across this 21-item scale, which then contributed to assessing the effectiveness and implementation of the program.

## 4.5.6 Collating the Case Study Evidence

To store the data collected as part of this case study in an organised and accessible manner an evidence database was created. Maintaining an evidence database in this way helped to tackle issues regarding validity, as the data collected could be easily traced and reviewed. Collating the data in this way can also act to minimise researcher bias. The case study data were stored in 5 different databases based on the type and format of the data collected. The content of each database is outlined below.

**Database A** contained the hard copies of the case study data. The evidence was stored in a series of folders categorised by the type of evidence included. The evidence included field notes following direct observations and paper adverts of the Tribe Project such as leaflets, posters and holiday camp brochures.

**Database B** stored evidence that was in electronic form. This database was stored on the central Bath University server, separated into folders, which corresponded to the type of data it included. Email correspondence between the Tribe managers and coaches was stored in Folder 1. Working documents such as the Tribe Project records of program attendance were stored in Folder 2. Electronic copies of the paper adverts for the Tribe Project were also stored in Folder 2. All the interview transcripts and original tape recordings were stored in Folder 3. The electronic version of the field notes following direct observations were stored in Folder 4.

**Database C** comprised the completed questionnaires in paper form, stored in a series of boxes. The questionnaires were organised numerically.

**Database D** contained the questionnaire data following conversion from written format into SPSS data files. These datasets were stored on the central Bath University server.

**Database E** held the archival records relating to the Tribe Project. These were stored in an electronic format. Data included Bath and North East Somerset Council census data from 2009.

Table 11 illustrates the range of data collected, the type of evidence, its storage location and the results section to which it relates.

# Table 11: Case Study Data Sources and Storage

Data Source	Data Type	Evidence Collected	Evidence Database Storage	Relevant Section of Cross-Case Analysis
Documentation	Advertisement of the Tribe Project	Electronic copy February/Summer 2010 Holiday Camp Brochure	Database B; Folder 2	Reach
Documentation	Advertisement of the Tribe Project	Hard copy of posters, leaflets and holiday camp brochures	Database A	Reach
Documentation	Advertisement of the Tribe Project	Advertisement of the Tribe Sports Sessions Sept 09	Database B; Folder 2	Reach
Documentation	Advertisement of the Tribe Project	Community Links with the Tribe Project Opportunities for School yrs 1-6 and 7-13	Database B; Folder 2	Adoption
Documentation	Working Document	Record of the delivery to Primary and Secondary schools, June 2009	Database B; Folder 2	<ul><li>Adoption</li><li>Maintenance</li></ul>
Documentation	Working Document	Weekly attendance record, May 2009	Database B; Folder 2	<ul><li>Reach</li><li>Effectiveness</li></ul>
Documentation	Email correspondence	Overview of the history and development of the Tribe Project 'Queen's Prize Document'	Database B; Folder 1	<ul><li>Effectiveness</li><li>Adoption</li><li>Maintenance</li></ul>
Archival Records	BANES Council Census Data	BANES Primary and Secondary School Council Census Data (2009)	Database E	<ul><li>Reach</li><li>Adoption</li></ul>

Data Source	Data Type	Evidence Collected	Evidence Database Storage	Relevant Section of Cross-Case Analysis
Direct Observation	Field Notes	Hard copy field notes Electronic copy field notes	Database A Database B; Folder 4	<ul> <li>Reach</li> <li>Effectiveness</li> <li>Adoption</li> <li>Implementation</li> <li>Maintenance</li> </ul>
Interviews	Interview Transcripts Interview Recordings	Interview data from the Tribe managers, coaches and parents	Database B; Folder 3	<ul> <li>Reach</li> <li>Effectiveness</li> <li>Adoption</li> <li>Implementation</li> <li>Maintenance</li> </ul>
Questionnaire Data	Written questionnaire SPSS Outputs	Questionnaires from Tribe children/adolescents SPSS data files	Databases C & D	<ul><li>Reach</li><li>Effectiveness</li><li>Implementation</li></ul>

## 4.5.7 Chain of Evidence

As a considerable amount of case study data were collected as part of this research, a chain of evidence was created. This procedure helped manage the case study data so it could be easily followed and retrieved. Maintaining a chain of evidence throughout a case study can improve the reliability of the study results. Arguments that are presented during the analysis phase can then be traced back to the original evidence source. The overall quality of the case study can be improved if a chain of evidence is maintained (Yin, 2003, Aaron et al., 1995). Evidence within the database in this particular case study was organised according to the date of the evidence, the setting it was collected from, the individuals involved and the data type. The case study protocol also remained a constant source of reference during this research. This ensured the original aims of the study were met, and the evidence collected was relevant to answering the case study questions. Yin (2003) argues that if these processes are achieved, this constitutes the ultimate chain of evidence.

## 4.6 Case Study Data Analysis

The findings from the qualitative and quantitative data collection phases were integrated into the RE-AIM framework, along with evidence from documentation, archival records and direct observations relating to the Tribe Project. To evaluate the individual and organisational-level impact of the Tribe Project, evidence from these five sources of case study data were individually integrated into the RE-AIM framework.

## 4.6.1 Methods

Interview data from the Tribe managers, coaches and parents was used to evaluate the *Reach, Effectiveness, Adoption, Implementation* and *Maintenance* of the program. Questionnaire data from the children and adolescents attending the Tribe Project was used to evaluate the *Reach, Effectiveness* and *Implementation* of the Tribe Project. Documentation was used to assess the *Reach, Effectiveness, Adoption* and *Maintenance* of the Tribe Project. Archival records were used to assess the *Reach* and *Adoption* of the Tribe Project. Field notes collected following direct observations over the course of this case study (Appendix S) contributed to evaluating the *Reach, Effectiveness, Adoption, Implementation* and *Maintenance* of the Tribe Project.

Data from the interviews, questionnaires, documentation, archival records and direct observations were integrated into RE-AIM framework and triangulated to assess the convergence and divergence of evidence. Triangulating the data in this way meant the individual and organisational-level impact of the Tribe Project could be ascertained.

## 4.6.2 Analysis

#### 4.6.2.1 Calculating the RE-AIM Components

To assess the individual and organisational-level impact of the Tribe Project, the five dimensions of the RE-AIM framework were calculated based on the findings from the qualitative and quantitative data collections. Each RE-AIM dimension was rated on a three-point scale indicating the extent to which the respective RE-AIM criteria were successfully achieved. The scale ranged from 1-3, whereby 1 = less successful, 2 = moderately successful and 3 = highly successful. The types of data and strategy used to assess the individual RE-AIM dimensions are described below.

#### 4.6.2.1.1 'Reach' of the Tribe Project

Reach is concerned with assessing the proportion of the population that is accessed by the program in question. Data relating to those who are eligible to participate, those contacted to participate and those who agree to participate are used to assess the extent of Reach.

To assess the *Reach* of the Tribe Project, archival data consisting of BANES Council census data were used to estimate the participation rate. The proportion of children and adolescents in BANES that were eligible to participate in the Tribe Project was compared to the proportion of children and adolescents who did actually participate in the Tribe Project. Interviews with Tribe managers, coaches and parents were used to assess the representativeness of the Tribe Project attendees. Representativeness was based on the demographics (sex, age, social class) of individuals participating in the Tribe Project, as well as the sectors of the BANES population that the Tribe Project is described as being accessible and inaccessible to. Questionnaire data were used to assess the reasons why the children and adolescents who attend the Tribe Project chose to do so. Documentation relating to the advertisement and recruitment for the Tribe Project and direct observation field notes collected throughout the course of the research were also integrated to assess the reach of the Tribe Project.

#### 4.6.2.1.2 'Effectiveness' of the Tribe Project

Effectiveness relates specifically to the impact of an intervention on important outcomes, including potential negative effects, quality of life and economic outcomes.

The *Effectiveness* of the Tribe Project was assessed through interviews with Tribe managers, coaches and parents, and questionnaires with the children and adolescents who attended the Tribe Project. During interviews, participants were asked to comment on the aims and objectives of the Tribe Project, the extent to which the aims had been met, the successes of the Tribe Project and the evaluation measures in place. Questionnaire data were also used to assess the extent that the outcomes of the Tribe Project were successfully met based on the children's perceived importance of factors whilst attending the Tribe Project. Documentation relating to the program outline and the aims and objectives of the Tribe Project were also incorporated. Field notes collected following direct observations were also integrated into the analysis to assess the effectiveness of the Tribe Project.

## 4.6.2.1.3 'Adoption' of the Tribe Project

Adoption relates to the absolute number, proportion and representativeness of settings and intervention agents who are willing to initiate a program. As with Reach, Adoption also relates to the participation rates. Adoption, however, relates to the proportion of settings or agents willing to initiate the program.

The *Adoption* rate of the Tribe Project at the setting level was assessed based on the extent to which the sports delivered through the Tribe Project had adhered to the Tribe Project principles. The adoption rate of the Tribe Project within the community was based on the proportion of schools within BANES that the Tribe Project delivered sports sessions to, and the proportion of schools with which the Tribe Project had established links. Activities, which constitute 'links', are, for example, schools' participation in the Tribe Project holiday camps, hosting of the school sports festivals and hosting the Key Stage 3 games.

The adoption rate of the Tribe Project across the different Tribe sports was assessed through interviews with the Tribe managers, coaches and parents. Interviewees were asked to comment on whether the different Tribe sports delivered through the Project adhered to its core program principles, and what differences or similarities existed between the Tribe sports. The adoption rate of the Tribe Project within the community was also assessed during interviews with the Tribe managers and coaches and through archival records. Archival data relating to BANES Council census data were used to estimate the adoption rate within the community. Adoption rates were estimated based on the proportion of schools within BANES that the Tribe Project delivered sports sessions to, and the proportion of schools with which the Tribe Project had established links. Documentation relating to records of participation and coaching delivery rates within the Tribe Project and field notes from direct observations were also integrated into the analysis.

#### 4.6.2.1.4 'Implementation' of the Tribe Project

Implementation refers to the extent to which different components of a program are delivered as intended. This concerns the consistency of intervention delivery across different individuals, and the extent to which the program is modified or adapted over time.

The *Implementation* of the Tribe Project was assessed through interviews with the Tribe managers, coaches and parents. Questions relating to the consistency of coaching and the organisation and implementation of the Tribe Project were used. Questionnaire data were used to assess the implementation of the Tribe Project based on the children's and adolescents' perceived importance of factors whilst attending. Field notes from direct observations were also integrated into the analysis.

#### 4.6.2.1.5 'Maintenance' of the Tribe Project

Maintenance can be assessed at both the individual and organisational-level. At the individual-level, maintenance addresses the long-term effects of a program on both targeted outcomes and quality of life indicators. At the organisational-level, maintenance refers to the program's institutionalisation or the extent to which a program is sustained over time.

*Maintenance* of the Tribe Project was assessed at both the individual and organisational-level using interview data from the Tribe managers, coaches and parents. To assess maintenance at the individual-level, interviewees were asked to estimate the length of time the children typically attended the Tribe Project, and the

long-term effects following participation. Field notes from direct observations were also used as part of the analysis. Organisational-level maintenance refers to the extent to which the Tribe Project became institutionalised as part of the University of Bath's program of Community sport and sustained over time as part of the community. This was assessed via interview questions addressing the routes and pathways during and after the Tribe Project, the challenges associated with these pathways and the strategies in place to overcome them. Documentation relating to program pathways during and after the Tribe Project and field notes from direct observations were also integrated into the analysis.

### 4.6.2.2 RE-AIM Framework

The evaluation of the Tribe Project centred upon the RE-AIM framework (Glasgow et al., 1999), and evidence to support each dimension of the model was addressed using the five sources of data within this case study. The translatability and public health impact of community-based programs are best evaluated by examining all five of the RE-AIM components (Belza et al., 2007). Table 12 illustrates the application of the five sources of case study data into the RE-AIM framework.

# Table 12: Application of the RE-AIM Framework within this Case Study

<b>RE-AIM Component</b>	Definition	Data Source	Assessment Questions
<b>Reach</b> (Individual-Level)	The absolute number, proportion and representativeness of individuals who are willing to participate in a given initiative. Reach is a function of the size of the target population, the number exposed to the recruitment, the number who responded to the recruitment, the number who are eligible and the number who participate	<ol> <li>Archival Records</li> <li>Interview Data</li> <li>Questionnaire Data</li> <li>Documentation</li> <li>Direct Observations</li> </ol>	What percent of potentially eligible participants a) were excluded, b) took part and c) how representative were they?
<i>Effectiveness</i> (Individual-Level)	The impact of an intervention on important outcomes, including potential negative effects, quality of life and economic outcomes	<ol> <li>Interview Data</li> <li>Questionnaire Data</li> <li>Documentation</li> <li>Direct Observations</li> </ol>	What impact did the intervention have on a) all participants who began the program; b) on process intermediate and primary outcomes; and c) on both positive and negative (unintended), outcomes including quality of life?
<b>Adoption</b> (Organisational- Level)	The absolute number, proportion and representativeness of settings and intervention agents who are willing to initiate a program	<ol> <li>Archival Records</li> <li>Interview Data</li> <li>Documentation</li> <li>Direct Observations</li> </ol>	What percent of settings and intervention agents within these settings (e.g., schools/educators, medical offices/physicians) a) were excluded, b) participated and c) how representative were they?

<i>Implementation</i> (Organisational- Level)	The extent to which different components a program are delivered as intended. This concerns the consistency of intervention delivery across different individuals, and the extent to which the program is modified or adapted over time.	<ol> <li>Interview Data</li> <li>Questionnaire Data</li> <li>Direct Observations</li> </ol>	To what extent were the various intervention components delivered as intended (in the protocol), especially when conducted by different (non- research) staff members in applied settings?
<i>Maintenance</i> (Individual/ Organisational-Level)		<ol> <li>Interview Data</li> <li>Documentation</li> <li>Direct Observations</li> </ol>	<ul> <li>a) What were the long-term effects (minimum of 6-12 months following intervention)?</li> <li>b) What was the attrition rate; were drop-outs representative; and how did attrition impact conclusions about effectiveness?</li> </ul>
	At the organisational-level, maintenance refers to the programs institutionalisation, or the extent to which a program is sustained over time.		<ul> <li>a) To what extent were different intervention components continued or institutionalized?</li> <li>b) How was the original program modified?</li> </ul>

Definitions and assessment of RE-AIM components accessed from: http://www.re-aim.org/

# 4.7 Ethical Considerations

Ethical approval to conduct this case study was obtained from the Department for Health Ethics Committee at the University of Bath. Permission was also obtained from the key administrators of the Tribe Project prior to the onset of this study. There are several ethical issues involved in conducting case study research such as informed consent, anonymity, confidentiality and the public profile of the case. An overview of the ethical issues taken into consideration during this case study is presented below.

## 4.7.1 Informed Consent

Obtaining participant consent is central to ethical research. Informed consent describes a code of conduct where participants have the right to be informed that they are being researched, and what the nature of the research is (Punch, 1994). There is a widespread debate about the basis for ethical decision making in social research (Wiles et al., 2005), and social scientists have argued that the reality of research means concealing certain elements of the research process is almost inevitable (Homan and Bulmer, 1982, Punch, 1994).

In contrast to postpositivist assumptions, constructivists argue that deception of a researcher's intent is detrimental to how individuals reflect upon their perceptions and observations of the social world (Guba and Lincoln, 1994). Epistemologically, the constructivist's aim is to build upon individuals' personal constructions of the social world. Deception in this way, according to constructivism, cannot generate a true reflection of the social situation the participant believes himself or herself to be in. The premise is that ethics should serve as a guideline prior to research, but not intrude on full participation (Punch, 1994). There is further debate that adhering to specific ethical rules within research can distort the very issue that is being studied. As such, it becomes impossible to conduct the research (Punch, 1994, Homan and Bulmer, 1982).

A way to overcome the issue surrounding informed consent is to provide participants with sufficient information for them to decide, with informed knowledge, whether to take part. Balancing the rights of participants to have knowledge of the research without affecting participant rates is an important and valuable way of dealing with issues surrounding consent (Willig, 2001). To address issues associated with informed consent during the qualitative data collection phase of this case study, several steps were taken. At the onset of interviews with the Tribe managers, coaches and parents, all participants were given a written information sheet (Appendix B), and asked to provide signed consent (Appendix C) before taking part. The information sheet explained the purpose of the study, the reason they had been asked to participate and their right to withdraw at any point without a given reason. This method was employed to confirm all the participants were aware of what they were being required to do, they had read and understood the information sheet and were willing to take part voluntarily.

A slightly different approach to informed consent was taken during the quantitative data collection phase of this case study. To ensure adequate response rates to the questionnaire, all the children and adolescents attending the Tribe Project were automatically included to participate in the study unless they had been 'opted-out' from participation. Due to the large volume and young age of children and adolescents attending the Tribe Project, informed consent could not be obtained from individuals. To overcome this, a parent/guardian was informed of the study prior to the data collection so they could opt to provide consent on behalf of their child. All the parents of the children and adolescents attending the Tribe Project were given a notification letter (Appendix G), information sheet (Appendix H) and an 'opt-out' of participation form (Appendix I) 3 weeks before the data collection date. These letters were handed out to the Tribe children and parents at the end of each Tribe sports session over a period of 2 weeks. This method was used, as there were certain data protection restrictions on posting information to the Tribe parents. Some of the Tribe coaches who had the contact details of the Tribe parents were unwilling to post information to the parents for the purposes of this research. Handing these letters out in person was the only way to overcome this.

To ensure all the Tribe parents had received notification of this study, a follow-up email was sent by the Tribe managers to the Tribe parents 2 weeks before the data collection date. The email re-informed parents of the purposes of the study, why their child had been asked to take part, and that if they did not wish their child to participate they would need to opt-out of the study. Any questions or misunderstandings the Tribe parents had regarding the research were addressed prior to their child's inclusion in the study.

## 4.7.2 Anonymity and Confidentiality

Anonymity and confidentiality are extremely important and challenging issues in case study research, due to the public profile and exposure of the case. Anonymity refers to concealing the identities of participants in all documents resulting from the research. Confidentiality refers to who has the right of access to the data provided by the participants. Issues surrounding anonymity and confidentiality in social research are widely debated. There is a conflict between the necessity to divulge important information about the participants, context and phenomena in question for the pursuit of scientific knowledge, whilst accommodating the rights of the individuals involved (Wiles et al., 2005, Denzin and Lincoln, 1994). Secondly, there may be a conflict between participants' consent towards their anonymity and confidentiality. Ethically it is inappropriate to breach participants' rights to protection, however, this could also then prevent information to be concealed that some individuals would want acknowledgement for (Wiles et al., 2005).

The personal and interactive nature of research in light of interpretivist and constructivist paradigms does raise ethical issues regarding the confidentiality and anonymity of data (Guba and Lincoln, 1994). The researcher must remain sensitive to the personal protection of participants; however, the research must reflect the true nature of their beliefs as accurately as possible. It is inherent that the risks involved in participation vary based on the role, precedence, involvement of the individual in the case and their contribution to the research. The Tribe Project exists in the public domain and is a small organisation run by a close-knit team of administrators. As with a large proportion of qualitative research, case studies centre upon the experiences, views, feelings and circumstances of others. In doing so, the vulnerability of participants comes into question. Participants risk exposure, loss of standing, employment or self-esteem by taking part in the research (Denzin and Lincoln, 2000). The researcher has a moral obligation to protect this where possible (Schwandt, 1993).

It is impossible to commit to ensuring 100% anonymity within research projects of a 'public' nature, as the precedence of the Tribe Project and the distinct and isolated roles of some individuals within it means there is always the risk of exposure. To minimise the risk of participants' vulnerability to the research process, low priority questions of sensitive issues were avoided (Denzin and Lincoln, 2000), and the interview schedule remained a constant source of reference. At the onset of the interviews with the Tribe managers, coaches and parents, participants were informed that the information they

provided during the interviews would be recorded using a Dictaphone and the data would be stored confidentially within the Department for Health at the University of Bath. To ensure confidentiality the participant transcripts were coded, so any quotes used in the published report would be annonymised. Participants were given the choice of interview venue and time so they could select an environment they felt most comfortable in to discuss the Project. It was made clear to participants that they were to talk as freely as they felt comfortable and could ask for something not to be recorded if necessary. The aim of this process was to make the participant.

To ensure confidentiality of the questionnaire data collected as part of this case study, a similar coding procedure was used. Each questionnaire was uniquely numbered so names were not required, only gender, age and the sport the individual participated in. The participants received a copy of their questionnaire number so their data could be removed from inclusion in the study at a later date if necessary.

## 4.7.3 Public Profile of the Case

Case studies often deal with matters of public interest, nonetheless, there may neither be a public nor scholarly 'right to know' (Stake, 1994). The issue is whether invading the privacy of others is ethically viable for the purposes of scholarly intent. The conduct of research should not outweigh the negative consequences to the persons involved. Stake (1994) explains this precisely:

"qualitative researchers are guests in the private spaces of the world, their manners should be good and code of ethics strict" (Stake, 1994, p. 244).

In an attempt to overcome potential problems surrounding the divulgence of information into the public realm, the use of participant data, purpose of the research and eventuality of the research were explained to participants. It was made clear to participants that the research was not affiliated to the Tribe Project, and the motivation preceding it was for greater scientific knowledge. This was an important part of the ethical process. This ensured the participants did not feel they needed to manipulate or shield certain information they provided in light of the study motives. However, they were still aware of how their information would be used.

## 4.8 Reliability and Validity

Case studies frequently receive criticism for being based on subjective judgements when collecting data, and are difficult to generalise to the wider population (Yin, 2003). An integral part of case study design is to achieve optimum levels of validity and reliability to minimise bias and maximise its application in real-world settings.

Reliability refers to consistency over time and groups of respondents (Cohen, et al. 2000). The aim is to minimise the bias or inconsistencies so the study could be replicated and find similar results. A major barrier to ensuring high levels of reliability within case study research is that case study data is often built upon only partial accounts of the informants to the case. Case studies can therefore never fully capture the social situation in its entirety (Willig, 2001), nor can observations or interpretations ever be exactly reproduced (Flick, 1998). Yin (2003) proposed that a way to increase the reliability of a case study is to produce and follow a case study protocol. In so doing, the research is carried out as intended. Within this case study of the Tribe Project, a case study protocol was used as a constant source of referral to ensure the research was conducted as intended. This acted to improve the study reliability and make awareness of important findings even greater. A case study database was also created to manage the retrieval of evidence, preventing the collection of redundant data. This also meant key data were collected and a chain of evidence could be maintained.

Validity refers to the extent to which you are measuring what you say you are measuring, and therefore the extent to which the study's findings can be generalised to the wider population (Yin, 2003). Within this case study, collecting both quantitative and qualitative data increased the methodological validity of the research. Triangulation of the case study data also enhanced the validity and reliability of the research findings. The multiple sources of data collected within this case study meant access to a wide range of perspectives and experiences of the Tribe Project was achieved. This aided triangulation of the respective research findings, and is a principal method of increasing research validity. To ensure that adequate validity was achieved throughout this case study, the methods employed and data collected were continually related back to the original objectives of the study. It was also ensured that the techniques used to collect the data were appropriate to address the research questions stipulated. To avoid researcher bias and inconsistency during this research, a schedule was devised to guide the interview, provide a theoretical framework and maintain consistency across all the interviews. This also acts as a means of guarding against researcher bias whilst

analysing the data, ensuring that alternative interpretations and inconsistencies in the dialogue can still be recognised (Smith, 2008).

High levels of reliability and validity are essential to any scientific study, and are a way to judge the quality of the research. Due to the variety and complexity of case study data sources, methods, settings and populations, ensuring validity and reliability becomes even more complex. Validity is important in case study research, as the reader cannot always determine whether changes recorded in the case study are as a result of genuine events, or whether they are based on the investigators impressions alone (Yin, 2003). The strategies employed throughout the conduct of this case study meant a good level of reliability and validity was achieved.

## 4.9 Limitations of the Research Design

Inherent within all research is the fact that the results are conditioned as much by the limitations of the approach taken, as by the strengths. There are various advantages and disadvantages to the methodological approach taken within this case study, and their potential impacts on this research are discussed.

There is avid criticism for the use of single case studies due to their lack of representativeness and potential weaknesses in generalisability (Stake, 1995). Ensuring that the study's findings can be generalised to the wider population is a major barrier in doing case study research (Tripp, 1985). This is not always the case, however. Within survey research, statistical generalisation is paramount to establish how useful the results are. Within case study research, however, analytical generalisation is used, as the researcher is striving to generalise the results to a broader theory. The issue of whether generalisation is an appropriate measure by which to judge case study as a research method is heavily debated within social science research. Generalisation is fundamentally believed to be a problem based within positivism (Tripp, 1985). Tripp (1985) argues that the pursuit of complete generalisation may in fact be detrimental to the very ethos of case study research. Researchers conducting case studies are doing so because they wish to address the unique features of the case (Stake, 1995). Although the findings may not be directly applicable to a number of other situations, this does not warrant dismissal of the studies relevance. Limitations to case study generalisability do not warrant complete dismissal of its merits therefore.

Yin (2003) asserts that criticisms about single case studies are usually founded on concerns regarding the uniqueness or factual conditions of the case. The vulnerability of a single case study design is that a case may later turn out not to be the case it was thought to be at the outset (Yin, 2003). Further criticism of the case study method arises due to the researcher having little or no control over the research subject, and the bias that this may cause:

...the case study has basically been faulted for its lack of representativeness...and its lack of rigor in the collection, construction and analysis of the empirical materials that give rise to this study. This lack of rigor is linked to the problem of bias...introduced by the subjectivity of the researcher and others involved in the case... (Hamel et al., 1993, p. 23).

This is arguably, however, one of the major strengths of case study research, as it studies social phenomena in the context within which it naturally occurs. The fact that differences in ideology, epistemology and methodology can all be accounted for in case study research demonstrates a unique advantage of this approach (Merriam, 2009).

Although the combination of qualitative and quantitative methods has the advantage of producing a more diverse and in-depth analysis (Waysman and Savaya, 1997, Brannen, 2005), there are disadvantages associated with this approach. Mixed methods can produce opposing and even contradictory findings regarding a single phenomenon of interest (Waysman and Savaya, 1997). In particular within case study research, the study results are not always generalisable to wider populations, as they are often specific to that particular case (Brannen, 2005). Incompatibility between forms of validity, relevant to different types of qualitative and quantitative data, can be problematic when conducting mixed methods research. Challenges arise when trying to create a coherent explanation for the qualitative interpretations and qualitative findings (Smith, 2008). Quantitative data may conclude that the results are an accurate measure of the event, whereas qualitative data may highlight the complex and contradictory meanings of responses from different participants (Smith, 2008).

For the purposes of this case study, an embedded case study design was used. A potential pitfall when using embedded designs is that emphasis within the case study can be placed too heavily at the sub-unit level. Failing to address the case as a whole unit can reduce the generalisability of the findings, therefore (Yin, 2003). Yin (2003) argues that the embedded units of analysis can provide great opportunities for extensive study. If too much emphasis is placed on the sub-units, however, the holistic

aspects of the case may be ignored and the case itself will have different orientations and purpose. To ensure the effects of this potential bias were minimised in this research, the case study aims and objectives remained the primary focus during the case study design, data collection and analysis phases.

In addition to the weaknesses associated with the research design, there were certain limitations to this study due to the nature of the case itself. A major limitation to assessing the participation rates within the Tribe Project was that data on individuals' age, gender and sports participation was limited. This extended to include almost no consistent or accurate record of the rates of attrition within the Project. This meant evidence accounting for the *Reach* and *Adoption* of the Tribe Project was based on estimations only. A further potential pitfall of this research was the potential bias of the interviewees. Based on the pre-selection recruitment method used, participants were chosen according to their role within the Project. Although this led to a more informed depiction of the case, there may also have been some degree of social desirability due to the expectations and responsibilities associated with their role. For the researcher it was essential the potential effects of this were minimised. Close consideration of the researcher relationship was made, and procedures associated with confidentiality, anonymity, informed consent and the public profile of the Project were given careful consideration.

The limitations discussed in this section are a reminder of the unobtainable perfection within social science research. The aim of this sub-section was to demonstrate a rigorous understanding and awareness of the potential pitfalls of this case study, along with its predicted strengths. Case studies offer a means of investigating complex social phenomena, using more than one variable of importance. Within case study research there is no attempt to simplify what cannot be simplified, making this methodology an essential strategy to evaluate the Tribe Project. Due to the multiple sources of evidence used within this case study, a range of differing perspectives and a combined analysis of the data, the strengths of the current research outweigh its potential limitations.

## 4.10 Summary of the Case Study Rationale and Design

This chapter has addressed issues relating to the methodological considerations integrated within this case study, and the broad methodological approach adopted. Secondly, the data used to address the research questions, and the qualitative and quantitative methods used to achieve this were outlined. Lastly, this chapter has

addressed the reliability and validity issues surrounding this research, and the implications for the particular type of methodology employed.

A single mixed methods case study was chosen as the basis for this research, as it facilitates differences in the sample of participants during the qualitative and quantitative phases. Secondly, it is appropriate in circumstances where there are no existing instruments to measure the case in question. The Tribe Project is a notable example of a community-based physical activity intervention aimed at children and adolescents. The lessons learnt from this case study will be informative in relation to existing physical activity programs within the community and the development of new ones. The case study's findings will be based on the convergence of information from different sources of evidence, based on neither quantitative nor qualitative methods alone.

Chapters 5 to 9 present the evidence from the five sources of data, as applied to the RE-AIM framework.

# **CHAPTER 5: REACH**

## 5.1 Introduction

In this chapter, the quantitative and qualitative data used to assess the reach of the Tribe Project is presented. *Reach* is measured at the individual level and refers to the absolute number, proportion and representativeness of individuals who are willing to participate in a given initiative (Glasgow et al., 1999). Representativeness refers to the similarity or differences among individuals who participate, and those who are eligible but do not participate. If differences do exist, the intervention may have a differing impact on the target population. If differences do not exist, then the generalisability of the intervention may be increased (Glasgow et al., 1999). Reach is typically quantified based on the size of the target population, the number exposed to the recruitment, the number who responded, the number who are eligible and the number who participate. The reach of the Tribe Project, therefore, was estimated based on: data from interviews with the Tribe managers, coaches and parents, questionnaires from the children and adolescents attending the Tribe Project, documentary and observational data. The results following these data collections are presented below.

## 5.2 Bath and North East Somerset Population Data

Archival records were used to assess the proportion of the population within BANES that were potentially eligible and consequently reached by the Tribe Project. Bath and North East Somerset Council census data were used to quantify the demographic data on the population living within BANES, with data accurate as of 1st October 2009 (Appendix K). The total population of BANES equated 177,700 residents, of which 87,800 (49.4%) were male and 89,900 (50.6%) were female. There were 16,062 children and adolescents aged 6-15yrs living within BANES and of these, 8227 children were aged 6-11 years old (attending Primary School years 2-6) and 7835 children and adolescents were aged 11-15 years old (attending Secondary School years 7-10). Estimates from 2007 revealed 89.2% of the total population defined their ethnicity as White British, followed by 3.9% who defined themselves as White Other and 1.2% who defined themselves as Chinese.

### 5.3 Qualitative Data

#### 5.3.1 Interviews with the Tribe Project Managers and Coaches

Three Tribe Project managers held overall responsibility for the Tribe Project, and all 3 of these managers agreed to participate in an informal one-to-one interview (1 male and 2 females). These individuals were responsible for the overall structure, implementation and organisation of the Tribe Project. Fourteen Tribe coaches were contacted via email requesting their participation in an informal interview. These individuals included both head and senior coaches representing all 10 sports delivered through the Tribe Project. Of the 14 Tribe coaches contacted for an interview, 50% agreed to participate in the study. The seven Tribe coaches within this sample (1 male and 6 females) represented 7 of the 10 sports delivered through the Tribe Project. These sports included athletics, badminton, football, judo, swimming, tennis and trampolining. Three head Tribe coaches (3 females) were recruited for swimming, tennis and judo. Four senior Tribe coaches (1 male and 3 females) were recruited for athletics, football, trampolining and badminton. There were no Tribe coaches available for interview to represent multi-skills, hockey and netball.

During interviews with the Tribe Project managers and coaches, various themes emerged relating to the reach of the program. These themes related to the recruitment and advertisement of the Tribe Project, the population that attended the program and the determinants of their participation (Appendix R). Evidence relating to these themes contributed to assessing the population eligible to attend the Tribe Project, the population reached and the representativeness of the attendees. Evidence to account for these themes is presented below.

#### 5.3.1.1 Recruitment and Advertisement of the Tribe Project

The proportion of the eligible population that was reached by the Tribe Project was assessed based on the recruitment and advertisement of the Project. Both the Tribe Project managers and coaches referred to word of mouth as the main recruitment method for the Project. The Team Bath website, local schools and organisations within BANES were also described as a source of uptake; however, this was referred to only briefly during the interviews:

Most of our business will come from word of mouth, parents telling other

parents this is a really a good program you should bring your son or daughter along. This is where we get most of our new opportunities from in terms of delivery. (M1)

"If you type in "kids activities" or "childrens activities" on search engines...we pop up, I think that's purely because if you type in "childrens..." we are literally the first one." (M3)

There was a consensus amongst the Tribe managers and coaches that the promotion and advertising of the Tribe Project was largely ineffective and could be significantly improved:

Um...I think we're still yet to find one [best was to advertise] in all honesty...we've always had problems with that marketing, getting that message across to parents, um we can do all the sessions in the world in schools and in curriculum time, but unless the parent has actually seen us do it...its not...its not an easy one. (M3)

I think like...they sent us out with leaflets last week, they should have done that in the Easter holidays for the summer, not a week or two weeks into the actual summer camp...because people have already booked on other summer camps, and they're not going to get the numbers in. (C7)

One Tribe manager described the weaknesses associated with the advertising of the Tribe Project in the context of creating awareness of the program:

I think in terms of hardest, at times our hardest is actually the recruit...making people aware of the programs that operate here is really difficult because no one associates the University with running children's community programs, everyone's first impressions of the university is there are students up there and the facilities are for the students that are here. So for us it's always been breaking down that barrier of no there are opportunities, here's what you can do... (M1)

Likewise, a Tribe coach referred to the insufficient promotion of the Tribe Project in the context of a missed opportunity on behalf of the Tribe managers:

I don't think it [the Tribe Project] is promoted...which is a real shame because we've got like all of us coaches up here who are very good [name of sport] players as well and you know, I think we're actually pretty good at what do and there's a sort of real, quite a good opportunity there...I think they're sort of missing an opportunity. (C8)

#### 5.3.1.2 Population who Attend the Tribe Project

Despite consensus regarding the challenges associated with promoting the Tribe Project, the Tribe managers' accounts of access to the program differed significantly. One of the Tribe managers inferred that a specific target group for the Tribe Project did not exist:

"I do think, I think we cater for sort of all the age groups, um I wouldn't say that we miss out on anybody." (M3)

Irrespective of this, the difficulties of targeting inactive or obese children through the Tribe Project was recognised:

Our barrier really is...if you're looking at it as a recreational program, how do we manage to engage with the 30% that might be considered obese, that might be not doing their 3 x 30 a day that might not have an enjoyable experience of sport...you know our programs do target those that are already interested. Our programs are suitable for those to get a first taste of it, but whether we market strongly enough into that 30%...is a difficult question. (M1)

All of the Tribe managers and coaches did refer, however, to a 'type' of individual that would typically attend the Tribe Project. The attendees were described as being 'sporty' and physically active prior to attending:

"...They're usually very sporty kids anyway...the less sporty generally dropout because...and the ones without parents who are sort of not pushing them but you know, helping them get there makes a big impact I think." (C9)

The majority would be active already or would come from active families where they have parents who are active much or have been active...we have targeted other markets but probably the largest bulk will come from those already active families, not necessarily active children, but active families. (M1)

In particular, one of the Tribe managers suggested that the presence of 'sporty' children and adolescents could have a negative impact on the reach of the program:

"Usually the attendance for sporty kids quite often puts off the ones we really want to bring in, because they'll see themselves as not being able to do it as well as the kids that are already there." (M1)

There was further agreement among the Tribe managers and coaches that the parents whose children attended the Project were usually white, middle-class and wealthy. The SES and ethnicity of the population living within BANES was described in relation to this:

Bath is so dominated by [the] white, middle-class, socio-economic group. When we were doing our research 6, 7 years ago for all the local councils, the percentage was something like 1.2% of ethnic minorities in the Bath area, so predominantly our groups are white middle-class because that's the immediate market on our doorstep. (M1)

Likewise, the cost of attending the Tribe sports sessions and the timings of the program delivery were also described as having a potential influence on the population who could attend:

We want every kid to have a chance not just the ones that their parents can afford for them to do x amounts of activities a week so that's why we keep the prices as low as possible...but I have noticed, from my personal experiences, I have noticed it is the more comfortably-off people [that attend]...but that's possibly because of the area that we're in 'cos Bath is a...quite a wealthy area. (M2)

I mean, for example with the Tribe [name of sport], we always struggle with numbers to come at four o'clock because it's so close to school, so it's generally practicalities which get in the way of a lot of things. (C8)

The Tribe managers and coaches also inferred that children and adolescents from more disadvantaged backgrounds would be less likely to participate in the Tribe Project due to the costs involved:

"I mean this is what I've noticed...is we get a few that are from sort of less privileged backgrounds and they don't tend to stick around for very long." (M2)

We go in to schools in Twerton and Southdown and if I'm being honest, we've never, we'd never get kids from there, as much as I, some of them love us going in there, you almost feel, it's awful but you almost feel, I actually don't give any forms out there because I don't want to. Maybe I'm being judgemental, probably but I don't wanna get their hopes up and them take forms home to mum and dad and mum and dad are thinking, 'Oh, great! Thanks a lot. We can't afford that'...kind of thing. (C6)

#### 5.3.1.3 Determinants of Participation in the Tribe Project

The determinants of participation in the Tribe Project were also described in the context of the reach of the program. Specifically in light of the Tribe parents, childcare was described as an important influence on certain parents' decision to attend the program:

"There's the ones that are there just so they can offload their kid for an hour...the ones who sort of, there you go, shove them down for an hour while they look after the other kids kind of thing." (C6)

In a small number of cases we've had, more often in the holiday programs, we will have children that we know don't want to be here, and it will be a case of the parents have no other option because of work that they need to book someone into a program. (M1)

In particular, a motivation for parents to attend the Tribe Project was referred to with respect to the perceived reputation of the University of Bath and the 'Team Bath' brand image:

I think that elite sport angle some parents will say that they're gonna be better than Local Authority Sports Centres just because of one, facilities and the expertise they think that we have obviously up here...so I think those are probably the strengths that pull people towards us, um... (M3)

"I think Team Bath is quite a good thing, Team Bath is quite a good name...I think that encourages parents to send them to these clubs, I think we've got a good advantage there with that." (C7)

Nonetheless, one Tribe manager and coach also referred to the potential negative impact of the 'Team Bath' brand image on parents' perceptions of the Project:

[It's about] just getting that message across that we do, do kids stuff, its not all elitist...its not expensive because I think people go 'Oh its really expensive' and its like hang on a minute £2.50 for an hour, most places are charging 3, 4 quid, £2.50 is not...and that's across the board. (M3)

"I think we could have more kids here personally...when I hear about how many kids are at the other camps I definitely think so...possibly put ourselves on a pedestal that might be too elite, where people think it's too elite." (C4)

In addition to the influence of the Team Bath brand image, the Tribe managers and coaches all referred to the perceived social and physical benefits following participation. These included increasing the children's physical fitness, reducing their time spent in sedentary activities and improving the children's sociability with others:

Um...yeah they're [parents] usually keen to get their kids involved in sport, the parents I find, some of them, when the kids aren't too sporty they're keen to get their kids a bit more active and help them get fitter I guess. (C7)

There was further consensus regarding the children's and adolescents' reasons for participation in the program. Enjoyment of the sport and the range of sports available at school were considered important factors among the attendees:

They don't get exposed to it in primary school and when they get to senior school they get badminton, they get rugby, they get all these sport-specific things which they don't necessarily have at primary school...so all of a sudden these kids are getting exposed and coached and stuff at school and they go 'l really enjoyed badminton'... (M2)

Likewise, there was a consensus that recreational sport was important for children aged between 7-14 years. Enjoyment of the sport without the pressure of competition was considered a determinant of the children's attendance: I personally don't agree with competition until they are...at an age where they can deal with...competition. I personally don't think that its good for them...and to be fair the majority of the people that come here do agree and that tends to be why a lot of people do come because, just because they are good at [name of sport] doesn't mean that they want to be a competitive [name of sport]. (C5)

I think the only thing for the 10-14 year old age group is the understanding that the element of external competition is quite often not, what they're after. Their internal competition is usually quite high...so if they can learn a new skill, or they can demonstrate a new activity, or they can say that they've achieved something they've been trying to achieve, quite often that means a lot more to them than being able to say they won the match...(M1)

Recreational sport was referred to as an advantage and a determinant of participating in the Tribe Project:

Its more than recreational here I think...'cos I know there's quite a few they might not be very good at [name of sport]...you know they're not good enough to be in a team. If they were good enough they would have been snatched up by an academy by now, so it's kind of for those that are caught in the middle...it allows them to do some exercise and still enjoy [name of sport]. (C4)

According to the Tribe managers and coaches, the population reached by the Tribe Project were more likely to be physically active or 'sporty' prior to attending, and from a middle-class and wealthy background. The population reached was influenced by factors relating to the timings, cost, promotion and perception of Team Bath, Bath University and the Tribe Project. Recreational sport was described as a preceding factor for attendees of the program, and this influenced the types of individuals who attended. To further assess the reach of the Tribe Project, interviews were conducted with the parents whose children attended the Tribe Project. The data from these interviews follows.

#### 5.3.2 Interviews with the Tribe Project Parents

Ten Tribe parents were recruited to take part in an informal interview. Five Tribe parents volunteered to take part in the study following written invitation (5 females), and 5 Tribe parents were recruited as an opportunity sample (4 females, 1 male). In total, the Tribe parents represented 15 children who attended the Tribe Project (7 boys and 8 girls),

aged between 7-14 years, who had participated in the program for between 2 months to 6 years. The parents had a combined experience of 8 out of the 10 sports delivered through the Tribe Project. These sports included swimming, tennis, trampolining, football, badminton, athletics, multi-skills and hockey. Participants were classified as having an 'experience' of a Tribe sport when their child was currently participating in the sport through the Tribe Project, or they had previously participated in a sport through the Tribe Project and were no longer attending. During interviews with the Tribe Parents, various themes emerged accounting for the reach of the Tribe Project. The themes specifically related to: the recruitment and advertisement of the Tribe Project, the types of parents and children that attended and their own and their childrens' reasons for participating in the program (Appendix R). The evidence from these themes was used to assess the population eligible to attend the Tribe Project, the population reached and the representativeness of the population that attended.

#### 5.3.2.1 Recruitment and Advertisement of the Tribe Project

There was a consensus among the Tribe parents that their initial awareness of the Tribe Project was either through word of mouth or via the internet. In contrast to evidence from the Tribe managers and coaches, none of the Tribe parents had any knowledge or awareness of Tribe Project advertisements through the school system. In general, the Tribe parents had very little awareness of Tribe Project advertising within the community as a whole, and concluded that the Tribe Project was not advertised effectively. Consistent across all the Tribe parents was that their awareness of the Tribe Project was predominantly through advertisements on the University of Bath campus:

I know about it [the Tribe Project] because I'm here at the University but I don't think the publicity is out there to tell people about it. Even Team Bath to some extent is purely reliant on you finding out about it, so yeah...you know I think with a lot of it we found that the schools provide so much for them, but if you want to do anything additional the owing-ness is very much on you to go and find out about it... (P11)

"I'd had the opportunity to view what was going on in Tribe before he started up....but I don't know how you'd do that if you were just coming in cold off the street." (P14)

It was the more motivated and proactive parents that were more likely to be reached by the Tribe Project:

"... They're lucky they probably don't really need those links to some degree because they've got very motivated kids and they've got pretty motivated parents that you know, if you need anything additional you go and find out about it." (P11)

I think it misses the boat a bit actually, 'cos I mean I have been interested in [name of sport] for quite a while and it's not, you know I've asked a couple of times at the desk, and they say oh you have to look at the chart on the notice board. You know there isn't...if I just...could've been handed a leaflet that would have been helpful, but having to, for me to then have to go in and then find the [name of sport] corridor and the notice board, have a look, see what there was on offer...that's kind of asking a lot of people...(P12)

"if you were in the mode you probably could go and surf and fiddle around and stuff, but I don't necessarily think people do and you could make it easier for people." (P17)

#### 5.3.2.2 Population who Attend the Tribe Project

Consistent with evidence from the Tribe managers and coaches, there was a consensus among the Tribe parents that the children and adolescents reached by the program were typically 'sporty' and physically active prior to attending:

I think it's geared for...it's very sporty, it's very outdoors and that suits his [Tribe parents' child] personality, so in that sense I think it was money well spent. My youngest son, however, who's not necessarily so sporty, I think he'd be quite reluctant to do a lot of the activities...so he hasn't done any of the holiday camps. (P13)

The attendees were further described as being white, middle-class and from wealthier backgrounds:

I suspect it's very white middle-class...but whether that's reflective of the catchment, the area as it is, but yeah it tends to be those sorts of children that

you know go to nice schools and have parents with reasonable resources and yeah there does tend to be a [trend]...I can see it's used by the better-off parents or the working parents that can afford to do it, and ideally you want it to be accessible everyone don't you. (P11)

"I think an awful lot of them come round from the more sort of local to this area sort of schools, which by definition they're quite nice schools a lot of them, so I think there's a bit of a trend of that." (P17)

Consistent with the Tribe coaches, the timings of the Tribe sports sessions were also described as a potential barrier to participation in the program:

*I guess the other* [problem of attending the program]...*I'm interested, then it's the timings of the classes like are 4-5 and unless you live and work in Bath and your kids go to school in Bath it's very hard...if school finishes at 3.30 its very hard to get to there for 4 o'clock.* (P12)

#### 5.3.2.3 Determinants of Participation in the Tribe Project

Despite consensus amongst the Tribe parents regarding the population that attended the Tribe Project, individuals' motivations for participating differed. Some of the Tribe parents indicated that childcare needs, convenience and routine were important factors preceding their participation:

Me as a parent, and hands up yes, it was very much a...I need some help...in the holidays I need some childcare organised, um...and they've been to previous activities local to home that weren't sport orientated, but were purely childcare. And although they were good, I wanted them to do more than sort of sit in a room full of kids and watch videos and that sort of thing, um...so, a) it was providing some support for me in the holidays in terms of childcare, b) it was convenient because it happened to be within 200 yards of where I was working. It sort of ticked a lot of boxes really. (P11)

There are other teams they can join in Bath for this age group. This is a great timing, Saturday morning is a really good time for children to come and do

something, and the fact that it's going into the holidays is great. So its nice 'cos this fits in with our life as well. (P16)

Other Tribe parents described the positive influence of the Tribe coaches and the facilities at the University of Bath as a determinant of their participation. Consistent with the Tribe managers and coaches, the image of Bath University and the Team Bath brand were also described as having a positive impact on their decision to attend the Project:

I like the thought that it's Team Bath because of the excellent facilities and that's all that really comes into it. And I've looked into other facilities like the leisure centre, you know the leisure centre is not really a comparison really...in terms of the facilities, um...and I think that does sway it for me. (P13)

Allowing children to socialise and learn new skills also influenced the parents' uptake in the program. Consistent with the Tribe managers and coaches, the fact that the Tribe sports sessions were conducted in a non-competitive, relaxed environment was perceived as a positive factor:

I'm very keen that they don't, it's not competitive. They do a game of 5-a-side at the end, and I'm quite happy with that because they love it, but I'm happy...very keen. The reason I'm here is because I don't want him to be in a team at 7, when he doesn't need to be in a team...he learns skills...he learns everything he needs to...I was generally looking for a non-competitive scenario. (P14)

Conversely, however, factors preceding their children's participation in the Tribe Project differed from their own. Although the Tribe parents acknowledged the importance of non-competitive sport for their own uptake within the program, competition was referred to by some Tribe parents as potentially important for the children and adolescents who attended:

I'm all for encouraging everybody to join in and non-competitive, but at the end of the day there's a certain amount of kids that thrive on that competitiveness and they want to be in a team and they want to play matches and stuff. (P16)

Secondly, there was a convergence of evidence across all the Tribe parents that enjoyment, sociability, the sport available at school and the influence of peers were significant in their children's decision to attend:

So it's quite difficult I think for individual children...unless they're particularly motivated or they have a particular passion about something, to get them to and try a new activity, it's quite hard...I think what makes a big difference is their peer group, because I've noticed with us, if you suggest going somewhere, and you say to them 'Oh there'll be your friends from school there'...they'll go, you know. (P11)

According to the Tribe parents, the population reached by the Tribe Project was influenced by factors relating to the promotion, awareness, cost and timings of the Tribe sports sessions. Participants were described as typically physically active and 'sporty', and from a white, middle-class background. The determinants of their own, and their children's, participation in the program, however, differed. Among the Tribe parents, convenience, compatibility with their lifestyles and recreational sport were key factors determining their participation. Among their children, however, enjoyment of the sport, access to sport within school, the influence of peers and opportunities for competition were recognised as salient factors in their attendance. What follows is evidence from questionnaires administered to the children and adolescents attending the program, to assess their determinants of participation in the Project.

### 5.4 Quantitative Data

#### 5.4.1 Cross Sectional Survey of the Tribe Project Attendees

Questionnaire data were collected from a sample of the children and adolescents attending the Tribe Project (N = 334), and was used to assess individuals' determinants of participation in the Tribe Project. The determinants of participation in the Tribe Project were rated on a five point Likert scale whereby 1 = "never true for me", 2 = "hardly ever true for me", 3 = "I don't know", 4 = "sort of true for me" and 5 = "really true for me". Five items related to interpersonal factors (beliefs and morals), 6 items related to intrapersonal factors (goals and progression), 5 items related to social factors (family and peers) and 5 items related to environmental factors (physical environment, facilities). The data represented all 10 sports delivered through the Tribe Project, and was assessed by gender and age. Boys completed 181 questionnaires and girls 153 questionnaires. The mean (SD) age of participants was 9.69 ( $\pm$ 1.88) years. Participants aged 7-10 years old were classified as 'younger children', and participants aged 11-14 years old were classified as 'older children/adolescents'.

The children and adolescents attending the Tribe Project could participate in multiple sports within the program. Participants could complete more than one questionnaire as a result. As the participants may be represented more than once within the questionnaire data, the results reported, refer to the number of completed questionnaires by gender and age, *not* the number of participants within the sample. Table 13 shows the distribution of questionnaire responses across the 10 Tribe sports according to gender and age. Mean item scores were calculated for the 21 items within the determinants of participation scale, the results of which are presented in Table 14.

The key findings were that the most strongly endorsed reasons for participating in the Tribe Project amongst both the boys and girls were social and intrapersonal factors relating to the pursuit of enjoyment and health and fitness goals. This was shown to be irrespective of age. In comparison to the older children and adolescents, only the younger children reported that the image of the University and feelings of inclusion in the group were determinants of their participation in the Tribe Project. The mean scores for these items were slightly higher among the 7-10 year old girls compared to the 7-10 year old boys. Only among girls aged 7-10 years old did the motivation to improve and join a team have a mean score >4.00, whereas among the 7-10 year old boys this item had a mean (SD) score of  $3.81 (\pm 1.43)$ .

Overall, the findings from the questionnaires revealed that the determinants of participation in the Tribe Project were broadly similar across both gender and age, and were a combination of social, intrapersonal and environmental factors. The determinants of participation most strongly endorsed by the participants included the pursuit of fun and enjoyment, and health and fitness-related goals. These two items had the highest mean scores as determinants of participation in the Tribe Project, irrespective of the gender or age of participants.

	Number of Questionnaire Responses										
	Total N	Athletics	Badminton	Football	Hockey	Judo	Multi-skills	Netball	Swimming	Tennis	Trampolining
Total Boys	181	8	14	23	30	19	8	0	39	33	7
7-10 yrs	119	8	6	23	10	9	5	0	31	21	6
11-14 yrs	62	0	8	0	20	10	3	0	8	12	1
Total Girls	153	8	5	1	4	10	10	24	44	29	18
7-10 yrs	107	8	2	1	1	6	4	18	41	18	8
11-14 yrs	46	0	3	0	3	4	6	6	3	11	10
Total 7-10 yrs	226	16	8	24	11	15	9	18	72	39	14
Boys	119	8	6	23	10	9	5	0	31	21	6
Girls	107	8	2	1	1	6	4	18	41	18	8
Total 11-14 yrs	108	0	11	0	23	14	9	6	11	23	11
Boys	62	0	8	0	20	10	3	0	8	12	1
Girls	46	0	3	0	3	4	6	6	3	11	10
Tot. No. Completed Questionnaires	334	16	19	24	34	29	18	24	83	62	25
Tot. No. in the Tribe Sports Session	*409	16	19	27	*34	30	18	*34	*100	*100	*31

#### Table 13: Distribution of Questionnaires across the 10 Tribe Sports by Gender & Age

\* Indicates data are estimates only<sup>2</sup>.

<sup>&</sup>lt;sup>2</sup> Data on the number of children and adolescents who attended the Tribe Project, and information on their age and gender were not consistently recorded throughout the Project. The number reported as attending the Tribe Project, therefore, is based on estimates only. As the participants can participate in multiple sports within the program, they could complete multiple questionnaires. Data relates, therefore, to the number of completed questionnaires by age and gender, *not* the number of participants in the sample.

	Mean (SD) Item Score (Scale Range 1 – 5)					
Scale Item	7-10 y/o Girls (N = 107)	7-10 y/o Boys (N = 119)	11-14 y/o Girls (N = 46)	11-14 y/o Boys (N = 62)		
I want to have fun and enjoy myself	4.72 (.74)	4.73 (.70)	4.67 (.60)	4.39 (1.03)		
I want to keep fit and healthy	4.67 (.68)	4.62 (.93)	4.78 (.63)	4.44 (.93)		
I like the coaches that teach me	4.66 (.55)	4.40 (.94)	4.70 (.51)	4.15 (.96)		
I want to learn new skills	4.60 (.76)	4.54 (.88)	4.54 (.81)	4.29 (1.01)		
like the place where I do the activity	4.46 (.85)	4.21 (1.07)	4.39 (.80)	4.08 (1.15)		
I enjoy the activity and just want to take part	4.40 (.93)	4.43 (.91)	4.70 (.63)	4.19 (.96)		
The University is a cool, fun place to be	4.23 (.98)	4.10 (1.10)	3.98 (.98)	3.87 (1.06)		
Being part of sports group is cool	4.06 (1.23)	4.04 (1.29)	3.41 (1.45)	3.65 (1.15)		
I want to improve and join a team	4.03 (1.19)	3.81 (1.43)	3.96 (1.26)	3.66 (1.41)		
I want to meet new people	3.79 (1.13)	3.23 (1.46)	3.76 (1.23)	3.13 (1.19)		
My mum wants me to come	3.74 (1.53)	3.92 (1.42)	2.83 (1.57)	3.11 (1.46)		
My family are active so want to be active	3.56 (1.27)	3.60 (1.30)	3.15 (1.40)	3.06 (1.37)		
I want to do activity competitively	3.52 (1.38)	3.79 (1.38)	3.50 (1.44)	3.90 (1.18)		
There are top athletes training here	3.34 (1.43)	3.24 (1.58)	3.33 (1.35)	3.11 (1.38)		
I want to do activity in relaxed place	3.19 (1.26)	3.18 (1.45)	3.28 (1.13)	3.23 (1.25)		
It's easy for me to get here	3.10 (1.39)	3.39 (1.50)	3.20 (1.36)	3.63 (1.19)		
My dad wants me to come	2.79 (1.53)	3.32 (1.60)	2.35 (1.43)	2.90 (1.54)		
My friends also come	2.79 (1.64)	2.55 (1.62)	2.96 (1.70)	3.16 (1.53)		
It is near to where I live	2.65 (1.52)	2.62 (1.47)	2.67 (1.42)	3.26 (1.37)		
My brother or sister comes	2.53 (1.82)	2.54 (1.85)	2.28 (1.63)	2.39 (1.69)		
I want to hang out with my friends	2.28 (1.39)	2.58 (1.51)	2.43 (1.64)	2.85 (1.29)		

Table 14: Mean Item Scores for the Determinants of Participation in the Tribe Project among the Children and Adolescents

## 5.5 Documentary and Observational Data

Documentary and observational data were collected over the course of this case study to contribute to an assessment of the reach of the Tribe Project. These data were used to assess the population potentially eligible to participate in the program, the population who did take part and the representativeness of these attendees. Direct observations were made over a period of 12 months and were informal in nature. Observations were recorded during general visits to the Tribe Project site, during the data collection phases and following specific meetings with Tribe Project staff members. Documentation included a report outlining the aims and objectives of the Tribe Project, and advertising of the program such as leaflets, posters and holiday camp brochures.

#### 5.5.1 Observational Data

#### 5.5.1.1 Population Eligible to Attend the Tribe Project

The proportion of eligible participants that were reached by the Tribe Project was assessed following an interview with a Tribe manager on 31/10/2009. The Tribe Project receives only partial funding through Sport England; hence, the cost of attending the Project is essential to fund the implementation of the program. During the interview, the Tribe manager did not associate the cost of attending the Tribe Project with the potential reach of the program. In fact, the Tribe manager referred to the fact that *all* children and adolescents were reached. The Tribe manager was unaware of the potential barriers to participation in the Project and, therefore, a core aim of the Project to reach all children and adolescents could not be achieved.

Likewise, a direct observation on 11/05/2009 highlighted that the Tribe managers were unclear as to which population the Tribe Project was aiming to recruit, due to the contradictory information they provided regarding the target population during interviews. Some of the Tribe managers inferred that younger children were the main target of the Tribe Project, as the Project can provide their first experience of sport. Other Tribe managers, however, suggested that children of all ages were the target. This lack of clarity regarding the target population for the Tribe Project meant it was unclear who the eligible population were and, consequently, calculating the proportion of this population that had been reached. This links with a further observation following an interview with one Tribe manager on 31/10/2009. There appeared to be an overestimation of the awareness and reach of the Tribe Project to members of the public. The Tribe manager stated during an interview that if a member of the public typed "children's physical activity", or similar, into an internet search engine the Tribe Project appeared in the results. This strategy of searching for the Tribe Project online was attempted and there were no results relating to the Project. In order to find the Tribe Project online it was necessary to search specifically for the words "Team Bath Tribe". In order to find the Tribe Project via internet search engines, therefore, some prior knowledge of the Tribe Project would be necessary. This contradicts the interview evidence from the Tribe manager that a general internet search for "children's physical activity" was directly linked to the Tribe Project, and participants could access the program in this way.

Furthermore, it was also consistently observed over the course of this case study that the Tribe managers, in particular, spoke negatively regarding the motivations of certain parents who children attended the Tribe Project. The Tribe managers referred to the use of childcare as a hindrance to the Project, and it was something they discouraged. This was specifically observed on 31/10/2009 and on 05/11/2009 following interviews with the Tribe managers and coaches. The Tribe managers and coaches were unenthusiastic about children who attended the Tribe Project and failed to enjoy the sport. It was apparent that children who may have had negative experiences of sport, or did not enjoy sport prior to attending the Tribe Project, were viewed negatively. The implication from the Tribe managers and coaches was that the Tribe Project catered for children and adolescents who either were motivated by sports, or had a limited experience of sports participation. There was the assumption that parents who attended the Tribe Project for childcare reasons were not 'on board' with the program and this was something the Tribe managers and coaches discouraged within the program.

#### 5.5.1.2 Population Reached by the Tribe Project

The advertisement of the Tribe Project is also a key factor in achieving high reach, as the awareness and promotion of the Project was essential to achieve maximum uptake. An observation was made on 15/01/2010 that the Tribe Project was heavily advertised within the main building of the STV on the University of Bath campus. Although this promotional material was widespread within the STV, it appeared to be advertised solely within this location on campus. There was a Tribe Project display table at the entrance to the STV with adverts, leaflets and pricing information for the Tribe sports

sessions. The stand was bold, colourful, informative and helpful; nonetheless, the display was situated beyond the electronic entrance barriers into the STV. This meant the promotional material was not accessible to members of the public. The material would only be seen by parents and children already attending a course within the STV, who had access to go beyond the electronic entrance barriers. A similar observation was made with relation to the promotional postcards that advertised the Tribe sports sessions. Unlike the Tribe Project display table, the postcards were accessible to members of the public; nonetheless, they were not consistently available for every sport, nor positioned in visible place. On a series of occasions it was observed that parents who were enquiring about the Tribe Project at the STV reception desk were not directed to this postcard stand, nor had they seen it themselves due to its positioning.

#### 5.5.1.3 Representativeness of the Population Reached by the Tribe Project

The representativeness of the population reached by the Tribe Project was also addressed in a further observation made during one of the Tribe sports sessions on 09/02/2010. This observation related specifically to a conversation with a parent whose children were participating in the Tribe sports session. The parent indicated that they had tried several other sports centres in the local area prior to attending the Tribe Project. Despite the fact that there were sports centres located nearer, which were cheaper to attend than the Tribe Project, the Tribe parent chose to attend the Project due to its compatibility with their lifestyle. The parent described the sports sessions per night. The implication was that the Tribe Project was compatible with their lifestyle and was, therefore, the main reason they chose to attend the Project. To the parent's knowledge, the Tribe Project was the only organisation locally within BANES that had this format, so it was an essential factor in their participation in the program. The Tribe Project was the only sports program they could attend, and this had a direct impact on the reach of the program.

This was consistent with an observation on 05/11/2009, when it was observed following an interview with two Tribe coaches that the weekly Tribe sports sessions often commenced shortly after the closing time of most schools. As a result, the timings of the sports sessions restricted the reach of the Tribe Project to individuals living in close proximity to the University of Bath.

#### 5.5.2 Documentation

Documentation relating to the advertisement of the Tribe Project was also used to assess the reach of the program. A half-term holiday camp brochure dated February 2010 (Appendix O) and a Tribe sports session schedule from September - December 2009 (Appendix P) were used. The promotional materials were visually appealing and had a good balance of clear information. The style and layout promoted the sports effectively and there was equal representation for all of the Tribe sports. There was a large amount of promotional material within the University of Bath STV, and the poster displays and leaflet stands were prominent. In terms of the reach of the Tribe Project within the STV, the promotional and recruitment material was widespread.

A second document outlining the aims and objectives of the Tribe Project, the 'Queen's Prize Document' (Appendix L), was also used to assess population who attended the Project. The following extract outlines the key aims and objectives of the Tribe Project:

Tribe is the University's programme of community sport. The objectives of Tribe have been to create pathways for people to follow sport from a young age and into an active future. The programme starts with mother and baby classes, progresses into Tots activities (4-7 years), Tribe activities (7-14 years), Futures (7-16 years), Academies (16-18 years) and Adult Recreation. The pathways allow at each stage of development routes into performance pathways and participation pathways inter-changeably. This development pathway allows people access to sporting opportunities throughout their life, contributing to a healthier lifestyle.

The document highlighted that the program did not have a specific target population other than the age of individuals, whereby all children and adolescents aged between 7-14 yrs were eligible to attend.

### 5.6 Data Synthesis

A combined assessment of interview, questionnaire, observational and documentary evidence revealed that the reach of the Tribe Project was less successful overall, and could potentially be improved. Table 15 shows the evidence from each data source used to assess the reach of the Tribe Project.

To assess the reach of the Tribe Project, the absolute number of potentially eligible participants that attended the Tribe Project was assessed. This assessment also included the representativeness of the attendees. The total population of children and adolescents aged 7 – 14 years attending the Tribe Project was estimated at 409<sup>3</sup> participants. Based on BANES Council census data, the Tribe Project reached approximately 2.5% of the potentially eligible participants living within BANES. According to this population data, the gender distribution within BANES is relatively equal, whereas the ethnic variety is less diverse. The likelihood that participants attending the Tribe Project were defined as 'White British' is greatly increased as a result. Interviews with the Tribe Project were typically white, middle-class and wealthy, consistent with this population data.

Interview data revealed a strong convergence of evidence between the Tribe managers, coaches and parents regarding the representativeness of the children and adolescents reached by the Tribe Project. There was a consensus amongst participants that the attendees were usually physically active prior to participation, and could generally be described as 'sporty'. The Tribe managers inferred that the attendees usually came from families that were more active, and the parents who attended perceived the Tribe Project to provide social and physical benefits following participation. This was consistent with evidence from interviews with the Tribe coaches and parents and, in particular, data from the questionnaires administered to children and adolescents attending the Tribe Project.

The motivation to keep fit and healthy emerged as a key determinant of participation in the Tribe Project among all the children and adolescents, irrespective of gender or age. Likewise, the pursuit of fun and enjoyment was a key determinant of the younger children's participation in the Tribe Project, and this was shown to exist irrespective of gender. During interviews with the Tribe parents, it emerged that the potential physical and social benefits to their child, childcare needs and lifestyle compatibility were key determinants of their participation in the program. This was supported by a direct observation, which revealed that lifestyle compatibility and access to Bath University were vital in determining some parents' attendance on the program. These factors were directly associated with the population actually reached by the Project overall.

<sup>&</sup>lt;sup>3</sup> Data on the number of children and adolescents who attend the Tribe Project and information on their age and gender were not consistently recorded throughout the Project. The BANES Council census data records children's ages based on school year groups. This results in an age grouping of 6-15 years. The Tribe Project data relates to children and adolescents aged 7-14 years. The results reported are based on estimates only.

### Table 15: Synthesis of Data used to assess the Reach of the Tribe Project

### **RE-AIM Component - REACH**

The absolute number, proportion and representativeness of individuals who are willing to participate in a given initiative

Data Source	Population Eligible to Attend	Population Reached	Representativeness of Attendees
Archival Records			
<ul> <li>Bath &amp; North East Somerset population data</li> </ul>	In total, 16,062 children and adolescents aged 6-15yrs were living within BANES.	The total number of children and adolescents attending the Tribe Project was 409 participants.	
	Of this, 8227 children were aged 6-11 years old and 7835 children and adolescent were aged 11-15 years old.	The Tribe Project reached approximately 2.5% of the total population of 6-15 year olds living within BANES.	
Qualitative Data			
<ul> <li>Interviews with the Tribe Project Managers, Coaches &amp; Parents</li> </ul>	All children and adolescents aged between 7 – 14 years living within Bath and North East Somerset	Participants were typically physically active or 'sporty' prior to attending.	Participants were described as white, middle class and wealthy.
		The children and adolescents usually attended private schools within BANES	Attendance from obese or inactive children & adolescents was unlikely
Quantitative Data			
<ul> <li>Cross sectional survey of Tribe Project attendees</li> </ul>	The total number of children and adolescents attending the Tribe Project was estimated at 409* participants.	In total, 334 questionnaires were completed by participants <sup>4</sup> . Of this, boys completed 181 questionnaires and girls completed 153 questionnaires.	Children and adolescents more likely to be reached, perceived sport as fun and enjoyable, and had health and fitness- related goals

Data Source	Population Eligible to Attend	Population Reached	Representativeness of Attendees	
<ul> <li>Documentation</li> <li>Promotional material advertising the Tribe Project</li> <li>Queen's Prize Document outlining the program aims &amp; objectives</li> </ul>	All children and adolescents aged between 7 – 14 years living within Bath and North East Somerset			
<ul> <li>Direct Observations</li> <li>Following interviews with the Tribe managers and coaches</li> <li>The location of Tribe Project advertisements</li> <li>Conversation with a Tribe parent</li> </ul>	Impact of program cost was unaccounted. The population eligible to attend was unclear, yet attendance for childcare reasons was discouraged. Access to the Tribe Project via internet search engines was overestimated	Potentially individuals who had prior access to enter the University of Bath Sports Training Village	Perception that individuals who attended could afford the cost of the Tribe sports sessions, and could meet the program timings	
Rating of REACH	1 (Less successful)			

RE-AIM dimension ratings equivalent to 1= Less successful, 2 = Moderately successful, 3 = Highly successful

\* Indicates data are estimates only<sup>4</sup>.

<sup>&</sup>lt;sup>4</sup> Data on the number of children and adolescents who attended the Tribe Project, and information on their age and gender were not consistently recorded throughout the Project. The number reported as attending the Tribe Project, therefore, is based on estimates only. As the participants can participate in multiple sports within the program, they could complete multiple questionnaires. Data relates, therefore, to the number of completed questionnaires by age and gender, *not* the number of participants in the sample.

There was not, however, a clear population that was targeted by the Tribe Project. A document outlining the key aims and objectives of the Tribe Project (Appendix L) highlighted that the mission of the Tribe Project was to create pathways for young people to follow sport from ages 7-14 years old. Irrespective of this, interview data revealed some contradictions amongst the Tribe managers concerning the Tribe Project's target population. Some of the Tribe managers inferred that there was not a specific target group and all children were reached. This was contradicted, nonetheless, by other Tribe managers who inferred that younger children were the main target, and that children already interested in sport were usually reached. The Tribe managers acknowledged that the reality of targeting inactive or obese children through the Tribe Project was unlikely; however, the target population to be reached by the Tribe Project remained unclear.

The advertising and promotion of the Tribe Project may have also influenced the proportion of the potentially eligible population that were reached by the program. There was a consensus amongst all the Tribe managers, coaches and parents that advertising of the Tribe Project was not widespread, and the reach of the Tribe Project could be increased by recruiting more participants. Interviews with the Tribe managers, coaches and parents revealed that the main recruitment for the Tribe Project was predominantly as a result of word of mouth. Access to the University of Bath website was the next most likely source of recruitment. However, only the Tribe managers and coaches indicated that recruitment also took place through the school system. None of the Tribe parents through the school system, nor had they had any experience of Tribe Project advertising within the community. In particular, the Tribe parents reported a limited awareness of the Tribe Project overall, and that the Tribe Project was not overtly promoted to them.

Documentary evidence showed that the Tribe Project promotional material was well designed and informative; nonetheless, the location of the promotional displays meant some individuals could not access it. Specifically, individuals without prior access to the STV would not be reached. This supports direct observations and interview data from the Tribe coaches and parents that promotion of the Tribe Project was poor, and predominantly located in and around the STV and University of Bath campus.

Based on evidence from these sources of data, the proportion of potentially eligible participants and the representativeness of the population actually reached by the Tribe Project were limited. Weaknesses associated with the advertising and the recruitment of the Project meant uptake was restricted and only children and adolescents who were physically active were typically reached. The Tribe managers perceived the reach of the Project to be moderately successful overall, whereas the Tribe coaches and parents described the reach of the program as far less successful.

## 5.7 Limitations and Recommendations

There are several limitations associated with calculating the reach of the Tribe Project, as data on the Tribe Project's target population, total number of attendees and potentially eligible participants were not systematically recorded. Data on the number of children and adolescents who attended the Tribe Project, and information on their age and gender, were not consistently recorded throughout the program. Nor did the Tribe Project maintain a consistent record of the scope of potentially eligible participants living within BANES that may have been reached by the program. In an attempt to overcome this limitation, estimates of the proportion of the potentially eligible population that were reached by the Project were made using BANES Council census data. There were, however, inherent limitations in using this population data. The BANES Council census data records children's ages based on school year groups, which results in an age grouping of 6-15 years. The data that was available on the number of attendees within the Tribe Project related to children and adolescents aged 7-14 years. As a result, the proportion of the eligible BANES population reached by the Tribe Project could only be based on estimates. Due to the limitations associated with the data recorded within the Tribe Project, the reach of the program could not be indisputably quantified.

Recommendations to increase the reach of the Tribe Project would be to establish the Tribe Project's target population and maintain a record of the Tribe Project attendees. By clarifying the target population, the rate of attendance among potentially eligible participants could be monitored. The program could then be tailored specifically to reach certain groups within the BANES population. Secondly, the breadth of the advertising and promotion of the Tribe Project within the BANES needs to be increased. Taking a proactive approach to marketing the Tribe Project beyond that of primarily within the University of Bath campus may increase the accessibility of the program. Implementing such strategies may increase the accessibility of the Tribe Project to individuals living within BANES, and provide a more systematic way of quantifying the extent of the program's reach overall.

## 5.8 Summary of Reach

In this chapter, multiple sources of data have been used to assess the reach of the Tribe Project. Overall, the reach of the program was less successful and could potentially be improved. Limited advertising and promotion of the Tribe Project within BANES meant the accessibility and reach of the program was reduced. The program failed to reach a representative proportion of the population within BANES, as attendees were described as white, middle-class and from a physically active/sporty background. The absence of data on the attendance rates within the program meant the proportion of the eligible population that were reached by the Tribe Project could not be indisputably quantified. The following chapter presents data accounting for the effectiveness of the Tribe Project, based on interview, questionnaire and documentary/observational data.

# **CHAPTER 6: EFFECTIVENESS**

## 6.1 Introduction

In this chapter, the quantitative and qualitative data used to assess the effectiveness of the Tribe Project is presented. Effectiveness refers to the impact of an intervention on important outcomes, including potential negative effects, quality of life and economic outcomes (Glasgow et al., 1999). Within the RE-AIM framework, effectiveness is measured at the individual level, and it represents the impact of an intervention when implemented in ideal and real-world settings. Effectiveness is calculated by examining the intervention's effect size and specified outcomes, which can include biological, behavioural and quality of life indicators (Glasgow et al., 1999). The effectiveness of the Tribe Project was calculated based on: the extent to which the program objectives were achieved, the elements of the program deemed successful or unsuccessful, the potential impact of the program on the attendees and the extent to which the Tribe Project could be deemed an overall success. Based on these criteria, the effectiveness of the Tribe Project was calculated using data from: interviews with the Tribe managers, coaches and parents, questionnaires from the children and adolescents attending the Tribe Project and documentary and observational data. The results following these data collections are presented below.

## 6.2 Qualitative Data

#### 6.2.1 Interviews with the Tribe Project Managers and Coaches

During interviews with the Tribe Project managers and coaches, various themes emerged relating to the effectiveness of the program. These themes included the aims and objectives of the Project, the definition of program success, the strengths and weakness of the program and the outcomes following participation (Appendix R). Evidence relating to these themes contributed to assessing the potential impact of the Tribe Project on the attendees. Evidence to account for these themes is presented below.

#### 6.2.1.1 Aims and Objectives of the Tribe Project

Interviews with the Tribe managers and coaches revealed a convergence of evidence regarding the aims and objectives of the Tribe Project. These aims included making sport accessible to children and adolescents, getting children and adolescents to improve and learn new skills, making sport a fun, enjoyable and positive experience and creating pathways from recreational to elite sport:

...We are in some essence looking to go all the way up through to elite athletes and through to long-term recreational players. So for us, at the back of our minds must always be that there is a pipeline that individuals can follow...and we've always been quite cautious about initiating experience for children that really inspires them, and then telling them there's nothing to it and you can't go anywhere. 'Cos it's usually those levels will drop to below than when they started, so for us we've always made sure we've got somewhere to signpost them, an outlet...(M1)

It's just really getting all the kids involved in [name of sport], keeping the kids within the sport and getting them onto the next level so they carry on through. So developing the young one from grass roots and then all the way through to club and then they're developed to be an athlete. (C7)

Specifically, the Tribe coaches placed emphasis on the importance of enjoyment and improvement within the Tribe sport:

But I always try to keep the kids that come in the club, like keep them coming, make sure they enjoy themselves. I never let one get sort of neglected from the other kids, just keep them all involved and try and make it so they enjoy it, and enjoy their time. But I always aim to get improvement, for the children to improve, like I've had these two children here who were a bit overweight and they carried on going for like a year and they got better and better so you always try...(C7)

Despite a consensus on the core aims of the program, the Tribe coaches' views on competition within the program differed. There was a majority opinion that one aim of the Tribe Project was to provide recreational sport:

Tribe is less of the competitive, obviously, we want them to play matches and things like that, but we're the thing before the team. 'Cos I know there's quite a few they might not be very good at [name of sport]...you know they're not good enough to be in a team. If they were good enough they would have been snatched up by an academy by now, so it's kind of for those that are caught in the middle...it allows them to do some exercise and still enjoy [name of sport]. (C4)

Unlike the Tribe managers, some of the Tribe coaches inferred that opportunities for competition were an important part of the Tribe Project:

We run the programme but with the aim, we run it sort of, almost, it sounds awful, almost alongside producing performance kids. So, the one aim we do have is however many kids we have, I think we want about ten percent of them feeding in to performance [name of sport]...we measure it [success of the Tribe sports session] through performance. Um, yeah and numbers is great that we've got so many kids in, but not until we start producing some winners [Laughs], it sounds awful but... (C6)

#### 6.2.1.2 Definition of Program Success

To assess whether the aims and objectives of the Tribe Project had been met, the Tribe managers and coaches referred to the criteria by which they deemed the program successful. There was consensus among the Tribe managers and coaches that their definition of program success related directly to the uptake and retention of attendees, and the monetary profit gained:

Because obviously not only do we have to pay the coaches with each activity we also have to pay the facility fee, So, it is a lot of money to be paying out if you're only getting four or five kids. So I think that is when we decide that something is not successful, not getting the interest we are not getting the numbers. (M2)

For me it's money because it's so hard to keep an eye on anything else...um and that's the one thing I have to keep tabs on. Like numbers is something that [Tribe managers] ask for and I send it to him and its quite nice to see whether we've gone up or down in a week, 'cos we're given weekly numbers, but I don't know how...it does interest me a little bit but not as much as figuring out how much money we've made. (C5)

Unlike the Tribe managers, there was evidence from some of the Tribe coaches, nonetheless, that their definition of program success was also based on the children's and adolescents' enjoyment of the Tribe sports sessions:

"[The Tribe Project is a success] because the kids are all having fun erm, and *I'm retaining them and we go to tournaments and I see them progressing.*" (C10)

[The definition of success] The people who've done it and they've stayed there for a long time, they've enjoyed it, they've gone on to other clubs you know, to play [name of sport] at clubs and sort of just you know, enjoyed the game and wanted to do it more. (C8)

The definition of program success was also referred to in the context of the strengths and weakness of the Project. There was a convergence of evidence amongst the Tribe managers and coaches that the key strengths of the Project included the sports facilities and coaching available, the range of sports offered through the Project, the positive image of Bath University and the 'Team Bath' brand and the lack of competition from other sports programs within BANES:

So there's no point to do something that every one else is doing unless you can offer something completely different or a lot cheaper or whatever. So whenever we look into start something new up we always do find out what else is on offer in the area...I don't know of any other... any other sports facility in the area that do as many activities for kids under one...kind of one name if you know what I mean. (M2)

The uniqueness of the Tribe Project was also discussed in relation to the partnerships that have been created between the Tribe Project and community organisations:

...It is very, very unique [the Tribe Project]. There is not a University in the country that has a program of this nature. There are other University's that invite school groups onto campus and run school visits, and there are some University's that create volunteer placements and send students out into class and into schools to do work. But, there is no one that has systematically worked

with schools sports partnerships, county sports partnerships, whose funding priority is to set up a sustained delivery mechanism utilising student coaches out in the community. (M1)

#### 6.2.1.3 Evaluation and Feedback Procedures within the Program

Despite a consensus on the Tribe Project successes, there were contradictions among the Tribe managers and coaches regarding the evaluation procedures in place to ascertain the program's success. One Tribe manager in particular inferred that evaluation procedures were in place, and parents whose children attended the Project were able to give feedback:

We always make sure that if a parent has got a problem with anything that we've done or how their kid's been taught, we, I have these feedback forms. I try and make sure that everyone and I also send those out, even if I'm just sending out a letter a courtesy letter or a letter to remind them of re-enrolment, I will send a feedback form back to us so if they've got any problems that they want to write down and send back to me. (M2)

"Yeah, I mean we keep like we keep all our feedback forms as well so we can always look over them and say we know what works and what doesn't work through what we are the feedback we get." (M2)

This was contradicted by evidence from the remaining Tribe managers and coaches, however. Feedback was not sought proactively and evaluation procedures were not in place. Participants inferred that this resulted in a lack of knowledge relating to the Tribe Project attendees:

So quite often if we've reached a point where either we're stuck for how it can improve, or we've had a similar number of issues or criticisms raised...we'll go out to the whole group and say 'This is what we're thinking of doing'...So we've been a little bit reactive rather than in terms of proactively going out there and seeking it...um but at certain times we have to hold our hands up and just say actually we don't have the time and the staff to be able to do as much of that side as we'd like to; its about time. (M1) It's hard as a coach to get that feedback. I don't think as Tribe that we, that we know enough of what the kids are doing...I don't think we know enough and I also think we should be doing things like family memberships so some of the parents come to loads of stuff, you know, we should be rewarding them. (C10)

Despite efforts to obtain feedback from the Tribe parents, the Tribe coaches inferred that a systematic process did not exist. This limited their ability to maintain a record of the attendees as a result:

The parents, they should be asked if they're not coming back, why but erm, for [name of sport] I always ask why but I don't know if it's ever noted down, and I can't remember now. But I would love to have a better system than I have at the moment, I mean I've got kind of files everywhere, filing's not my strong point, it's something that I should probably improve on. (C10)

Although the Tribe managers and coaches agreed that feedback and evaluation measures within the Tribe Project could be improved, parental feedback was described, however, in a negative manner. Feedback that had previously been received was described in the light of it being a critique of the program, with reference to its unimportance:

...We only tend to get feedback if it's either a narky parent [Laughing] or it's just somebody, they phone and go 'Look, I don't really want to complain but...this coach has been late a couple of times, or...' stuff like that. But we give them the opportunity in that quarterly, so I think the next one will be June, sort of summer time, that they'll get a chance to have a nag. (M3)

I think although as hard as it will be, 'cause I think feedback forms are hard, I might try and do feedback forms, but often the parents don't know what's going on and it's quite easy just to jump on and say, 'Well actually I don't like the way they do this.' And often half of them don't know what's going on 'cos they're not down there... um...but they are the hardest things to do I think. But then I think it works both ways – it's very easy to, if you're very happy with someone you sort of praise, it's very easy to criticize, and then in between you're sort of 'Mmm bothered,' kind of thing. (C6)

Consistent with this, a Tribe coach also described feedback within the Tribe Project in the context of it being undervalued. Despite the Tribe coaches' attempt' to collect

feedback from the Tribe parents, emphasis was placed on the fact that program decisions were made, irrespective of the feedback received:

'Cos I initially I sent out a questionnaire to get their feedback on it [a change to the payment system], and some feedback came back positive...some came back quite negative...um, but it was already something that I wanted to do, so even though I had the questionnaires, it was gonna happen [Laughing]. I kind of thought well if they haven't bothered sending it back, then they're obviously not that bothered...And in a way I kind of sort of filtered out the people that I didn't really want in the program in the nicest way possible as well [Laughing], 'cos they're often the wingers [Laughs]. (C5)

#### 6.2.1.4 Outcomes Following Participation in the Tribe Project

Outcomes following participation in the Tribe Project were not formally measured as part of the program. Irrespective of this, all of the Tribe managers and coaches referred to psychological, social and physical benefits following participation. None of the Tribe managers or coaches referred to any negative outcomes after participating in the program. The positive outcomes that were described included an increase in the child's confidence, increased sociability with other children and an improved skill and physical fitness level. These benefits were described in the context of their long-term impact on the children and adolescents, having an influence both within and outside of the Tribe Project:

"I think I was getting something like 30 or 40% of those girls [who attend the Tribe sports session] that were coming to my lesson, going back into their sports lessons [in school]...because they were starting to feel a bit fitter, a bit confident [after participating in Tribe]." (M3)

"They all have fun and they go away they think [name of sport] is amazing and that's my main concern...so it becomes a part of who you are rather than a thing that you do, so you can make physical activity part of the whole person." (C10)

Overall, there was a consensus amongst the Tribe managers and coaches that the Project had a positive impact on the children and adolescents who attended. The positive outcomes among the attendees included an increase in physical fitness and level of skill within the sport, improved confidence and an increased sociability with other children. There was some evidence that the benefits following participating in the Tribe Project influenced physical activity participation external to the Tribe Project, such as within school-based PE. None of the Tribe managers or coaches referred to any negative consequences following participation in the program. Despite limited feedback and evaluation procedures within the Project, it was deemed a success overall. This decision was based on the successful uptake and retention of participants, and the monetary profit gained. To further assess the effectiveness of the Tribe Project, interviews were conducted with the parents whose children attended the Tribe Project. The data from these interviews follows.

#### 6.2.2 Interviews with the Tribe Project Parents

Interviews with the Tribe parents revealed various themes emerging which accounted for the effectiveness of the Tribe Project. The themes specifically related to their understanding of the program aims and objectives, their definition of program success, the feedback and evaluation procedures within the program and the outcomes following their child's participation (Appendix R). Evidence relating to these themes contributed to assessing the potential impact of the Tribe Project on the attendees. Evidence to account for these themes is presented below.

#### 6.2.2.1 Aims and Objectives of the Tribe Project

During discussions relating to the aims and objectives of the Tribe Project, there was a consensus amongst all the Tribe parents that they were unsure of what the aims and objectives of the Tribe Project were:

"There is this confused mixed message about it, is it actually...are things like that actually trying to help kids improve their skill sets and perhaps go on and take it further, or is it just a childcare situation." (P11)

And I think if they were CLEARER about...about their goals, is it participation as in healthy living...or is it about being competitive and bringing them on to being competitive? I think it would be nice to know what they're trying to achieve, so I think there's that one, so it's clear whether it's participation or whether they're bringing them on or anything. (P17) The there was a further consensus that there was little consistency between the aims and objectives across the different Tribe sports. The Tribe parents recognised that differences between the Tribe sports were inevitable; nonetheless, having no formal knowledge of what these differences were was frustrating. The overall goal of the Tribe Project was unclear to participants:

"Maybe it differs for different sports, I mean it might be that with [name of sport] they're very keen to you know, build into the competitive edge and they're not about recreational sport....and that would just be nice to know. (P17)

Now that you've said the [name of sport] element is also under Tribe, see I find that a very different provision, and it's very sort of pot luck...Because there's no continuity, you wouldn't know that... you wouldn't know that they are operating all under the same umbrella. (P13)

#### 6.2.2.2 Definition of Program Success

A further convergence of evidence was reported concerning the aspects of the Tribe Project that were successful. These related specifically to the facilities and coaching available through the Project, the reputation of the Team Bath brand, the lack of competition within BANES and the enjoyment their children experienced whilst participating. There was a consensus amongst participants that the Tribe Project was a successful program. However, the criteria by which participants judged the program's success differed. In contrast to evidence from the Tribe managers and coaches, some of the Tribe parents felt that access to a wide range of sports and facilities made the Tribe Project a success:

I think it's successful from the point that they make the great sports facilities up here accessible for children...there are a wide variety of sports that are offered so I think that you know they can link in and out of things, and I think...yeah I think it is successful, I think it works well. (P17)

Likewise, the importance of progression and improvement within the Tribe sport were also described as criteria for the program's success: I've definitely seen progress, so that makes it a success because I can see the development, I can see the progress. Even though there isn't a program, I can see that there's...so seeing some progression is important for me, to decide whether it's successful or not. So if he was still running around like a dog off a lead, then I would think, well, what is the point...? (P14)

#### 6.2.2.3 Evaluation and Feedback Procedures within the Program

Despite consensus amongst participants on the strengths of the Tribe Project, weaknesses were described in terms of limited feedback procedures within the program. In particular, among the Tribe parents whose children had ceased participation in a Tribe sport, participants described never having experienced any follow-up after their child had dropped out.

"No. it was never followed up or anything...nobody from the Tribe tried to find out why she dropped out." (P14)

Emphasis was also placed on a perceived lack of interest on the part of the Tribe Project:

[Were you contacted after dropping out?] No...no, not at all...there was no, I mean we literally kind of left and that was it. So in a way they would have missed why that was the case...so you wonder whether...at that point my feelings on it were that they were very definitely, it almost felt like a weeding out process. (P17)

The lack of feedback or evaluation procedures within the Tribe Project was also described negatively by participants, specifically with reference to their overall perception of the program's effectiveness:

I think [Tribe Project needs] better feedback to parents. Because I think when you don't get any feedback about what they've been doing, they've achieved, you come away with the perception it is purely childcare. And if you went in and they said well today we're going to be working on this, then at the end of the day you get a report or you know...you'd feel more reassured that there was a plan behind it. (P11) The Tribe parents also expressed their entitlement to, and desire to be able to, give feedback. The fact that feedback procedures were not in place meant some of the Tribe parents questioned the interest of the Tribe Project in improving the program:

I think in both cases the feedback you don't get. Yeah, so you don't to be honest haven't got a clue, you know, how well he's doing, how he isn't doing or anything like that. I think it would be nice if at some point, even if it was just at the end of the year, they maybe do a very mini written type report or something, just you know it can even be done by email or something. But something that goes 'they've achieved this, this and this...' I wonder whether they ever want the feedback on what parents are wanting from it. (P17)

Likewise, providing feedback to the Tribe parents on the outcomes following participation in the Tribe sports sessions would confirm that the Project was having a positive impact on the children and adolescents who attended:

That would be nice, that would sort of give you a sense of reassurance that you know it isn't a childcare situation that there is a little more and there's some expertise and knowledge in what the coaches can offer to your children. (P11)

#### 6.2.2.4 Outcomes Following Participation in the Tribe Project

The outcomes following participation in the Tribe Project were described positively by all of the Tribe parents. Consistent with the Tribe managers and coaches, these benefits were specifically referred to in terms of a positive social and psychological impact. The positive outcomes included an increase in the child's confidence, sociability with other children and a greater awareness of health and fitness:

One of the aspects it does do is because it brings kid together form a number of different areas and schools and things, it's great for the sociability things and I think it's good for the age group mix, so I think that is very good, and so I think he enjoys that really. (P17)

Unlike evidence from the Tribe managers and coaches, however, the promotion of team ethics and sportsmanship were also described in light of the program outcomes:

"It also teaches them, like you know my son isn't particularly good at losing, but he needs to learn you know...that he's got to lose and be able to cope with that...so..." (P16)

Although the Tribe Project was deemed successful, and the positive outcomes following participation were acknowledged, the Tribe parents did refer to factors negatively affecting their child's participation. These factors were described with specific reference to the structure of the Tribe sports sessions and the group dynamics:

I think they need to have you know, tots should be with tots, the older ones should be with the slightly older... I really don't think that they should have mixed people [in the same sports session]. And age groups, I mean they range from about 4 years old anything up to 17, 18, so it's a complete mix. (P18)

Additionally, the mixed motivations and abilities of the children and adolescents within the Tribe sports session had a negative impact on the effectiveness of the Tribe sports session:

You know and we've seen that before, you know it's a shame then, particularly if your child is there because you know they have a level of motivation and then other children are there, not because they want to be. Is there enough structure to keep them from being engaged throughout...I think sometimes they were held back because of the ranges of ages. (P11)

"Some are here to take it seriously, like ours, and actually want to go further with it, so you know they're keen they're eager...that's why they do it so many hours...and others are here to just mess about..." (P18)

The potential impact of the Tribe Project was further described with reference to the importance of recognition or praise within the Tribe sports sessions. Rewards and certificates were absent from the Tribe Project, and this was something the Tribe parents considered important to their child's participation. There was a consensus that rewards or praise was an important incentive for children and adolescents to remain physically active:

You know I think you need that encouragement for kids. Even to...yeah you know they're not all going to be [name of sport], fair enough, but just to be able to say to them 'look, this is how much progress you've made week, when you

came on Monday you could do this...now you can do this...', you know just, it incentivises them a bit...(P11)

The omission of rewards for improvement and progression within the Tribe sports sessions was unanticipated by some of the Tribe parents, and was directly linked to their child's experience of the Tribe Project:

Well I thought they did that here [gave badges] and I was really shocked to find they didn't...I don't know why, but it gives all the children something to do, to focus on, something to work to at the end of the day...that to a child is a huge thing. (P20)

Overall, there was a consensus amongst the Tribe parents that the Tribe Project was successful as a program to promote physical activity. The positive outcomes following participation in the Project were described in terms of social and psychological benefits such as an increase in the childrens' confidence, sociability, a greater awareness of health and fitness and improved sportsmanship. Although negative outcomes following participation in the Tribe Project were not identified, there was evidence for the potential negative impact of the program structure on participants' experience. The Tribe parents referred to the mixed ages, abilities and motivations of children within the same sports session as negatively influencing their child's experience of the program. Likewise, the absence of rewards within the Tribe Project was described as a weakness. Despite a consensus regarding the benefits following participation in the Project, the aims and objectives of the program were unclear, and the feedback and evaluation procedures within the program were poor. The Tribe parents suggested that the opportunity to provide and receive feedback was welcomed and would improve the Project overall. What follows is data from questionnaires administered to the children and adolescents who attended the Tribe Project. The evidence relates specifically to the factors that they perceived as important to their participation in the program.

### 6.3 Quantitative Data

#### 6.3.1 Cross Sectional Survey of the Tribe Project Attendees

Questionnaire data were collected from a sample of the children and adolescents attending the Tribe Project<sup>5</sup> (N = 334), and was used to assess the importance of factors whilst individuals attended the Tribe Project. The importance of factors whilst attending the Tribe Project were rated on a five point Likert scale whereby 1 = "unimportant", 2 = "of little importance, 3 = "moderately important", 4 = "important" and 5 = "very important". Five items related to interpersonal factors (beliefs and morals), 7 items related to intrapersonal factors (goals and progression), 3 items related to social factors (family and peers) and 6 items related to organisational/environmental factors (physical environment, facilities). Descriptive data on the children and adolescents that completed questionnaires, and the distribution of questionnaire responses across the 10 Tribe sports, are reported in the quantitative data section in the previous chapter (Chapter 5).

Mean item scores were calculated for the 21 items within the scale measuring the importance of factors whilst attending the Tribe Project, the results of which are presented in Table 16. The key findings were that the aspects of the Tribe Project most important to the attendees were social, intrapersonal and interpersonal factors. Specifically these related to the rapport with, and ability of, the coach delivering the Tribe sports session, improvement within the sport and gaining new skills and the pursuit of health and fitness goals. This finding was observed irrespective of gender or age. In comparison to the boys, however, a positive rapport with the Tribe coach and feelings of inclusion within the Tribe sports session were more important among the girls attending the Tribe Project. The mean scores for these items were slightly higher among the 7-10 year old girls compared to the 11-14 year old girls, however. Only among the boys was the timing of the Tribe coach to the session important during their participation in the program, and this was observed irrespective of age.

Overall, the findings from the questionnaires revealed that the factors that were important whilst attending the Tribe Project were broadly similar across both gender and age, and were a combination of social, intrapersonal and interpersonal factors. Aspects

<sup>&</sup>lt;sup>5</sup> The participants attending the Tribe Project can participate in multiple sports through within the program. Participants could complete, therefore, multiple questionnaires (one for each sport they participated in). As a result, data relates to the number of completed questionnaires by age and gender, *not* the number of participants in the sample.

of the Tribe Project most important to the attendees included a positive rapport with the Tribe coach, the coach's ability within the sport, improving and gaining new skills within the sports session and maintaining fitness and health. These items had the highest mean scores for their importance whilst attending the program and this was observed irrespective of gender or age.

Scale Item	Mean (SD) Item Score (Scale Range 1 – 5)			
	7-10 y/o Girls (N = 107)	7-10 y/o Boys (N = 119)	11-14 y/o Girls (N = 46)	11-14 y/o Boys (N = 62)
The coach is good at the activity	4.66 (.78)	4.49 (.83)	4.65 (.60)	4.47 (.86)
I keep fit and healthy	4.65 (.66)	4.57 (.98)	4.59 (.62)	4.50 (.76)
I improve and gain new skills	4.62 (.61)	4.61 (.61)	4.72 (.50)	4.44 (.76)
I get on well with my coach	4.58 (.69)	4.27 (.96)	4.41 (.69)	4.34 (.75)
I have a nice, friendly coach	4.58 (.69)	4.52 (.92)	4.59 (.58)	4.52 (.80)
I feel safe when I'm at the University	4.43 (.95)	4.35 (.96)	4.37 (.93)	4.03 (1.09)
The place is clean and well looked after	4.30 (1.01)	4.12 (1.05)	4.30 (.73)	4.26 (.86)
I get on well with the other children	4.30 (.97)	4.13 (1.12)	4.30 (.84)	4.15 (.88)
I feel part of the sports club	4.28 (1.09)	4.19 (1.11)	4.22 (1.15)	4.13 (.91)
I have something to aim for, improve on	4.21 (.96)	4.07 (1.14)	4.09 (.94)	3.92 (1.06)
I feel included in the group	4.14 (1.14)	4.26 (1.05)	4.26 (.74)	3.85 (1.23)
The coach turns up on time	4.11 (1.18)	4.29 (1.17)	3.76 (1.18)	4.19 (1.13)
I am with children who are as good as me	3.97 (1.03)	3.40 (1.47)	3.76 (1.08)	3.66 (1.10)
The sessions aren't too long or too short	3.93 (1.18)	3.82 (1.31)	3.59 (1.05)	3.74 (1.23)
I see the same coach each week	3.90 (1.20)	3.49 (1.36)	3.85 (1.13)	3.56 (1.34)
I receive a reward when I do well	3.38 (1.42)	3.10 (1.50)	2.80 (1.26)	2.89 (1.53)
I can take part in competitions	3.35 (1.48)	3.71 (1.30)	3.50 (1.28)	3.66 (1.20)
I am with children of my age	3.33 (1.41)	3.18 (1.38)	3.41 (1.34)	3.60 (1.27)
I don't have to take part in competitions	3.03 (1.46)	2.90 (1.43)	3.09 (1.40)	3.05 (1.43)
I win or beat other children in group	2.77 (1.36)	2.77 (1.36)	2.30 (1.47)	2.97 (1.33)
It's close to where I live	2.49 (1.19)	2.49 (1.34)	2.26 (1.14)	2.79 (1.28)

Table 16: Mean Item Scores for the Importance of Factors whilst Attending the Tribe Project among the Children and Adolescents

### 6.4 Documentary and Observational Data

### 6.4.1 Documentation

Documentation relating to the aims and objectives of the Tribe Project was also used to assess the effectiveness of the program. A document outlining the main aims and objectives of the Tribe Project, the 'Queen's Prize Document' (Appendix L), was used. The following extract outlines the key objectives of the program:

Tribe is the University's programme of community sport. The objectives of Tribe have been to create pathways for people to follow sport from a young age and into an active future. The programme starts with mother and baby classes, progresses into Tots activities (4-7 years), Tribe activities (7-16 years), Futures (7-16 years), Academies (16-18 years) and Adult Recreation. The pathways allow, at each stage of development, routes into performance pathways and participation pathways inter-changeably. This development pathway allows people access to sporting opportunities throughout their life, contributing to a healthier lifestyle.

To build on the evidence from this documentation, an email from a Tribe manager on 18/05/2009 was also used. The email briefly outlined the three main aims of Bath University's programs of community sport, and, therefore, the Tribe Project:

- 1. Create participation pathways from 4 years to 18 years in all focus sports
- 2. To engage with the community, using students as positive role models
- 3. To provide a fun and safe environment for young people to enjoy sport

During interviews with the Tribe managers and coaches, the definition of program success was based on the number of children and adolescents attending the program, and the monetary profit gained. To assess the extent to which the Tribe Project can be deemed a success based on these criteria, a document containing the attendance records within the Project was used. A weekly schedule of the Tribe sports sessions and attendance records (Appendix M) indicated that all the Tribe sports had exceeded, or were close to exceeding, their minimum target of attendance. This working document related to the week beginning 20/04/2009 - 09/05/2009. According to this weekly attendance record, the Tribe Project successfully met its annual attendance targets across all of the Tribe sports. Based on the Tribe managers and coach's definition of success, therefore, the Tribe Project could be deemed successful.

### 6.4.2 Observational Data

#### 6.4.2.1 Measures of the Tribe Project Success

The criteria used to measure the success of the Tribe Project was assessed following a direct observation made on 31/10/2009 relating to feedback and evaluation procedures within the program. Consistent with evidence during interviews, the Tribe Project manager ascribed the participation rates within the Tribe Project as a direct indication of the program's popularity. A lack of uptake within a particular Tribe sport could lead to the removal of this session due to the assumption that there was a lack of interest on behalf of the participants. Likewise, if there were insufficient requests for a new type of Tribe sports session, the interpretation was that there was a lack of interest on the part of the attendees. This strategy was thus used as a marker of the program's success. Due to the omission of any formal evaluation procedures within the Tribe Project, the Tribe managers in part based their assessment of the Tribe Projects success on assumptions alone.

A similar observation was made on 31/10/2009. A Tribe coach implied that if they received a low number of complaints regarding their Tribe sports session, they concluded that the program was a success. Consistent with previous observational data, the lack of feedback and evaluation strategies within the Tribe Project meant the success of the program was somewhat based on assumptions, specifically relating to the frequency and negativity or positivity of the feedback that was voluntarily provided by attendees.

#### 6.4.2.2 Potential Impact of the Tribe Project

The potential impact of the Tribe Project was also assessed based on observational data collected on 23/04/2009, following a meeting with a Tribe Project manager at the onset of this research. The Tribe manager highlighted that a key advantage to the program was the comprehensive range of sports offered to the children and adolescents. Providing a broad range of activities within the Tribe Project was considered an effective strategy to promote physical activity among children and adolescents, in particular among those who may have had negative experiences of sport. The range of sports offered within the program was interpreted as meaning the potential positive impact of the Tribe Project was increased.

Likewise, the flexibility of the Tribe Project in adapting the Tribe sports sessions was also linked with the program's potential impact. Although feedback was not a formal part of the Tribe Project, it was observed on 28/10/2009 that the program could successfully respond to feedback from the attendees. During a conversation with a Tribe Project manager, it was revealed that despite the Tribe Project's target age range of 7-14 year olds, within a particular Tribe sport there was a demand for continued participation beyond 14 years old. Responding to this demand for extended participation, the decision was made to increase the age limit within this sport to beyond 14 yrs. This ensured that the adolescents could maintain participation in the Tribe sports session, and the perception was that the positive outcomes following participation were therefore sustained.

### 6.5 Data Synthesis

A combined assessment of interview, questionnaire, observational and documentary evidence revealed that the effectiveness of the Tribe Project was moderately successful overall. Table 17 shows the evidence from each of the data sources used to assess the effectiveness of the Tribe Project.

To assess the effectiveness of the Tribe Project, the impact of the program and criteria used to measure the program's success were assessed. There were neither formal outcome measures within the Tribe Project, nor evaluation strategies in place to assess the program's impact. The aims and objectives of the Tribe Project were assessed, therefore, to ascertain the degree to which these were achieved. Interview data from the Tribe managers and coaches revealed a strong convergence of evidence regarding the aims and objectives of the Tribe Project. The core aims of the program were to make sport accessible to children and adolescents, promote skill development within the sport, make sport a fun, enjoyable and positive experience and to create pathways from recreational to elite sport. There was, however, a divergence of evidence amongst the Tribe coaches. Whilst the ethos of the Project was to promote recreational sport, some of the Tribe coaches reported that the competitive sport was an important aspect of their sports sessions.

### Table 17: Synthesis of Data used to assess the Effectiveness of the Tribe Project

Data Source	Aims and Objectives	Definition of Program Success	Impact of the Tribe Project
Qualitative Data			
<ul> <li>Interviews with the Tribe Project Managers &amp; Coaches</li> </ul>	To make sport fun, accessible and a positive experience. To get children and adolescents to improve, learn new skills and progress to elite sport.	The uptake and retention of attendees and the monetary profit gained	Psychological, social and physica benefits, such as an increase in the child's confidence, sociability, skill and physical fitness level
<ul> <li>Interviews with the Tribe Project Parents</li> </ul>	Aims and objectives unclear and differed across the Tribe sports	Access to a wide range of sports and facilities, and the child's progression, enjoyment and improvement within the sport	Same as above plus a greater awareness of health and fitness and an improved understanding of team ethics and sportsmanship Potential negative impact of the mixed ages, abilities and motivations of children within the group. The absence of rewards following participation
Quantitative Data			
<ul> <li>Cross sectional survey of Tribe Project attendees</li> </ul>			Children and adolescents reported that a positive rapport with, and ability of, the Tribe coach were important to their participation.

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Data Source	Aims and Objectives	Definition of Program Success	Impact of the Tribe Project
<ul> <li>Quantitative Data</li> <li>Cross sectional survey of Tribe Project attendees</li> </ul>			Likewise, improvement within the Tribe sport, attainment of new skills, and increased health and fitness were important outcomes
<ul> <li>Documentation <ul> <li>Queen's Prize Document outlining the program aims &amp; objectives</li> <li>Email correspondence with Tribe Project manager</li> <li>A weekly schedule of the Tribe sports sessions and attendance records</li> </ul> </li> </ul>	<ol> <li>Create participation pathways from 4 years to 18 years in all focus sports.</li> <li>Engage with the community, using students as positive role models.</li> <li>Provide a fun and safe environment for young people to enjoy sport</li> </ol>		for the attendees. The Tribe Project successfully met its annual attendance targets across all of the Tribe sports.
<ul> <li>Direct Observations</li> <li>Following interviews with the Tribe managers and coaches</li> <li>Meeting with a Tribe Project manager at the onset to the research</li> </ul>		Success based on the assumed popularity of the Tribe sports sessions. Low participant rates within a Tribe sports session were perceived as an indication of disinterest on behalf of the Tribe Project attendees	The range of sports offered was perceived as a way to counteract childrens' negative experiences of sport. Increasing the age limit of a Tribe sport was perceived to influence sustained participation and promote positive outcomes.

RE-AIM dimension ratings equivalent to 1= Less successful, 2 = Moderately successful, 3 = Highly successful

This inconsistency in the program objectives was supported by evidence from the Tribe parents. Interviews with the Tribe parents revealed that the program goals were unclear and inconsistent. The different sports delivered through the Tribe Project were described as having different aims and objectives, and it was unclear how the different sports were functioning as part of one complete program. The Tribe parents recounted having no concept of what the Tribe Project was aiming to achieve in its entirety. Irrespective of this, the major strengths of the Project were consistent across all the Tribe managers, coaches and parents. Key strengths of the program included the facilities and coaching available at the University of Bath, the image of 'Team Bath' and the University, the lack of competition within BANES and the range of sports that the Tribe Project offers.

The strengths of the Tribe Project were associated with the positive outcomes following participation in the program. Consistent across all the interviews was evidence that the benefits following participation in the Tribe Project extended beyond that of purely physical activity participation. The Tribe managers, coaches and parents all described social, psychological and physical benefits of the Tribe Project. Specifically these included increased ability and skill level within the sport, improved self-confidence and sociability with other children, a greater sense of team ethics and improved knowledge of health and fitness. Consistent with evidence collected during interviews, questionnaire data revealed that aspects of the Tribe Project most important to the attendees included the improvement and acquisition of new skills and the maintenance of fitness and health. The children and adolescents attending the program also reported that a positive rapport with the Tribe coach and the coaches' ability within the sport were an important part of their attendance.

In contrast to evidence from the questionnaires, although the Tribe managers and coaches acknowledged the Tribe coaches as a key strength of the program, there was no reference to their impact on the children's and adolescents' experience of the Project. Only the Tribe parents referred to the structure of the Tribe sports sessions in the context of the program impact. Specifically, the mixed ages, abilities and motivations of the children within any one group were described as negatively affecting the children's experience of the program. Likewise, the absence of rewards within the Tribe Project was described as negatively influencing the outcomes following participation. According to the Tribe parents, the structure of the Tribe sports sessions was directly linked to the impact of the program overall.

Despite consensus on the positive outcomes following participation in the Tribe Project, the criteria for program success differed amongst participants. Consistent with the Tribe managers, some of the Tribe coaches evaluated the success of the program according to the number of participants and financial profits gained. According to documentation relating to attendance rates within the program, the Tribe Project can be deemed a success based on these criteria. Nonetheless, the Tribe coaches also referred to the children's enjoyment of the Tribe sports sessions and the retention of the attendees as criteria for program success. Amongst the Tribe parents, however, the Tribe Project was deemed successful based on the range of sports offered, and their child's improvement and enjoyment within the Tribe sports session.

Notwithstanding this consensus among the Tribe managers and coaches in terms of the positive outcomes of the program, the basis for this decision was largely based on assumptions alone. Interviewees revealed that feedback and evaluation procedures ceased to exist within the Project, and this was supported by observational data. Specifically, the Tribe parents emphasised that the effectiveness of the Tribe Project was affected by the lack of feedback measures within the program. Follow-up procedures following dropout from the Tribe Project also emerged as insufficient. Of the Tribe parents whose children had ceased participation in a Tribe sport, none had been contacted or followed up as a result. Conversely, however, the Tribe managers and coaches revealed that the feedback that had previously been received was neither valued nor viewed positively. As such, feedback and evaluation measures were not considered an important part of the program. Nonetheless, observational data highlighted that when the program reacted to the feedback received, the positive outcomes of the program were potentially increased.

### 6.6 Limitations and Recommendations

There are several limitations associated with calculating the effectiveness of the Tribe Project, as data on the program impact, including negative or unintended outcomes, were not formally recorded as part of the program. The Tribe Project did not have standardised feedback or evaluation strategies in place to assess the program impact, nor was there a formal measure of program success. The effectiveness of the Tribe Project, therefore, could not be quantified based on a specific outcome measure. To overcome this, the impact of the Tribe Project was estimated based on the extent to which the program aims and objectives were met, the strengths and weaknesses of the program and the perceived outcomes following participation.

Recommendations to increase the effectiveness of the Tribe Project would be to clarify the aims and objectives across the different Tribe sports and within the Project as a whole. Establishing clear program goals would enable the outcomes following participation in the Project to be more systematically measured. Secondly, by implementing feedback and evaluation procedures within the Tribe Project the effectiveness of the program could be assessed based on the extent to which the program aims have been achieved. Implementing such strategies may increase the effectiveness of the Tribe Project among the attendees, and provide a more systematic way of quantifying the impact of the program overall.

### 6.7 Summary of Effectiveness

In this chapter, multiple sources of data have been used to assess the effectiveness of the Tribe Project. Overall, the program was moderately effective, having a perceived positive impact on the children and adolescents who attended. The majority of the program's aims and objectives were met, and the criteria for the program success were achieved. The lack of clarity on the programs aims and objectives, coupled with the absence of formal feedback and evaluation procedures, meant assessment of the Tribe Project's impact on the attendees was restricted. Irrespective of this, there was no evidence of a negative impact following participation in the program, and a combination of social, psychological and physical benefits were reported. Based on evidence from the three data sources, the Tribe Project was moderately effective overall. The following chapter presents data accounting for the adoption of the Tribe Project based on archival records, interview, questionnaire and documentary/observational data.

# **CHAPTER 7: ADOPTION**

### 7.1 Introduction

In this chapter, the quantitative and qualitative data used to assess the adoption of the Tribe Project is presented. *Adoption* refers to the absolute number, proportion and representativeness of settings and intervention agents who are willing to initiate a program (Glasgow et al., 1999). Within the RE-AIM framework, adoption is measured at the organisational level. The aim is to assess how different settings or program agents adopt the intervention based on differing resources, level of expertise and commitment to the program. If differences do occur, the program has been differentially adopted (Glasgow et al., 1999). The adoption rate of the Tribe Project was assessed based on two measures. Firstly, the extent to which the sports delivered through the program adhered to the core Tribe Project principles, and secondly, the proportion of schools and organisations within BANES that had established links with the program. Based on these criteria, the adoption rate of the Tribe Project was calculated using data from interviews with the Tribe managers, coaches and parents, documentary and observational data. The results following these data collections are presented below.

### 7.2 Bath and North East Somerset School Census Data

Bath and North East Somerset School census data were used to assess the adoption rate of the Tribe Project. Firstly, the proportion of schools within BANES that the Tribe Project delivered sports sessions to, and secondly, the proportion of schools within BANES with which the Tribe Project had established links. Links between the Tribe Project and the community included holiday camps, hosting of sports festivals and the Key Stage 3 games.

Bath and North East Somerset School census data (October 2009) (Appendix K) recorded that in total there were 82 schools within BANES, 63 Primary schools and 19 Secondary schools. The Tribe Project delivered sports coaching to 30 of the 82 schools within BANES: 26 Primary schools and 4 Secondary schools. The Tribe Project coaching was adopted, therefore, by 37% of the total number of schools within BANES. Of these, the Tribe Project coaching was delivered to 41% of the total Primary schools and 21% of the total Secondary schools within BANES.

The Tribe Project had established links with 78 of the 82 schools within BANES: 60 Primary schools and 18 Secondary schools. The Tribe Project had established links, therefore, with 95% of the total number of schools within BANES, and this adoption rate was consistent across both Primary and Secondary schools.

### 7.3 Qualitative Data

#### 7.3.1 Interviews with the Tribe Project Managers, Coaches and Parents

Interviews with the Tribe Project managers, coaches and parents revealed two key themes accounting for the adoption of the Tribe Project. These included the adoption rate of the Tribe Project across the Tribe sports, and the adoption rate of the Tribe Project within BANES (Appendix R). This accounted for the setting-level adoption of the Tribe Project and the community-level adoption of the Tribe Project. Evidence to account for these themes is presented below.

#### 7.3.1.1 Adoption Rate of the Tribe Project at the Setting Level

The setting-level adoption of the Tribe Project was described only by the Tribe coaches and parents. Adherence to the Tribe Project principles across the Tribe sports was described less favourably, nonetheless. Consistent across all the Tribe coaches and parents was evidence that the sports delivered through the program ran independently from one another. The Tribe parents described the Tribe Project as having little unity as a whole, and that the Tribe sports adhered differentially to the program principles:

"I didn't feel it [the Tribe Project] was joined up...so it's kind of presented as joined up, but actually when you got there...it wasn't...and I didn't think that was very professional." (P12)

Because there's no continuity, you wouldn't know that...no you wouldn't know that they are operating all under the same umbrella...because payments are different, the way you're sort of contacted is different. Well if it's all gonna be under Tribe then essentially they should have the same format. (P13)

The Tribe coaches, in particular, indicated that they deliver their sports sessions independently from the rest of the Tribe Project. The coaches referred to the fact that

they consider their Tribe sports sessions as self-run and in isolation from the rest of the program:

Well I think we're all ignorant in our own little way...I think I'm ignorant in the fact that I don't actually know what they're [other Tribe coaches] doing everyday. I don't know how they run their programs...Ok I might see a bit going on, on the sports field or whatever, but I don't...I don't know anything about what they're doing or their programs and how I could interlink it to mine. I mean I don't see any real negative points with the Tribe, like I can see the idea and where they're trying to get to...um...but I don't think we're gonna get to it doing what we're doing now. I think we're too individual. (C5)

"If I'm being totally honest I don't really have anything to do with Tribe...I almost want to be seen as our own identity and part of Team Bath [name of sport] rather than Tribe." (C6)

The lack of unity between the Tribe sports was recognised as having a negative impact on the implementation of the program. Creating consistency across the different Tribe sports was described as a challenge; however, the need for increased unity within the program was recognised:

I think it would definitely be good [to create more unity]...I think it would be a good thing...but I don't know how you would make it work. Because even [name of Tribe manager] as hard as [name of Tribe manager] works and everything [name of Tribe manager] still doesn't understand [name of sport] and the program that I'm running. Its just a bit...a bit weird to get shoved in under an umbrella that you're not really, got any part of and I don't know anything about Tribe. And to be fair the other thing is I haven't got time to learn about it either, and they haven't got time to learn about [name of sport]...so...its just...basically we're under Tribe but we're still all running very separately. (C5)

#### 7.3.1.2 Adoption Rate of the Tribe Project at the Community Level

Despite evidence from the Tribe parents relating to the setting-level adoption, only the Tribe managers and coaches described the community-level adoption of the program. The adoption rate of the Tribe Project within BANES was consistently described by the Tribe managers as highly successful overall. The most successful links, in particular, related to the delivery of the Tribe sports sessions within the local schools:

Most schools in the BANES area we work with on a regular basis, um either they sort of come in and have multi-skilled days here, where a bunch of our coaches will work with throughout sort of the 10 - 3 day. Or we send coaches out for after-school clubs, most days of the week we have coaches at various schools doing after-school clubs for various activities. (M2)

"We have about now eight sports that will rotate round the school clusters. So our programs actually work with every single primary school in Bath and every single secondary school in Bath to some degree." (M1)

Irrespective of this, both the Tribe managers and coaches acknowledged that there were some challenges associated with linking the Tribe Project to organisations within the community. The limited availability of clubs within BANES led some of the Tribe coaches to conclude that the adoption rate of the Tribe Project within BANES was negatively affected:

"And you can just imagine once they've moved on [from the Tribe Project] they won't do anything...except like a few of them...maybe a few of them will do it at school but, most of them wouldn't...I can't offer them anything recreational [after the Tribe Project] 'cos there isn't anything. So they've just got to go into a team really. But like I said it's all about [name of a sports club in BANES], and we don't have a very good link." (C4)

The Tribe managers and coaches both inferred, however, that there were further difficulties associated with the adoption of the Tribe Project within the school system. Such challenges included time and cost constraints, the presence of other, free, physical activity programs within the school system and the attitude of the schools towards the delivery of sport through the Tribe Project:

There are so many programs that go into schools that are free, that we will...that are free to the schools, so the schools don't have to pay anything for them. So if we go and create a link for a school and ask for funding from the school, quite often they'll say 'Well we won't go with you, we'll wait until our program comes round to us next term, when we'll get our free coaching'. We might still be delivering that free coaching, because we're in that partnership, but for the school, they've not had to pay anything out. (M1)

Specifically the Tribe coaches related the challenges of program adoption to the practicalities of implementing the Tribe Project within schools. This included the mixed motivations of the schoolchildren, the inadequate sports facilities available at the schools and difficulties creating an enjoyable experience of the sport. Restrictions such as group size and the lack of discipline within schools limited the Tribe coaches' ability to deliver the sports sessions effectively:

I could go to a secondary school and they're doing, it's meant to be a [name of sport] session, none of them want to do it, they don't know why they've been put there, why this session is on, they have enough PE lessons anyway normally and they've got PE teachers. So they've already got people who should be able to take our school sessions anyway. So that's when I'm a bit...sometimes in secondary schools I'm like 'Yeah what's the point you don't have the interest'. (C4)

"When they start playing up you can't really focus on getting them to do things and getting them to improve [because of discipline], so I think that kind of erm ruins the experience of [name of sport] a bit and may affect the participation." (C8)

Overall, the Tribe coaches and parents described the adoption of the Tribe Project at the setting level as less successful. The extent to which the Tribe sports adhered to the core aims and objectives of the program varied. Both the Tribe coaches and parents inferred that the Tribe Project lacked unity, and the sports were consequently implemented inconsistently. At the community level, the rate of adoption was described by the Tribe managers and coaches as highly successful. Within BANES, the rate of adoption was more successful, as the Tribe Project had established multiple links within the community. The Tribe managers and coaches recognised the barriers to adoption within the community, and this was attributed to challenges associated with the successful delivery of Tribe coaching within schools. What follows is documentary and observational data to further assess the adoption rate of the Tribe Project.

### 7.4 Documentary and Observational Data

### 7.4.1 Documentation

Documentary evidence was used specifically to assess the adoption rate of the Tribe Project within the community. This was assessed according to the partnerships created between the Tribe Project and the local community, and the adoption of Tribe coaching within local schools. Two key documents were used: firstly, a report outlining the aims of the Tribe Project and the University of Bath, along with the community links that had been established (Appendix L), and secondly, two online adverts promoting the delivery of sport within local schools 'Opportunities for Schools yrs 1-6' and 'Opportunities for Schools yrs 7-13' (Appendix Q).

#### 7.4.1.1 Partnerships Created between the Tribe Project and the Community

The 'Queen's Prize Document' (Appendix L) outlined the core aims of the University of Bath regarding community-based sports participation. The document highlighted that community projects are essential to promote sport within the community. What follows are extracts from this document:

The University's objective is to bring sport to the community either by visiting schools, clubs, social groups or by transporting groups to the University and hosting events to encourage the community into sport and physical exercise.

The community level adoption of the Tribe Project was further assessed based on evidence that the number of interactions between the Tribe Project and the community had increased since the program's launch in 2003:

The University based programme within the holidays has increased this year to over 3,000 interactions on a programme offering more choice of sports and allowing families to participate together.

The University has organised and hosted a gifted and talented programme that has supported the local school sports partnership and supported links between state and independent schools within BANES providing opportunities for their pupils to participate together. Likewise, the document also reported the well-established pathways, links and relations between the University of Bath and the local community:

The University hosts out-of-term time activities for children to participate in and during term time hosts a wide range of activities working with multiple partners including local education authority, the school sports partnership, youth sports trust, county sports partnership, British Olympic Foundation and National Governing Bodies. The University hosts several national programmes each year including the Toplink Festival, Step into Sport Volunteers Festival and the Olympic Day Run.

Furthermore, the document highlighted the numerous partnerships that had been created since the Tribe Project was developed. These partnerships promoted access to the program and were described within the document as having a significant impact within the community:

Tribe has created excellent partnership links with the local authority, county sports partnership and the school sports partnership, which has enabled it to have a huge impact on the local community bringing role models, inspiration, ambition and accessibility to the community groups of BANES and surrounding areas.

The report also documented the major strengths of the links between the Tribe Project and the local BANES schools, and the volume of interactions between that have been created as a result:

[There has been a] delivery of activities to over 80% of Primary schools in BANES, to a large number of primary school in Wiltshire and North Somerset. This has resulted in over 30,000 interactions with young people in the past school year and over 50 schools per week visited by the Tribe programme.

The University sends coaches to schools to deliver sport within curriculum time, breakfast, lunch, and after-school clubs. The programme employs young student coaches who are wonderful role models, enthusiastic and unique communicators with young people. These role models visit local schools and groups to speak to young people, open fetes, work with gifted and talented pupils, young offenders and other local authority groups. Further documents used to assess the community-level adoption of the Tribe Project included online adverts promoting the delivery of sport within local schools (Appendix Q). These adverts promoted the opportunities for local schools to experience some of the facilities and coaching available at the University of Bath:

We would like to invite your school to experience some of the facilities and top level coaching available at the University. The day will consist of activities tailored to the students' needs depending on the curriculum, time of year and the needs of the group as a whole.

These documents advertised that for school years 1-6 (children aged 5-10 years), the activities included Key Stage 1 festivals, multi-skills academy, multi-skills assessments, generic sports visits and gifted and talented support days. For school years 7-13 (children and adolescents aged 11-17 years), activities included tailored educational visits, sports laboratory testing, gifted and talented support days, GCSE/A-level revision days and sports team enrichment days.

#### 7.4.2 Observational Data

#### 7.4.2.1 Adoption of Tribe Project at the Setting Level

Adoption of the Tribe Project principles across the different Tribe sports was further assessed using observational data. It was observed during the qualitative data collection phase (01/10/2009 - 30/11/2009) that certain Tribe coaches were more reluctant to participate in an interview than were others. Specific Tribe coaches stated that they did not feel they could contribute to this research as they had minimal knowledge of the Tribe Project. Despite the fact that such individuals were head coaches within the Tribe Project, they did not feel part of the Tribe Project. Consistent with evidence from interviews with the Tribe coaches and parents, the sports within the Project appeared to function independently of the core program. The observation that some of the Tribe coaches felt unable to provide information on a program that they delivered highlights the potentially inconsistent adoption of the Tribe Project as a whole.

The extent to which the Tribe sports adhered to the Tribe Project principles was also observed at the onset of this case study (31/03/2009). It was observed by the author that it was extremely difficult to fully comprehend the structure, organisation and

hierarchy within the Tribe Project. It became apparent that some of the Tribe sports were implemented in direct communication with the Tribe Project managers. Nonetheless, some Tribe sports sessions were delivered according to the head Tribe coaches, without any direct consultation with the Tribe managers. A second observation to support this was made on 01/03/2010. Despite the advertising of the Tribe sports as operating under one main governing body, the Tribe Project, it was apparent that certain Tribe sports were implemented based on their own rules, delivery methods and targets. Irrespective of the Tribe Project's core aims and objectives, the Tribe sports adhered to these to varying degrees. In support of interviews with the Tribe coaches and parents, the Tribe Project appeared disjointed as a complete program, with the Tribe sports appearing to have adopted the Tribe Project principles inconsistently.

### 7.5 Data Synthesis

A combined assessment of interview, observational and documentary data revealed that the adoption rate of the Tribe Project within the community was highly successful, whereas it was less successful at the setting level. Table 18 shows the evidence from each data source used to assess the adoption rate of the Tribe Project.

Records of the number of organisations within BANES that had been approached to adopt the Tribe Project were unavailable. Nor was there any information relating to the representative of organisations who had adopted the program and those who had declined. To assess the adoption rate of the Tribe Project, therefore, two key measures were used. Firstly, the extent to which the sports delivered through the program had adopted the core Tribe Project principles, and secondly, the proportion of schools and organisations within BANES that had established links with the Tribe Project.

In terms of the adoption of the Tribe Project principles across the different Tribe sports, there was a consensus amongst all of the Tribe coaches and parents that the sports were self-run and lacked unity within the Project as a whole. There was little consistency in the planning, structure and delivery of different Tribe sports, which meant the Tribe Project principles were not adopted uniformly. The Tribe parents specifically referred to having no concept of the Tribe Project as a unified program of sport. Although the potential difficulties of creating increased unity within the Project were recognised, the Tribe coaches and parents indicated that improved cohesion between the Tribe sports was important to the implementation of the Tribe sports sessions. The adoption rate of the Tribe Project at the setting level was less successful as a result.

### Table 18: Synthesis of Data used to assess the Adoption of the Tribe Project

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### **RE-AIM Component - ADOPTION**

The absolute number, proportion, and representativeness of settings and intervention agents who are willing to initiate a program

Data Source	Number of Settings Initiating the Tribe Project	Proportion of Settings Initiating the Tribe Project	Representativeness of Program Settings
Archival Records			
<ul> <li>Bath &amp; North East Somerset School census data</li> </ul>	There were 82 schools in BANES, 63 Primary and 19 Secondary schools.	Tribe Project coaching was adopted by 37% of the total schools in BANES, 41% of Primary and 21% of Secondary	
	Tribe coaching was delivered to 30 schools in total, 26 Primary	schools.	
	and 4 Secondary schools.	The Tribe Project had established links with 95% of all	
	The Tribe Project had established links with 78 schools in total, 60 Primary and 18 Secondary schools.	the Primary and Secondary schools within BANES	
Qualitative Data			
<ul> <li>Interviews with the Tribe Project Managers, Coaches &amp; Parents</li> </ul>	At the setting level adoption of the program's principles were varied across the Tribe sports. Not all the Tribe sports adopted the program	At the community-level, 100% of the schools within BANES were described as linked with the Project	Schools with limited facilities and a lack of funding were less likely to adopt the Tribe coaching.
	At the community level, every school within BANES was described as being linked with the Tribe Project		Barriers to included mixed motivations of children, large group sizes and a lack of discipline in the session.

Data Source	Number of Settings Initiating the Tribe Project	Proportion of Settings Initiating the Tribe Project	Representativeness of Program Settings
<ul> <li>Documentation</li> <li>Queen's Prize Document outlining the program aims, objectives &amp; community links</li> <li>Two online adverts promoting the delivery of sport within local schools</li> </ul>	More than 3000 interactions were had between the Tribe Project and community organisations since the program's launch in 2003. Tribe Project had over 30,000 interactions with young people in BANES during 1 year, and visited over 50 schools a week.	The program was linked to over 80% of Primary schools within BANES.	Adverts for the opportunities for schools in BANES to interact with the Tribe Project were not restricted to specific organisations.
<ul> <li>Direct Observations</li> <li>Following interviews with the Tribe managers and coaches</li> <li>Observations during the course of the research</li> </ul>			Understanding the structure of the program was challenging due to inconsistencies in the Tribe sports' adherence to the Tribe Project The Tribe sports were advertised as part of a larger program, yet adoption of the Tribe Project across the Tribe sports was varied
Rating of ADOPTION	Community-level: 3 (Highly succ Setting-level: 1 (Less succe		

RE-AIM dimension ratings equivalent to 1= Less successful, 2 = Moderately successful, 3 = Highly successful

Unlike the setting level adoption, the Tribe Project was adopted far more successfully within the community. There was a consensus among the Tribe managers and coaches that the Tribe Project had established various links within the community, and the Project had an active role delivering sports sessions to local schools. This was supported by documentary evidence highlighting the increase in community-based interactions with the University, and by Bath and North East Somerset School census data. This archival record revealed that, of the 82 schools within BANES, the Tribe Project delivered sports coaching to 30 of these schools: 26 Primary schools and 4 Secondary schools. The Tribe Project coaching had been adopted, therefore, by 37% of the total number of schools within BANES. Likewise, the Tribe Project had established links with 78 of the 82 schools within BANES, which is 95% of the schools.

The barriers associated with the adoption of the Tribe Project were acknowledged, nonetheless. The Tribe managers described the structure of the schools funding system and the cost of implementing the Tribe coaching as a major barrier to adoption among certain schools. The Tribe coaches also referred to the challenges associated with the delivery of Tribe Project coaching within schools. These were directly related to the mixed motivations of the schoolchildren, difficulties with discipline, large group sizes and inadequate sports facilities. The Tribe coaches indicated that these barriers prevented the children from gaining a 'real' experience of the Tribe sport, potentially limiting uptake in the Project as a result. Despite such challenges, the adoption rate of the Tribe Project within the community was highly successful overall.

### 7.6 Limitations and Recommendations

There are several limitations associated with calculating the adoption rate of the Tribe Project. Data on the number of organisations who were approached by the Tribe Project, and those who declined uptake of the program, was not recorded within the Project. Information relating to the characteristics of organisations that chose to, and chose not to, deliver the Tribe sports coaching was also limited. Knowledge of the proportion of schools approached for inclusion in the Tribe Project, yet had declined would enhance the evaluation of the Project. The generalisability of the Tribe Project, and barriers to its potential implementation in various settings, would also be increased. The adoption rate of the Tribe Project, therefore, could not be quantified based on this community level data. To overcome this, the adoption rate of the Tribe Project was estimated based on the extent to which the Tribe sports adhered to the program.

principles, and on the proportion of schools and organisations within BANES that had established links with the program.

Recommendations to increase the adoption rate of the Tribe Project would be to maintain a record of the organisations within BANES that had chosen to, and not chosen to, adopt the Tribe Project. This includes data on the shared characteristics of these organisations. This would enable the adoption of the Project within the community to be evaluated, and barriers to its successful implementation to be identified. Secondly, to increase adherence to the Tribe Project principles among the different Tribe sports, the core aims and objectives of the Project need to be clarified. Establishing clear program goals and communicating these effectively among the Tribe coaches would promote unity within the Project. This would increase the consistent delivery of the sports sessions and improve individuals' experience of the program. Inevitably, a clearer and more consistent image and delivery of the Tribe Project may be created as a whole.

## 7.7 Summary of Adoption

In this chapter, multiple sources of data have been used to assess the adoption of the Tribe Project across the different Tribe sports and within the BANES community. Overall, the adoption rate of the Tribe Project was highly successful, due to having established links with 95% of the schools within BANES. Barriers to the adoption of the Tribe Project within the community were identified, and these predominantly related to the practicalities of delivering Tribe coaching within schools. Nonetheless, the Tribe Project was adopted within a large proportion of the schools in BANES. The adoption of the Tribe Project principles across the different Tribe sports, however, was less successful. The Tribe sports adopted the program's aims and objectives to varying degrees, and the program overall consequently lacked unity and cohesion. The differing adoption rates of the Tribe Project across the Tribe sports potentially had a negative influence on individuals' experience of the program. Based on evidence from these data sources, the adoption rate of the Tribe Project at the community-level was highly successful, whereas, the adoption rate of the Tribe Project at the setting-level was less successful. The following chapter presents data accounting for the implementation of the Tribe Project based on interview, questionnaire and observational data.

# **CHAPTER 8: IMPLEMENTATION**

### 8.1 Introduction

In this chapter, the quantitative and qualitative data used to assess the implementation of the Tribe Project is presented. *Implementation* refers to the extent that different components of an intervention are delivered as intended by the program developers (Glasgow et al., 1999). Implementation is also concerned with the consistency of intervention delivery across different staff, the program costs and the extent to which the program is modified or adapted over time (Glasgow et al., 1999). Within the RE-AIM framework, implementation is measured at the organisational level. The implementation of the Tribe Project was assessed based on the extent to which the Tribe sports sessions were delivered consistently, and as intended, by the Tribe managers. To assess this, data from interviews with the Tribe managers, coaches and parents, questionnaires from the children and adolescents attending the Tribe Project and observational data were used. The results following these data collections are presented below.

### 8.2 Qualitative Data

#### 8.2.1 Interviews with the Tribe Project Managers and Coaches

Interviews with the Tribe Project managers and coaches revealed three key themes accounting for the implementation of the Tribe Project. These included the delivery of the Tribe sports sessions, communication within the program and the roles and responsibilities within the program (Appendix R). Evidence to account for these themes is presented below.

#### 8.2.1.1 Delivery of the Tribe Sports Sessions

The implementation of the Tribe Project was referred to by all participants in the context of the Tribe sports sessions delivery, and the organisation of the Tribe coaches. There was a convergence of evidence among the Tribe managers and coaches that the organisation of the Tribe coaches was poor, and there was a lack of consistency in their coaching. The Tribe managers attributed this lack of consistency to the students who delivered the Tribe sports sessions: The main challenges are that we have a student body of coaches, so although they are brilliant...they are still students, they are still here to have fun, go out and all the rest of it. So 1. We have a high turnover so every year a load will go but then we get another load back in. So it's almost like you're forever training a team of coaches to get them to the way you want them...and then they go. (M3)

The limitations of employing students to deliver the Tribe Project were also described in the context of the overall implementation of the program. Specifically, the Tribe managers referred to challenges associated with the University and school term times:

The timings of the University academic year don't match what the schools years. So the schools start in the first week of September and sometimes our students won't arrive till the second week in October. So we have a period at the start of the year and at the end of the year because the students leave in June, schools don't finish till the end of July, where our capacity to deliver diminishes largely. (M1)

Both the Tribe managers and coaches did refer to the differing motivations and abilities of the Tribe coaches that deliver the Tribe sports sessions. There was an acknowledgement that these differences were inevitable, yet could negatively affect the implementation of the program:

"Students, they sometimes are, 'Ahh I can't really be bothered,' and, or, 'I've got this, this just popped up and...' and that makes it very difficult to manage and you know, coaching." (C10)

Our weakness is with using students are, that potentially the loyalty is not as high because there will be exam times, there will be essay deadlines, there will be so many things that can potentially cause them to say 'I don't want to work today because there is something more important in my life'....from the coaches you'll get the full spectrum, some people who will completely understand what you're trying to do, they'll say yeah I work with the same group week in, week out, I take them to this. But then you'll get the coach that goes, I do it for the money...and we understand their different motivations. (M1)

Only the Tribe coaches, however, attributed the weak organisation of the Tribe coaches to the Tribe managers themselves. The poor communication and organisation within the

Tribe Project negatively affected the implementation of the program, in particular the implementation of the program within the community:

I think the kids who are in it, it works well for them, you know it's good...everything like that, but like we said the organisation needs to be better, like getting a text an hour before a session's ridiculous. 'Cos like...even the best of you can't plan a session and do it well, which means then you go to the school, you're the one that feels bad. Or another thing, like you get a text saying be there at 3.15, it started at 3...it's like I get it in the neck for being late yet that's what I've been told. (C4)

Limitations to the implementation of the Tribe Project were attributed, by some Tribe coaches, to their lack of training and expertise in delivering certain Tribe sports sessions:

"They've tried to send me on them [other Tribe sports sessions], various things as well, I've just had to say, 'sorry I'm not really qualified, I don't know what I'll be doing." (C8)

I think there should be more training because I've been sent to [name of sport] places, I have no training on how to do [name of sport] so you just kind of wing it and hope for the best so... And erm I do kids parties as well which I know isn't that similar but I've been sent to do a [name of sport] party and I have no idea what to do, and so I think the fact that I've not been prepped, and I've never done these kind of things before could affect the kids experience of err these sessions... (C9)

Nonetheless, the Tribe managers did acknowledge that there was a need for structure and planning within the Tribe Project. The Tribe managers inferred that successful implementation of the Tribe Project was partly a result of delivering a sports session that can be sustained within the program:

Before we agree a session we always make sure that we know we've got timescales. So if we say we can come and deliver four terms with this coach guaranteed. If we can't, we won't accept to be able to deliver...And we've always been quite...cautious about initiating experience for children that really inspires them, and then telling them there's nothing to it and you can't go anywhere. (M1)

#### 8.2.1.2 Communication within the Tribe Project

There was a consensus amongst both the Tribe managers and coaches that communication within the Tribe Project was lacking. The Tribe coaches inferred that the poor communication between the Tribe coaches and managers was detrimental to the successful delivery of the Tribe sports sessions:

There's not really much sort of communication about the wider picture, you just do your little err bit and err that's about it... [The Tribe Project needs] just some sort of link up between us and them sort of thing, it seems to be all like a text message here and a text message there, and there's no real sort of, it's not like a real job. (C8)

"As a program for kids we've not been told that we should have personal aims...we've never been told by anyone that this is what we should be doing, this is what we should be aiming for." (C4)

Specifically the Tribe coaches described the lack of communication within the Tribe Project as demonstrating a lack of interest on the part of the Tribe managers:

"I think within this environment, if I wasn't, if like I just turn up and kind of sit there at the side and not give a monkeys and no one would know about it." (C9)

"[name of Tribe manager] and [name of Tribe manager] came and watched us once and we had to do an evaluation of our coaching session....ONCE. And I've been doing it for 3 years now, it's been once." (C4)

Despite limitations in communication within the Tribe Project, both the Tribe coaches and managers did suggest, however, that improved communication and planning within the Tribe Project was important for the effective implementation of the Tribe sports sessions:

I think that would be really beneficial to have some, even if it's just a fortnightly 15 minute meeting with [the Tribe Project managers] just to go, if they can sort of say, 'yeah we're gonna try and do this and help promote your club...I think you have to extrapolate any information you want from [the Tribe managers], have to drag it out. (C8)

### 8.2.1.3 Roles and Responsibilities within the Tribe Project

The roles and responsibilities within the Tribe Project were also described in the context of the implementation of the program. There was a consensus amongst the Tribe coaches that promotion of the Tribe Project was the Tribe management's responsibility. There was further agreement that there was not enough guidance on the delivery of the sports sessions, and that the Tribe managers should be responsible for ensuring the program was delivered as intended:

I've had problems with coaches turning up late, and then looked to [the Tribe Project managers] to sort it out and they've not sorted it out....There's not enough guidance for these coaches. They get them in because they're qualified, but like I said it doesn't necessarily mean they're good or they know what they're doing, and that definitely needs to be sorted out. (C4)

I think it needs to be either an equal responsibility or they [the Tribe Project managers] need to be placing more responsibility on us and saying 'you need to have these sessions planned, know what you're doing kind of thing'. It's SO unstructured in that kind of sense. (C4)

Consistent with this, the Tribe managers outlined their inability to be fully aware of the implementation of the Tribe Project. The Tribe managers relied on the Tribe coaches to deliver the sessions effectively as a result:

It is common knowledge that unless somebody tells you, a lot of time you don't know. Because I'm...I don't really see the courses because I'm office based and I don't work at weekends, I very rarely see the courses when they are running um so all I know is what the coaches tell me and what the parents tell me. Now if I don't hear anything then the only thing I can do is to assume that everything is fine. (M2)

We put quite a lot of faith in our coaches to run the sessions, so I don't have to be at every single session all week long....I rely on my coaches to be...almost take responsibility for their session...um...they have the registers, they have the enrolment forms, they should have all of those things that allow them to answer questions. (M3) Overall, there was a consensus amongst the Tribe managers and coaches that the delivery of the Tribe sports sessions varied within the Project. The unreliability of the student coaches delivering the sports sessions meant implementation of the Tribe Project was inconsistent, and the sports sessions lacked consistent aims and objectives. The Tribe coaches specifically referred to the different levels of structure, planning, expertise and objectives across the sports within the program. Communication within the Tribe Project was seen as being somewhat responsible for the inconsistent delivery of the Tribe sports sessions, and it was acknowledged by all participants that this could be improved. Effective communication within the Tribe Project was considered essential for consistent and effective implementation of the program. Without having clearly identified the roles and responsibilities within the program, it was unclear who ensured the Tribe Project was delivered as intended. The implementation of the Tribe Project was negatively affected as a result. To further assess the implementation of the program, interviews were conducted with the parents whose children attended the Tribe Project. The data from these interviews follows.

#### 8.2.2 Interviews with the Tribe Project Parents

Interviews with the Tribe Project parents revealed three key themes accounting for the implementation of the Tribe Project (Appendix R). Consistent with the Tribe managers and coaches, themes included the delivery of the Tribe sports sessions and the roles and responsibilities within the Project. Unlike the Tribe managers and coaches, however, the Tribe parents also described their 'concept' of the Tribe Project as a program to promote physical activity.

#### 8.2.2.1 Delivery of the Tribe Sports Sessions

Consistent with the Tribe managers and coaches, there was a convergence of evidence among the Tribe parents relating to the unreliability of the Tribe coaches. Tribe parents described a lack of consistency in the coaches delivering the Tribe sports sessions:

"I think that's one of the main things I feel is that the coaches do tend to change, they haven't changed for quite a while have they, but before there was like one coach per term or whatever..." (P16) "It felt like as a consumer, for want of a better expression, that whoever happened to be around...there was no continuity I mean we didn't even get to know their [the Tribe coaches] names." (P14)

This inconsistency was further related to the differing motivations of the Tribe coaches. In particular, the Tribe parents described the differing motivations and expertise of the Tribe coaches as influencing the delivery of the Tribe sports sessions:

"Um...I've noticed a big difference between the events where you've got coaches and the events where...I suppose it might be its more childcare you've got." (P12)

"With the [name of sport] and the [name of sport], they're proper coaches and they're teaching technique. Whereas [name of sport]...um...I wouldn't say unqualified people but probably not coach level." (P12)

Although having acknowledged the unreliability of the Tribe coaches, the Tribe parents did suggest that the management of the Tribe Project was also weak. The program was described as being implemented unprofessionally, lacking structure and organisation:

Certainly from a parent's perspective if you take your child to attend a course, you expect a sort of reasonably professional signing in sheet and that sort of thing, and certainly our experiences have been that sometimes the sheet's just not available...um but you know, that really doesn't instil confidence... I think anybody new would think 'ooh, this isn't a very professional...um I'm entrusting my children, and you know I'm really not convinced that it's organised in the way it should be. (P11)

Likewise, the inconsistent delivery of the Tribe sports sessions meant the aims and objectives of the Tribe sports sessions were unclear, and varied across the different sports:

"As a parent I'm going, ok so what...what are we trying to achieve in this 12 week session? What are the objectives, what are we trying to achieve? Kind of very basic stuff..." (P14)

Is it participation as in healthy living? Or is it about being competitive and bringing them on to being competitive?... Maybe it differs for different sports, I

mean it might be that with [name of sport] they're very keen to you know, build into the competitive edge and they're not about recreational sport...and that would just be nice to know, you know maybe...the [name of sport] are about recreational sport, and maybe something like [name of sport] is about teaching them. (P17)

There was further consensus among the Tribe parents that the Tribe sports sessions lacked a clear structure or careful planning:

"I just think if it was a lot more structured and straightforward it would be better...for everybody...for the kids, for the coaches, for us, for everybody." (P20)

"You know sometimes you get the feeling it's a bit too freeform you know, you know 'ok kids what do we want to do today?' Whereas actually...you know I as a parent would prefer to see more structure...I think that, that would give it a more...sort of professional appearance." (P11)

One Tribe parent in particular emphasised that the unstructured delivery of the Tribe sports sessions could negatively affect the children's experiences of the program:

My personal belief is I think they need structured activity, I think they get more from it...I think unstructured activity...there's too much scope for them for them to choose whether to engage or not... You know and we've seen that before...you know it's a shame then, particularly if your child is there because you know they have a level of motivation and then other children are there, not because they want to be but neither...is there enough structure to keep them from being engaged throughout. (P11)

### 8.2.2.2 Communication within the Tribe Project

The implementation of the Tribe Project was also described in the context of communication within the program. There was a consensus amongst the Tribe parents that communication with the Tribe Project managers was poor. The Tribe parents described feeling unimportant, and that communication was essential for effective implementation of the program:

"Communication could probably be improved as well...I think...sometimes when we have moved [location of the sports session], you know we find out kind of...its more about our network working, I try to find out from other parents where we're going." (P14)

"It does feel as though we're a bit sort of...we'll slot in wherever...seems as though we're kind of peripheral to everything." (P13)

Consistent with the Tribe managers and coaches, the roles and responsibilities of the Tribe managers and coaches were unclear to the Tribe parents. This lack of clarity within the program was considered detrimental to its implementation:

"I think it would be nice if you had something saying you know, these are your coaches...you coaches this week will be....um, and the names and a little bit about what they're doing." (P11)

We wouldn't know would we if we'd seen them [Tribe managers]...but um so I emailed, I actually emailed [name of Tribe manager] to express my unhappiness with certain things, and [name of Tribe manager] forwarded it to [name of another Tribe manager]. I didn't know who [this Tribe manager] was...I thought [name of Tribe manager] and [name of Tribe manager] run it whoever they are... (P20)

### 8.2.2.3 'Concept' of the Tribe Project

Unlike the Tribe managers and coaches, only the Tribe parents emphasised that they felt confused as to what the Tribe Project 'meant'. Specifically, the Tribe parents had no concept of what the program was aiming to achieve based on the inconsistent implementation of the Tribe sports sessions:

I'm still unclear as to what...what the major focus of Tribe is. It's because of the different ones [Tribe sports] that he's been involved with, it's difficult to know whether it's about...it's about sort of participation and it really doesn't matter how well they do, so its shear healthiness or whether they are also trying to bring people though. Like I say, sometimes I think the way they've got it set up they potentially could lose people along the way with that. (P17)

"I'm not aware of other Tribe stuff, I'm not aware of the overall, I don't have a concept of Tribe as an overall, as a...thing...just individual bits which we delve in and out of." (P14)

This was reiterated amongst participants as they described having little clarity regarding the Team Bath and Tribe Project branding:

"I think if we hadn't had a Tribe prefix...I'm not sort of loyal to Tribe it's not a brand or something that has any meaning to me....Sometimes the whole Tribal branding thing is more to do with the organisation rather than the consumers of it." (P14)

"[The Tribe Project needs] just a clearer sort of brand, but a clearer what's under that brand and a clearer maybe mission of what they're trying to achieve...I think generally the Team Bath logo...it's the same thing [as 'Tribe'], what is it?" (P17)

One Tribe parent in particular described having almost no awareness of the other sports delivered through the Tribe Project. The confusing brand image of the program, and the inconsistent implementation of the Tribe sports sessions meant they had little concept of the Tribe Project as a complete program:

The other thing is, it's not clear sometimes what comes under Tribe...you know I'm not 100%, if you sort of said to me is there something where I'd go under Tribe, that's hockey, badminton, der, der, der, der, der...I don't actually know that. And I think that might be something that would be really good as a kind of marketing thing at some stage. So summer schools some of them I was like is that Tribe...? I DON'T know what comes under the whole notion of it, and I DON'T know if they do external work...I DON'T know if they link with schools, I don't know all of those things. (P17)

Overall, there was a consensus among the Tribe parents that the implementation of the Tribe Project varied across the different Tribe sports. The aims and objectives of the different sports were inconsistent, as was the level of expertise, structure and planning involved in the individual sports sessions. This was described by participants as negatively affecting their children's experience of the program. Communication between the Tribe parents and that of the managers and coaches was described as insufficient. This was associated with the unclear roles and responsibilities of the individuals who

deliver the program. Due to weaknesses associated with the implementation of the program, therefore, the Tribe parents had no concept of what the Tribe Project was aiming to achieve. The Tribe parents had neither a full understanding of the Tribe Project branding, nor a clear understanding of how the different Tribe sports were incorporated within the program as a whole. What follows is data from questionnaires administered to the children and adolescents who attended the Tribe Project. The evidence relates specifically to the factors that they perceived as important to their participation in the program.

## 8.3 Quantitative Data

### 8.3.1 Cross Sectional Survey of the Tribe Project Attendees

In Chapter 6 the questionnaire data used to assess factors important to the children and adolescents whilst attending the Tribe Project was presented. It was demonstrated that aspects of the Tribe Project most important to the attendees included a positive rapport with the Tribe coach, the coaches' ability within the sport, improving and gaining new skills within the sports session and maintaining fitness and health. These factors were perceived as important to the children and adolescents irrespective of gender or age.

In comparison to the boys, however, a positive rapport with the Tribe coach and feelings of inclusion within the Tribe sports session were more important among the girls attending the Tribe Project. The mean scores for these items were slightly higher among the 7-10 year old girls compared to the 11-14 year old girls nonetheless. Only among the boys was the timing of the Tribe coach to the session important during their participation in the program, and this was observed irrespective of age.

## 8.4 Observational Data

### 8.4.1 Organisation of the Tribe Project Coaches

The implementation of the Tribe Project was further assessed using observational data collected over the course of this case study. Specifically in relation to the organisation of the Tribe Project coaches, it was observed during the February 2010 half-term holiday camps (17/02/2010) that organisation of the Tribe coaches was limited. This was consistent with evidence from interviews with the Tribe managers, coaches and parents. Furthermore, the registration process for the children attending the Tribe

holiday camp sessions was disorganised and unsystematic. It was observed that the majority of children and parents arriving at the holiday camp appeared 'lost', and were unaware of where they needed to go and what they needed to do. Despite the presence of Tribe Project coaches, there was no coherence or clarity as to which Tribe coach was in charge and therefore able to organise the arrival of the holiday camp attendees.

The disorganisation of the Tribe holiday camps was further observed in relation to the communication between the different Tribe coaches. Specifically during the midday change over period, none of the Tribe coaches knew whether a table had been booked within the STV for the children's lunchtime break, nor the name of the Tribe coach they were handing over to, to take the afternoon session. As a result, there was substantial confusion and disruption during this midday changeover period, and several children attending the holiday camp were ignored and left unattended during this time. A set meeting place for all the parents and children had not been organised, nor had the designation of the Tribe coach in charge of the holiday camp. The weak organisation of the Tribe Project coaches delivering the holiday camp was not observed, however, across all of the different Tribe sports implemented during this half-term camp.

### 8.4.2 Delivery of the Tribe Sports Sessions

The consistent implementation of the Tribe Project was also assessed using observations made during the February 2010 half-term holiday camps (17/02/2010). Specifically, this related to weaknesses associated with social inclusion within the Tribe sports sessions. During some of the holiday camp sports sessions, the children participating were poorly integrated into the group and excluded by other children during the lunchtime break. Two incidences of bullying were witnessed, and several children were noticeably isolated from the remaining children in the sports session. Despite the presence of two Tribe Project coaches during this lunchtime period, they were unaware of group dynamics and failed to ensure all the children were included. Consistent with interviews with the Tribe parents, the dynamics within the Tribe sports sessions could influence the children's experience of the Tribe Project.

Likewise, the consistent delivery of the Tribe sports sessions was further assessed following an observation on 30/01/2010. At the end of a weekly Tribe sports session a conversation was had with a parent and child participating in the Tribe Project. The child commented that they participated in several of the sports delivered through the program. The child described that each of the Tribe sport sessions they attended was

implemented very differently, and that they had a very different experience with each of them respectively. The child stated that their motivation to attend the Tribe Project differed according to the specific Tribe sports session they were attending. This was related to the different positive and negative aspects within each sports session. Supported by the child's parent, this is consistent with evidence from interviews with the Tribe coaches and parents as a whole.

### 8.4.3 Communication within the Tribe Project

Throughout the course of this case study, it has been consistently observed that knowledge of the delivery of the Tribe sports sessions among the Tribe managers was lacking. In particular, on 05/11/2009, it was observed during conversations with the Tribe Project managers that only two of the Tribe sports were ever referred to when the Tribe managers described events or gave examples of the Project. It was apparent that their knowledge of certain sports was greater than of others and the Tribe managers lacked a full awareness of all the Tribe sports. This was consistent across all three of the Tribe Project managers.

The lack of awareness of the Tribe Project as a whole was also observed on 15/10/2009, following an interview with a Tribe parent. The Tribe parent suggested that a way to improve the Tribe Project would be to introduce 'taster days' as part of the program. This would introduce a new sport to children and adolescents, without having to commit to fulltime attendance. Crucially, however, the Tribe Project already implements 'taster days' as part of the Project, and this is an established part of the program. The fact that the Tribe parent had no knowledge of this component of the Tribe Project highlights weaknesses in the communication within the Project, and therefore implementation as a whole.

Weaknesses in communication within the Tribe Project were also observed during the qualitative data collection phase in October 2009. Attendance at a Tribe sports session was necessary in order to conduct an interview with a Tribe parent. On arrival for the session on 07/11/2011, it was apparent that the sports session had been cancelled. None of the parents whose children were attending the session had been informed, and they had consequently arrived with their children to participate. There were approximately 25 children and 15 parents at the sports session. They had only been informed of the cancellation by visiting the STV reception desk to enquire. None of the Tribe managers or coaches were present at the sports session, nor was there a

message from the Tribe Project to inform the parents of this cancellation. The Tribe parents were clearly frustrated that they had not been informed, nor that a Tribe Project coach or manager was present or contactable. The Tribe parents described the lack of communication within the Tribe Project as extremely frustrating and unprofessional. As such, this had a greater negative impact on the Tribe parents' perception of the Tribe Project, than the cancellation itself. The poor communication between the Tribe Project and the Tribe parents negatively affected the Tribe parents and children's experiences of the Project, therefore.

### 8.4.4 The Tribe Parents' Concept of the Tribe Project

Consistent with evidence from interviews with the Tribe parents, it was observed over the course of this case study that all of the Tribe parents failed to understand fully the structure, organisation and implementation of the Tribe Project. It was observed on 26/11/2009, following interviews with the Tribe parents, that as a group they had a very a limited concept of the Tribe Project. Specifically during such interviews, many of the Tribe parents did not know what was meant by the word 'Tribe'. The Tribe parents understood the question when it referred to a specific Tribe sport; however, the use of the word 'Tribe' was unclear to certain individuals. Likewise, it was observed that although many of the Tribe parents' children were in fact attending more than one Tribe sports session, they were unaware that all the sports their child attended were being delivered as part of the same program.

Likewise, although the Tribe parents attended a large proportion of the Tribe sports sessions, several of them had no awareness that the sports were all being delivered as part of "Tribe". During interviews with the Tribe parents (26/11/2009), individuals would frequently refer to participating in a specific sport without making a connection with the Tribe Project. Many Tribe parents admitted, following completion of the interview, that they did not know there were other children's activities at the University until they took part in the interview for this research. This was consistent with evidence from conversations with the children attending a Tribe sports session on 08/12/2009. It was observed that several of the children attending the Tribe sports session did not know what the "Tribe Project" was, nor did they refer to their activity using this term. Several children in fact asked what the "Tribe Project" was, despite having participated within the program for at least a year.

It was consistently observed during this case study, specifically between 15/07/2009 to 01/03/2010, that as a researcher it was extremely difficult to fully comprehend the organisation and 'concept' of the Tribe Project. The varied implementation of the Tribe sports meant the Tribe Project was not presented as a complete program, nor were the aims, objectives or branding of the program clear. Weaknesses with the implementation of the individual Tribe sports sessions meant the Tribe Project was not presented as a united program overall.

## 8.5 Data Synthesis

A combined assessment of interview, questionnaire and observational data revealed that the implementation of the Tribe Project was less successful overall, and the consistency of its delivery could largely be improved. Table 19 shows the evidence from each data source used to assess the implementation of the Tribe Project.

There was a consensus amongst the Tribe managers, coaches and parents that successful implementation of the program was affected by the student coaches delivering the Tribe sports sessions. The inconsistent implementation of the Tribe was attributed in part to the unreliability of these students and their mixed motivations and expertise when coaching the sports sessions. Nonetheless, the factors described as contributing to this varied amongst participants. According to the Tribe managers, conflicts between the University's and schools term times limited the Project's ability to provide consistent coaching. Unlike the Tribe managers, however, the Tribe Project as a whole. This related specifically to the conflict of roles and responsibilities within the program and the organisation of the sports sessions.

In the context of the organisation of the Tribe sports sessions, the Tribe parents described the aims and objectives of the Tribe Project as unclear and inconsistent across the different Tribe sports. According to the Tribe parents, this negatively affected the children's and adolescents' experience of the sports sessions. Likewise, the Tribe coaches had little awareness of other sports delivered through the program, and a varied understanding of what the Tribe Project was aiming to achieve. This was supported by observational data. The children attending the program revealed that their experiences of the Project differed greatly depending on the activity, along with factors they perceived positively and negatively. Specifically, questionnaire data revealed that a positive rapport with the Tribe coach, the coaches' ability within the sport, improving and

gaining new skills and maintaining fitness and health were important to all the attendees within the program. Specifically among the girls participating in the Project, feelings of inclusion within the group were considered important to their participation. Likewise, the punctuality of the Tribe coach to the Tribe sports session was important among the boys attending the program. Consistent with interviews with the Tribe parents, factors relating to the delivery, consistency and group dynamics were important to the children and adolescents attending the program.

## Table 19: Synthesis of Data used to assess the Implementation of the Tribe Project

## **RE-AIM Component - IMPLEMENTATION**

The extent that different components of an intervention are delivered as intended by the program developers

Data Source	Consistent Delivery of the Tribe Sports Sessions	Delivery of the Tribe Project across Different Program Implementers	Barriers to Effective Implementation of the Tribe Project
Qualitative Data			
<ul> <li>Interviews with the Tribe Project Managers and Coaches</li> </ul>	Delivery of the Tribe sports sessions varied, and the aims and objectives across the Tribe sports differed. Unclear roles and responsibilities were attributed to inconsistent implementation.	Unreliability of the Tribe coaches was attributed to the fact they are University students. Coaches had differing levels of motivation, expertise and ability, thus the sessions were delivered inconsistently.	University and school term times do not coincide. Consistent delivery of the sports sessions is affected. Communication within the program was lacking
<ul> <li>Interviews with the Tribe Project Parents</li> </ul>	Same as above plus the structure and planning of the sports sessions varied. Tribe parents had no 'concept' of the program nor its overall aims and objectives.	Same as above	The Tribe Project branding was unclear; therefore, the parents had a limited understanding of the program.
Quantitative Data			
<ul> <li>Cross sectional survey of Tribe Project attendees</li> </ul>			Children and adolescents reported that a positive rapport with, and ability of, the Tribe coach, improvement within the Tribe sport, attainment of new skills, and increased health and fitness were important for the attendees.

	Consistent Delivery of the Tribe Sports Sessions	Delivery of the Tribe Project across Different Program Implementers	Barriers to Effective Implementation of the Tribe Project
<ul> <li>Quantitative Data</li> <li>Cross sectional survey of Tribe Project attendees</li> </ul>			Among the girls, inclusion in the group was perceived as important, whereas among the boys the timing of the coach to the session was important.
<ul> <li>Direct Observations</li> <li>February half-term holiday camp</li> <li>Conversation with an attendee following a sports session</li> <li>Conversations with Tribe managers</li> <li>Following an interview with a Tribe parent</li> <li>During the qualitative data collection phase</li> </ul>	Attendees reported that the delivery of the program differed across the Tribe sports. Their experience, enjoyment and motivation to attend the program varied depending on the Tribe sports session.	The organisation of the coaches, inclusion of the attendees and delivery of the holiday camp sports sessions were poor amongst some Tribe sports, yet satisfactory among others.	Tribe managers have limited awareness of all the Tribe sports Poor communication within the program was reflected in the program implementation. 'Taster days' were suggested despite already being part of the Project. Cancellation of a sports session revealed weaknesses in the communication with the Tribe parents. This negatively affected parents' perception of program implementation.
Rating of IMPLEMENTATION	1 (Less successful)		

RE-AIM dimension ratings equivalent to 1= Less successful, 2 = Moderately successful, 3 = Highly successful

Observational data collected during the Tribe half-term holiday camps, revealed that the Tribe coaches failed to consistently promote inclusion within all of the Tribe sports sessions. Furthermore, questionnaire data revealed that a positive rapport with the Tribe coach, the coach's ability within the sport, and the punctual arrival of the Tribe coach to the sports session were important to the children and adolescents. As the consistency, organisation, reliability and expertise of the coaches delivering the Tribe sports sessions was shown to vary within the program, successful implementation of the Project was reduced.

Despite a consensus amongst the participants relating to weaknesses in the implementation of the Tribe Project, only the Tribe parents referred to their 'concept' of the Tribe Project. All of the Tribe parents interviewed described having either little or no concept of the Tribe Project as a complete program. Nor did they have a full awareness of all the sports delivered through the program. This was supported by observational data following interviews with the Tribe parents. Overall, the Tribe parents suggested that the 'Team Bath' and 'Tribe Project' branding was unclear and confusing. Inconsistent aims, objectives and implementation of the Tribe sports sessions meant participants had no 'concept' of the Tribe Project as a complete program, and the cohesion within the program was seen to be lacking.

The inconsistent implementation of the Tribe Project meant the program's structure was perceived as fragmented and the Project lacked coherence overall. Limited communication strands meant the Tribe coaches and parents perceived that the Tribe managers were uninterested in Tribe sports sessions, and failed to ensure effective delivery of the Project. Nonetheless, the Tribe managers acknowledged that they did not have full awareness of the Tribe sports sessions. This was supported by interviews with the Tribe coaches and observational data. An increase in the awareness and responsibility for the delivery of the Tribe sports sessions among the Tribe managers was considered essential to the effective implementation of the program. Overall, the Tribe Project was not implemented consistently across the different Tribe sports, and this varied according the specific expertise, motivation and reliability of the Tribe coaches. The implementation of the Tribe Project was, therefore, less successful overall.

## 8.6 Limitations and Recommendations

A limitation with assessing the implementation of the Tribe Project was associated with the financial costs of delivering the Tribe sports sessions. The structure of the Tribe Project meant that some of the Tribe sports sessions were 'self-run' and their program costs were calculated independently of the remaining Tribe Project sports. As a result, data relating to the cost of implementing the entire Tribe Project was unavailable. For this reason, the implementation of the Tribe Project could not be estimated based on costing information. Rather, the implementation of the Tribe Project was assessed based on the consistent delivery of the program components as intended, including the impact of the different program implementers.

Recommendations to improve the implementation of the Tribe Project would be to clarify the aims and objectives across the different Tribe sports and within the Project as a whole. Establishing clear program goals would improve the consistent implementation of the Tribe sports sessions, promoting a more unified Project. Implementing regular Tribe Project meetings would encourage communication pathways between the Project managers and coaches. This would provide a scheduled opportunity for feedback within the program and thus ensure the consistent delivery of the sports sessions. Likewise, communication between the Tribe Project managers and the parents whose children attend needs to be improved through regular contact. Incorporating the Tribe parents within the Tribe Project would improve their awareness of the different Tribe sports and increase their overall understanding of the program. Engaging the Tribe Parents with the Tribe Project in this way may increase their support for the program as a whole. Secondly, the brand image of 'Team Bath' and the 'Tribe Project' needs to be presented with more clarity. This would improve the parents' perception and understanding of the Tribe Project, and improve the children's and adolescents' sense of belonging within the organisation. By implementing such strategies to promote the consistent delivery of the Tribe Project, individuals' experiences of the program may be more positive, and the implementation of the program improved overall.

## 8.7 Summary of Implementation

In this chapter, multiple sources of data have been used to assess the implementation of the Tribe Project. Overall, the implementation of the Tribe Project was less successful due to inconsistencies associated with the delivery of the program. This was negatively associated with the children's and adolescents' experience of the Tribe sports sessions. The differing aims and objectives across the Tribe sports, and the mixed motivations, expertise and reliability of the Tribe coaches meant that the Tribe Project was not delivery as consistently as intended. This was attributed to the students delivering the sports sessions, weaknesses in the communication between the Tribe managers, coaches and parents, and the clarity of individuals' roles and responsibilities within the program. The Tribe parents thus had no concept of the program as a whole. Based on evidence from these data sources, the implementation of the Tribe Project was less successful overall. The following chapter presents data accounting for the individual and organisational level maintenance of the Tribe Project based on interview, documentary and observational data.

# **CHAPTER 9: MAINTENANCE**

## 9.1 Introduction

In this chapter, the quantitative and qualitative data used to assess the maintenance of the Tribe Project is presented. Maintenance is assessed at both the individual and organisational level. At the individual level, maintenance addresses the long-term effects of a program on both targeted outcomes and quality of life indicators (Glasgow et al., 1999). At the organisational level, maintenance refers to the extent to which a program or policy becomes institutionalized or part of the routine organisational practices and policies, and the extent to which a program is sustained over time (Glasgow et al., 1999). The individual level maintenance of the Tribe Project was assessed based on the length of time participants attended the Tribe Project and the rate of participant attrition. The organisational level maintenance of the Tribe Project was assessed based on the degree to which the Tribe Project had become institutionalised as part of the University of Bath's program of community sport. Secondly, it was assessed based on the extent to which the Tribe Project was linked with sports clubs within BANES and sustained over time. To assess this, data from interviews with the Tribe managers, coaches and parents, documentation and observational data were used. The results following these data collections are presented below.

## 9.2 Qualitative Data

### 9.2.1 Interviews with the Tribe Project Managers and Coaches

Interviews with the Tribe Project managers and coaches revealed two key themes accounting for the individual and organisational level maintenance of the Tribe Project. These included the rate of attendance and attrition within the Tribe Project, and the institutionalisation of the program within the University of Bath and the community (Appendix R). Evidence to account for these themes is presented below.

### 9.2.1.1 Attendance and Rate of Attrition within the Tribe Project

There was a consensus amongst all the Tribe managers and coaches that the children and adolescents who participated in the Tribe Project usually did so from a young age. The attendees typically participated in the program for several years. The Tribe managers and coaches also stated that the Tribe Project participants frequently joined the University of Bath's 'Tots' programs, aimed at 4-6 year olds, and would sustain participation until aged 7 when they could join the Tribe Project. Pathways between the University of Bath's Tots programs and the Tribe Project were described as a key factor influencing the individual level maintenance of the Tribe Project:

...For [name of sport] you will probably find they will join us from [name of sport] Tots when they're 4 years old, and they will probably stay. It is very rare on the [name of sport] that we get a 10 year old or a 12 year old just join because they've never played [name of sport] before and they wanna play...It'll be the ones that have already done one of our Tots programs and that have been with us for...for so long. (M3)

So that's why once they're in they stay in, they're with their friends they're enjoying what they're doing...Yeah they tend to stay. Especially some of the parents that really know us, they like want it...they know the next step is Tribe. I mean I had this start of the summer, I had 8 come over from Tots into Tribe, which for me I think is a large number. (C4)

Despite a consensus that attendees maintained participation in the Tribe Project for several years, there was a divergence of evidence regarding the monitoring of dropouts. One of the Tribe managers stated that attrition rates within the Project were recorded as part of the program:

I've got a record of all the kids that have ever been on our courses and I can look back on that and see who's still with us and who isn't...I keep feedback forms. Um I keep all the kids that we've had on the...like that we've ever had, even if they're too old now to do any of our other stuff. I keep them all in the database and I know which ones are still with us and which ones aren't. (M2)

This was contradicted by the remaining Tribe managers and coaches, who stated that attrition rates were neither monitored nor recorded within the Tribe Project:

...It's not something that we've monitored yet because it [dropouts] has been so low, that part of us have said well actually...we don't, its not a concern as of yet, because we're not getting people dropping out because they don't like it, or they don't think its good enough. Usually it's because there's another commitment or they're not old enough yet, the parent doesn't feel that they're getting enough from the program. (M1)

"We're supposed to go through them [records of participants in the database] then if they get to a certain age, phone and just say 'look are you still active, are you still with us?', you can check on our system if they're still with us...um but it's a huge job to track all of those children." (M3)

[Do you record dropout rates?] "No we don't. We don't do anything but I don't know about the Tribe office, whether or not...they wouldn't know that they're [the children and adolescents] not coming anymore" (C7)

Irrespective of this, the Tribe managers and coaches also stated that dropouts from the Tribe Project were minimal. As a result, the rate of attrition was not a major concern within the program and therefore not recorded:

I don't think that is our biggest problem because I would say the majority of kids, of the vast majority of kids that come along just to try out do tend to stick around at least for a term or two. So I don't think that's our biggest problem. (M2)

"I have a long waiting list for a lot of the classes so I haven't been too bothered about the dropout rate at the moment." (C5)

Among the children and adolescents who had dropped out of the program, there was some agreement regarding the shared characteristics of these individuals. Children and adolescents more likely to drop out from the Tribe Project were described as being either less 'sporty', less competitive, from less privileged backgrounds or from families who were unsupportive of participation in the program:

"I mean this is what I've noticed is we get a few that are from sort of less privileged backgrounds and they don't tend to stick around for very long." (M2)

"...They're usually very sporty kids anyway...the less sporty generally drop out because...and the ones without parents who are sort of not pushing them but you know, helping them get there makes a big impact I think." (C9)

You know some kids don't like that, they don't like team games, they don't like the pressure of having to be a [name of sport] player individual kind of thing, they'd rather I think just have the enjoyment put back in. Some kids do like it, they relish it, but other kids definitely don't, and I think those are the kids that are dropping out... (C4)

Although the rates of attrition within the Tribe Project were not recorded, the Tribe coaches did infer that procedures were in place among some of the Tribe sports to overcome potential dropouts:

"They also have to pay a £10 joining fee to re-join, which was to try and stop them from doing this [dropping out] over the summer holidays, dipping in and out." (C5)

"We try and keep them in by doing this house system and getting them to do their homework and if they can try, if they do homework outside the lesson they'll improve." (C6)

Nonetheless, the reasons for dropping out of the Tribe Project were attributed by the Tribe managers and coaches to factors outside of the Tribe Project's control. Factors that were external to the program, therefore:

...We don't really keep a huge record of anyone that's dropped out. Mostly because it's for reasons that aren't our fault, it's just that they're too old or not very well or something like that...When we actually do the research and look into it we realise that actually it's not always our fault. (M2)

I mean what we tend to find is people will come, if they don't enjoy it...they won't enjoy it in the first few sessions and that tends to be down to the kid just not being ready or...and if it doesn't tend to be anything to do with us or how we're running it. I do, I think it's down to the kid and what they do....if we have a whole load of dropouts in [name of sport] because of lack of...something to do with our coaches then...we change it. But it is, it's, I look more so at what the comments for leaving were and it does tend to be stuff that is outside of our control. (M3)

# 9.2.1.1 Institutionalisation of the Tribe Project within the University of Bath and the Community

To assess the organisational level maintenance of the Tribe Project, evidence relating to the institutionalisation of the program was used. There was a consensus amongst the Tribe managers and coaches that a good participation pathway existed between the University of Bath 'Tots' program leading into the Tribe Project. The Tribe Project was described as an established part of the University's program of community sport, and was referred to as a step along a longer pathway to sustained physical activity participation:

...At every single point someone can ask us 'what is the best option for me?', then we can point them internally or externally into the right environment for them...It's very much more about the first step on a longer pathway. For us it's not about 'can we keep them?', it's 'we need to make sure there's an environment for those that wish to stay', but we also need to be proactive in signposting where they can go on to do something different. (M1)

Although the Tribe Project was institutionalised within the University of Bath, there was a divergence of evidence regarding the participation pathways after the program. One of the Tribe managers in particular maintained that links between the Tribe Project and sports clubs within BANES were established:

What we've done is work with community clubs to provide that outlet. So we now we have a Team Bath football club, Team Bath netball club, Team Bath hockey club, Team Bath judo club and what we're trying to do is feed anyone coming into Tribe if they want to partake in that sport into those clubs ... We've always made sure we've got somewhere to sign post them, an outlet. It might not always be in Bath, you know it might not be one of our own clubs, but we always want to be able to say 'If you really enjoyed this activity...here's where you can go a bit more with it'. (M1)

This was contradicted, however, by the remaining Tribe Project managers and coaches. Links between the Tribe Project and community clubs were not always available for every sport, and these links were more likely to be competitive routes only: It does tend to be if they hit 14 and then they want to become competitive, they then have a route, but there really isn't a...recreational...so if...I feel a bit bad saying that because that shouldn't really happen...but...when they hit 14 they've either decided they're gonna be sporty, or they've decided that they're not. (M3)

I don't really like...it sounds awful but when they reach like 12, 13 years old...I'm not really interested because I can't really do anything for them, there's nothing that I can provide them with. Other than [competitive sports class] and if they can't keep up, which probably a lot of them couldn't if they hadn't stuck into it until that age, um so like if they've gone away and then they've chosen to come back to it...um...then...there's not much I can offer them. (C5)

There are hardly any [name of sport] clubs around and in Bath and Bristol areas; it's very poor but we have an elite kind of training cell and so it's good for that but for that, but for grassroots [name of sport] it's pretty poor so it's quite hard to move them up...(C9)

Overall, the individual level maintenance of the Tribe Project was described as being moderately successful. Participants typically attended the Tribe Project for several years, and this was frequently following participation in the University's Tots programs. There was a divergence of evidence relating to records of the attendance and attrition rates within the program. Nonetheless, there was a consensus that attrition from the program was not a major concern. Participants more likely to cease participation in the program were described as being either less sporty, less competitive, from less privileged backgrounds or with less supportive parents. The organisational level maintenance of the Tribe Project was also described as being moderately successful overall. The Tribe Project was successfully institutionalised as part of Bath University's program of community sport. However, pathways after the Tribe Project and into community were not always available for every sport, thus limiting the maintenance of the program within BANES.

### 9.2.2 Interviews with the Tribe Project Parents

Interviews with the Tribe Project parents also revealed two key themes accounting for the individual and organisational level maintenance of the Tribe Project. These themes included the rate of attendance and attrition within the Tribe Project, and the institutionalisation of the program within the University of Bath and the community (Appendix R). Evidence to account for these themes is presented below.

### 9.2.2.1 Attendance and Rate of Attrition within the Tribe Project

Consistent with interviews with the Tribe managers and coaches, there was a consensus among the Tribe parents that the children attending the Tribe Project often did so for several years. Participants described that the children typically progressed from the University of Bath 'Tots' program into the Tribe Project:

"He's been doing it [the Tribe sport] for 2 years, he was in Tots as well...[name of sport] Tots for about a year and this for a year." (P16)

My son has been linked with [name of sport], through Tribe since he was probably about 4, he's not doing [name of sport] anymore but he did, he went all the way up to almost the highest sort of levels of that, and he's also been doing [name of sport] for about 2 years with Tribe. (P17)

Despite having positively described their children's sustained participation in the program, of the Tribe parents whose children had ceased participation in a Tribe sport there was a consensus that they had never received any follow up procedures:

[When the child dropped out] it was never followed up or anything we just...you know it came to booking time and we just decided she wanted to do [name of sport] and not [name of sport]...and nobody from Bath, nobody from the Tribe tried to find out why she dropped out. I see why they might...as a sort of marketing you know...if I had a client that dropped out I'd want to know why they dropped out. (P14)

[Were you contacted after dropping out?] No...no, not at all...there was no, I mean we literally kind of left and that was it. So in a way they would have missed why that was the case...so you wonder whether...at that point my feelings on it were that they were very definitely, it almost felt like a weeding out process. (P17)

Unlike the Tribe managers and coaches, the Tribe parents stated that reasons for their child's ceased participation in the program were linked to the structure of the Tribe sports sessions. Specifically this included the pressure of time commitments, increased pressure to be competitive and the group dynamics of the session:

It was about 2 years ago that he dropped the [name of sport] and it was purely because it was getting so sort of time intensive, and you couldn't seem to do it unless it became really time intensive...This is one of the things I think happens up here a little bit because it has that kind of competitive bend sometimes, hence why he dropped the [name of sport]. (P17)

"I think more what she's put off with is maybe that the boys would be rougher or...I think that's what she was worried about yesterday, whether there were girls going to be there." (P12)

Consistent with the Tribe managers, nonetheless, the Tribe parents did acknowledge the potential influence of external factors on the children's and adolescents' decision to cease participation in physical activity and sport:

"When they get to 12, 13 you know...they'll be able to go off with their friends and do different things, and you know they'll both begin to discover the opposite sex etc, etc so there'll be plenty more sort of...there's much more attractions." (P13)

I think teenage-wise I think a, the school work will suddenly start kicking in big time which means that an activity that they pull back...There comes a point, and it tends to be I think the early teens bit, where they literally have to pull back on masses of activities, and I think that's the most likely thing that will happen. (P17)

# 9.2.2.1 Institutionalisation of the Tribe Project within the University of Bath and the Community

The institutionalisation of the Tribe Project was also assessed, based on evidence relating to the pathways available during and after the Tribe Project. The Tribe parents described the successful participation pathway between the University of Bath's 'Tots' program and the Tribe Project:

I think if they see, if [name of child] sees there's 14, 15 year olds doing it then he will aspire to be like them. So he will have in his mind when he's older, he could well join that group if he wanted to. You know its almost like when they're at [name of sport] Tots isn't it, and they then see the bigger boys doing it, its that...sort of continuity and progression they can see. If they can see it then they're more likely to sort of go to that, or go down that avenue. (P13)

Irrespective of this, the Tribe parents had far less awareness of the participation pathways after the Tribe Project and into the community. Links between the Tribe Project and community-based sports clubs were not apparent to the Tribe parents. Although they recognised that such partnerships might exist, they were not actively promoted. The institutionalisation of the Tribe Project within BANES was less apparent to the Tribe parents than within the University of Bath as a whole:

...So sometimes there doesn't seem to be the links with...say a club...But you don't get this feeling that he's ever in a match or something and there definitely isn't a kind of link to a club...there's not anything where they're kind of putting them in matches in a more formal way, and they certainly don't appear to be linking it, or using it as a way of siphoning them, encouraging them to join the [name of sport] club [in BANES]. (P17)

"You know they were encouraged, they were coached, they were given instruction...but there wasn't the underlying message of 'you could go on and do...' you know." (P11)

Specifically the Tribe parents indicated that links between the Tribe Project and sports clubs within BANES needed to be improved. The lack of exit routes following participation in the Tribe Project was described as a potential influence on children's and adolescents' ceasing participation in sport.

"This [Tribe sports session] goes on till 10 I think is the oldest and I really don't know what happens after that, whether you sort of drift away. 'Cos I don't think there's anything after this is there...I'm not sure whether there is anything after this, and it's almost like the kids are expected to join one of these [community-based clubs] or whatever but at the moment we can't get our kids into it because there's not anyone there to coach them. (P16) It's a real worry that if he gets too old for this, and he still can't get in [a community-based club] there's not enough places, he could end up giving up...It would be good if they could move on from this age and there was something for them afterwards, after the age of 10 or 9...whenever this one finishes, that would be great if we'd know that they could carry on doing something. (P15)

Overall, there was a consensus among the Tribe parents that the children and adolescents attending the Tribe Project typically did so for several years. This was often following participation in the University's Tots programs. Irrespective of this, children who had ceased participation in a Tribe sport were not followed up by the program's management. The reasons for dropout were attributed, in part, to the structure of the Tribe sports sessions. This included increased time commitment pressures, competition within the Tribe sport and the group dynamics. The influence of external factors on dropouts was acknowledged, however. Although pathways prior to the Tribe Project were described as being successful, the Tribe parents had a limited awareness of links between the Tribe Project and sports clubs within BANES. The lack of routes after the Tribe Project and into the community was partly associated with children's and adolescents' ceased participation in sport.

## 9.3 Documentary and Observational Data

### 9.3.1 Documentation

Documentation relating to the participation pathways during the Tribe Project was also used to assess the institutionalisation of the Tribe Project within the University of Bath and BANES. A document outlining the main aims, objectives and structure of the Tribe Project, the 'Queen's Prize Document' (Appendix L), described the participation pathways during the Tribe Project:

Our pathway begins with our Learn to Swim programme and the tots classes which are aimed at children aged 8 months to 7 years of age...From 7 years to 16 years we organise sport specific sessions across 20 different activities including football, netball, judo, athletics, swimming, trampolining and tennis....From 16-18 we have developed links with three local educational sites in Beechen Cliff, Wiltshire College and City Academy Bristol to support athletes whilst remaining in full time education. From 18 years onwards we have University based programmes and adult tribe opportunities to access sports clubs and organised activities to maintain participation throughout life.

The Tribe Programme now offers an array of activities covering every day of the week and at all times of day to allow accessibility to as many groups as possible. The Tribe programme has engaged local coaches, organisers and officials to work within the programme and help to develop the direction of the pathway.

Participation pathways after the Tribe Project and into the community were also documented. Specifically, developments within the Tribe Project such as the launch of new sports clubs, and sports partnerships within BANES, were described:

Individual sports have developed their own junior clubs in Judo, Hockey, and soon to be launched, Badminton, which will be the only Badminton Club in BANES. An Academy for football was established at Beechen Cliff School with partnership funding from the school and the University. The success of this year has led to the Academy expanding to include Hockey and Athletics in Year 2.

The most recent progressions in this area is the appointment of a joint position with the City Academy Bristol, to support young athletes within their school environment and create pipelines for them to progress into clubs and sports pathways whilst maintaining their educational focus.

### 9.3.2 Observational Data

### 9.3.2.1 Pathways after the Tribe Project and into the Community

Direct observations also contributed to the assessment of the organisational level maintenance of the Tribe Project. During the February 2010 half-term holiday camp, a conversation was had with three parents waiting to collect their children from the Tribe sports session (15/02/2010). The Tribe parents commented that very few non-competitive opportunities existed for children within sport beyond a very young age. This was referred to by the Tribe parents as "learning and enjoying". The parents' perceptions of the sports opportunities within the community were predominantly of them being competitive or elite sports. In particular, once children become adolescents, the parents' experiences were that few recreational opportunities within sport existed.

The Tribe parents further remarked that sports clubs within BANES did not always have a positive relationship with the University of Bath sports clubs, such as the Tribe Project. This was described as resulting from the competition for numbers, and the threat that the University's sports clubs would 'pinch' the children from the local clubs. The Tribe parents described the 'camaraderie' between the University of Bath and the sports clubs within BANES as poor.

## 9.4 Data Synthesis

A combined assessment of interview, documentary and observational data revealed that the individual and organisational maintenance of the Tribe Project were moderately successful overall. Table 20 shows the evidence from each of the data sources used to assess the maintenance of the Tribe Project.

There were no formal outcomes measured as part of the Tribe Project, nor a follow up procedure to assess the long-term outcomes following participation. Consequently, the long-term impact of the Tribe Project could not be quantified. To ascertain the individual level maintenance of the Tribe Project, the length of time the children attended the Tribe Project and rate of participant attrition were assessed. Among the Tribe managers, coaches and parents there was a convergence of evidence that the children and adolescents attending the program typically did so for several years. Pathways between the University's Tots programs and the Tribe Project provided an established route for the children to follow. This pathway was described as having a positive impact on individuals' sustained participation in the program. The rate of participant attrition from the program was less consistently described during interviews. Among the Tribe managers, there was a mixed account of the follow up procedures and monitoring of dropouts within the program. Whilst one Tribe manager claimed that the rate of participant attrition was monitored, nevertheless, the majority consensus among the Tribe managers, coaches and parents was that dropouts were not recorded. In particular, among the Tribe managers and coaches, dropouts were not considered a major concern within the Tribe Project.

Despite the omission of any long-term outcome measures, individuals' sustained attendance meant that the rate of attrition rate was not associated, by the Tribe managers or coaches, with the overall effectiveness of the program. Failure to monitor the attrition rate within the Tribe Project, however, limits the individual-level maintenance of the program overall. Children and adolescents most likely to dropout of

the Tribe Project were described by the Tribe managers and coaches as sharing certain characteristics. These included being less sporty, being from less privileged backgrounds and having parents who were less supportive of their participation in the program. Likewise, the Tribe managers and coaches attributed attrition from the Tribe Project to factors external to the program. The Tribe parents also maintained that factors external to the program influenced children's and adolescents' decisions to cease participation in the program; nonetheless, factors internal to the program were also described as having an impact. Unlike the Tribe managers and coaches, the Tribe parents inferred that time commitment pressures, increased competition and the group dynamics of the Tribe sports sessions could negatively influence their child's experience of the program. Along with factors external to the Tribe Project, the Tribe parents associated the Tribe sports sessions' structure as a reason for dropping out of the program.

### Table 20: Synthesis of Data used to assess the Maintenance of the Tribe Project

## **RE-AIM Component - MAINTENANCE**

Individual Level: The long-term effects of a program on both targeted outcomes and quality of life indicators Organisational Level: the extent to which a program or policy becomes institutionalized and is sustained over time

Data Source	Long-term Impact of the Tribe Project	Program Institutionalisation	Program Sustained Over Time
Qualitative Data			
<ul> <li>Interviews with the Tribe Project Managers and Coaches</li> </ul>	Attendees participated for several years, typically after attending the 'Tots' programs.	The Tribe Project was established as part of the University of Bath's program of community sport.	Links between the Tribe Project and community-based sports clubs were not consistently available for every Tribe sport.
	Rates of attrition were inconsistently recorded, yet not perceived as a concern within the program.	Pathways leading up to the Tribe Project were associated with participation in the Tribe Project	
Interviews with the Tribe Project Parents	Attendees participated for several years, typically after attending the Tot's programs.	Same as above	The Tribe parents had limited awareness of the links between the Tribe Project and the community.
	Dropouts were not followed up and were attributed to Tribe session structure and external influences on attendees.		
	Lack of exit routes after the Tribe Project potentially associated with childrens' ceased participation in sport.		

	Long-term Impact of the Tribe Project	Program Institutionalisation	Program Sustained Over Time
<ul> <li>Documentation</li> <li>Queen's Prize Document outlining the program aims, objectives and community links</li> </ul>	<b>r</b>	From 7-16 years the University provides sport sessions across 20 different sports	Individual sports have developed junior clubs based within the community.
		Tribe Project offers sports sessions for every weekday, to allow accessibility to the maximum number of groups.	The Tribe Project is linked with 3 educational sites in BANES to support sports participation during fulltime education.
<ul> <li>Documentation</li> <li>Queen's Prize Document outlining the program aims, objectives and community links</li> </ul>			The program has engaged local coaches, organisers and officials to work within the program and develop pathways.
<ul> <li>Direct Observations</li> <li>Conversation with 3 Tribe parents following a Tribe sports session</li> </ul>			Few recreational opportunities for sports participation were perceived to exist in BANES. Opportunities for "learning and enjoying" sport were limited.
			Relationship between the Tribe Project and sports clubs within BANES was perceived as less successful.
Rating of MAINTENANCE	Individual and Organisational Le	evel: 2 (Moderately successful)	

RE-AIM dimension ratings equivalent to 1= Less successful, 2 = Moderately successful, 3 = Highly successful

To evaluate the organisational level maintenance of the Tribe Project, the institutionalisation and modification of the program was assessed. The routes between the University's Tots programs and the Tribe Project were well established and deemed successful by all the interviewees. As such, the Tribe Project was successfully institutionalised as part of Bath University's program of community sport. In terms of the institutionalisation of the Tribe Project within the community, the evidence was more varied. There were weaknesses in the organisational level maintenance of the Tribe Project, specifically in relation to pathways after the Tribe Project and into the community. Documentation outlining the aims, objectives and structure of the Tribe Project highlighted that links between the Tribe Project and community-based sports clubs were established across some of the Tribe sports. Whilst unavailable to all the Tribe sports at that time, modifications to the program meant links were in development. The documentation revealed that there were continuous participation pathways prior to and after the Tribe Project at each stage of an individual's development. This was supported by interview data, albeit by only one Tribe manager. Whilst one of the Tribe managers claimed that links between the Tribe Project and community-based sports clubs did exist, this evidence was not supported by the remaining interviewees.

There was a consensus among the remaining Tribe managers and all the Tribe coaches that community-based links with the Tribe Project were only available for some of the Tribe sports. Likewise, these routes were more likely to be competitive and promoted individuals' progression into elite sport. Supported by evidence from the Tribe parents, only a proportion of the participants were aware of links between the Tribe Project and community sports clubs. The Tribe parents' awareness of these links was limited to certain Tribe sports, and was associated with competitive routes only. Despite documentary evidence describing the established links between the Tribe Project and community-based sports clubs, the Tribe parents remained unaware of such pathways. The lack of exit routes following participation in the Tribe Project was perceived as a major weakness to the program as a result. According to the Tribe parents this could influence children's and adolescents' discontinued participation in physical activity and sport. As a result, the organisational level maintenance of the Tribe Project was restricted.

## 9.5 Limitations and Recommendations

There were certain limitations associated with calculating the maintenance of the Tribe Project, due to the omission of any long-term outcome measures or records of attrition.

Rates of participant attendance and dropout from the program were not monitored, nor were there follow up procedures to record the reasons for dropout. As follow up procedures within the program did not exist, assessment of the representativeness of program dropouts was restricted to participant accounts. The potential impact of program attrition on the Tribe Project's overall success could not be quantified as a result. To overcome this, the individual and organisational maintenance of the Tribe Project was estimated based on the duration of participant attendance within the program, the institutionalisation of the Tribe Project within the University of Bath and the existence and development of Tribe Project links within the community.

Recommendations to increase the maintenance of the Tribe Project would be to maintain a consistent record of the Tribe Project attendees and those who dropout. Incorporating follow up procedures within the program would ensure that the frequency and reasons for dropout could be consistently monitored. The long-term impact of the Project could then be systematically recorded, providing feedback on the long-term impact and overall effectiveness of the Tribe Project. To increase the organisational level maintenance of the program, community-based sports clubs linked with the Tribe Project need to be more actively promoted to participants. Increasing the Tribe parents' awareness of the sports clubs within BANES may sustain their child's participation in physical activity and sport beyond the Tribe Project. This would also promote the institutionalisation of the Tribe Project within the community.

## 9.6 Summary of Maintenance

In this chapter, the individual and organisational level maintenance of the Tribe Project was assessed. The children and adolescents attending the Tribe Project typically sustained participation for several years, frequently following participation in the University's Tots programs. The long-term effects following participation in the Tribe Project were not recorded, however, nor were the rates of attrition within the program. This was attributed to the perceived low number of dropouts from the program. Nonetheless, the Tribe Project was successfully institutionalised as part of the University of Bath's program of community sport, and pathways from the Tribe Project into the community were available for some of the Tribe sports. These routes were often competitive routes only and were not actively promoted to the participants, however. Weaknesses attributed to the Tribe Project's links with sports clubs within BANES were potentially associated with the children's and adolescents' ceased participation in sport. In consideration of these findings, the individual and organisational-level maintenance

of the program was moderately successful overall. The following chapter discusses the findings and public health implications following this RE-AIM evaluation of the Tribe Project.

## **CHAPTER 10: DISCUSSION**

## 10.1 Introduction

The focus of this thesis was to evaluate the individual and organisational level impact of the University of Bath's Tribe Project. In this chapter, the main findings from this case study evaluation are discussed in addition to the implications of these findings for physical activity promotion among children and adolescents. Firstly, there is a brief overview of the main findings from the case study and the key strengths and weaknesses of this research. The focus of this chapter will then be to discuss the individual and organisational level impact of the Tribe Project. The final part of this chapter will be to describe the public health implications of this research, future research directions and the concluding points to this thesis. The Tribe Project was chosen as the focus for this research as it is a typical example of a real-world physical activity intervention aimed at youth. Using the RE-AIM framework of program evaluation (Glasgow et al., 1999), the five dimensions (Reach, Effectiveness, Adoption, Implementation and Maintenance) aimed at the individual and organisational level were assessed.

### 10.2 Summary of the Main Findings

The preliminary epidemiological study assessing differences in the type and context of physical activity amongst active, and inactive adolescents, revealed that more active adolescents engaged in more outside and sports-related activities. Identifying the type and context of physical activity associated with more active adolescents could potentially inform policy and physical activity interventions aimed at promoting physical activity amongst this population. Based on these findings, a case study evaluation of a community-based sports intervention aimed at children and adolescents was conducted.

The main findings from this case study were that the reach, setting-level adoption and implementation of the Tribe Project were less successful overall and could largely be improved. The effectiveness and maintenance of the Tribe Project were moderately successful, whereas only the community-level adoption of the Tribe Project was highly successful overall. Individual assessment of the five RE-AIM dimensions revealed that the Tribe Project reached approximately 2.5% of the total population of 6-15 year olds

living within BANES. The representativeness of the attendees was restricted, whereby participants were more likely to be physically active or 'sporty' and from a white, middleclass background. The Tribe Project was moderately effective nonetheless, as a combination of social, psychological and physical benefits following participation were reported. There were no negative consequences or adverse outcomes reported following participation. The absence of data measuring the specific outcomes of the Tribe Project limited assessment of the programs impact however.

The adoption rate of the Tribe Project within the community was extremely high, as links had been established with 95% of the primary and secondary schools within BANES. The adoption rate at the setting-level varied, and there were weaknesses relating to the Tribe sports' adherence to the core program principles. The aims, objectives and consistent delivery of Tribe sports varied within the program, reducing the successful implementation of the Project as a whole. As a result, the Tribe Project lacked unity and this was negatively associated with the attendees' experience of the program. Maintenance of the Tribe Project was moderately successful at both the individual and organisational level. Participants typically joined the Tribe Project at a young age and participated within multiple sports for several years. Rates of attrition were not recorded, and evidence for the long-term program outcomes was limited. Participants more likely to drop out were described as being less sporty, less competitive within sport and from families that had less support for the Tribe Project. Irrespective of this, the Tribe Project was successfully institutionalised as part of Bath University's program of community sport. Pathways after the Project and into the community did vary, and this reflected the successful organisational-level maintenance of the program. The Tribe parents, in particular, associated this with participants' potentially ceasing participation in sport after the Tribe Project.

## 10.3 Strengths and Limitations of this Research

The major strengths of this research were the mixed methodology used to collect the data, the evaluative framework used to assess the impact of the Tribe Project and the multiple sources of evidence gathered as part of the case study methodology. Qualitative and quantitative methods were used to collect the case study evidence, and the data were triangulated for validation purposes. Triangulating the qualitative and quantitative data in this way enhanced the validity and reliability of the study findings, and provided access to a broad range of comparable and contrasting perspectives and experiences. The breadth of participants included in this case study meant evidence

was collected from key informants of the Tribe Project at multiple levels. This ensured that an informed and varied picture of the Tribe Project was achieved.

The second major strength of this research was the systematic use of an evaluative framework that incorporated specific external validity reporting criteria in addition to more typically reported internal validity criteria. The RE-AIM framework was chosen as the evaluative framework for the purposes of this case study, as it is an extremely useful approach in estimating the potential impact of interventions at multiple levels. It is also particularly useful for identifying health policies, whilst integrating them with promotion strategies to increase the likelihood of program success (Bopp, 2007; Jilcott, 2007; Planas, 2008). From an ecological validity perspective, one of the difficulties in translating scientific research into real-world settings is the imbalance between internal and external validity (Green and Glasgow, 2006). The RE-AIM framework is designed to take this into consideration (Belza et al., 2007). Within this framework, greater focus is also placed on the implications of the program setting and process of implementation, as opposed to primarily the individual's experiences of it. Changing the focus of interest in this way does not remove the importance of the other components of the design, rather the implementation of each component in the program is considered as having greater importance.

Most intervention studies aimed at promoting health behaviours typically report the size of the study sample and the proportion of individuals included in the intervention. Few, however, report the representativeness of the participants. A key strength to the RE-AIM framework is that the characteristics of individuals who participate in an intervention are reported along with those who chose not to participate. This helps to establish how generalisable the intervention is to populations outside of the study participants. The effectiveness of the intervention is also measured at the individual level, as well as in terms of the program outcomes overall. Unlike most intervention studies, the potential negative or unintended consequences of the intervention are also reported, and individual experiences of the program are also assessed (Belza et al., 2007). Intervention studies typically report on the number of intervention sites and their related characteristics. Within RE-AIM, however, issues of adoption extend further than that of the number and location of intervention sites (Belza et al., 2007). The extent to which an intervention is adopted across different intervention sites and delivered consistently by different individuals can vary dramatically. Individuals implementing interventions can differ depending on their level of expertise, amount of resources available and their own investment in the intervention and policy-level restrictions. The differences in the adoption rate across program sites, and the consistent implementation of the intervention components, are an important part of the RE-AIM framework (Belza et al., 2007).

This is a unique advantage of RE-AIM, as emphasis is placed equally on the consistency of the intervention delivery at the organisational level, as opposed to primarily on participant responses at the individual level. To ascertain fully the potential long-term effectiveness and sustainability of an intervention it is essential to evaluate the institutionalisation and maintenance of the intervention post the initial study period. The majority of interventions are evaluated immediately post implementation and report early findings. However, RE-AIM is designed to address the maintenance of the program at the individual and organisational level. Thus, using the RE-AIM framework as the basis to this case study is a major strength of this research, as the internal and external validity of the Tribe Project could be equally assessed. This increased the generalisability of the study findings, and led to a more accurate estimation of the individual and organisational level impact of the program.

A third key strength of this research is the use of case study methodology to conduct the in-depth evaluation of the Tribe Project. Case studies' unique advantage as a methodology is the freedom to integrate multiple sources of evidence to assess the same social phenomenon. Case studies can be applied to current and contemporary situations, and are a useful way to improve our understanding of complex social phenomena (Yin, 1993). Conducting a case study evaluation using mixed methodology was essential to this research, as an in-depth evaluation would not have been effective through quantitative or qualitative methods alone. Using this methodology, the organisation, implementation and real-life experiences of the Tribe Project could equally be assessed. Case studies are an effective way of adding depth and realism to an evaluative analysis, by demonstrating the impact of processes, policies or programs in human terms (Yin, 2003). If unexpected outcomes or problems do occur, it is more likely that they can be attributed to a specific part of the intervention process (Mowbray et al., 2003). This makes case study research extremely useful in circumstances when the input and output of the program are not clearly related, or when evaluation criteria are not specific. This relates directly to the Tribe Project, which is a typical example of a real-world physical activity intervention aimed at children and adolescents. The Tribe Project was not founded on, or based within, an underlying theory or model of behaviour change. However, it does have real-world implications for the promotion of physical activity among children and adolescents. Using mixed methodology within a case study design was a major strength of this research as a more in-depth, thorough assessment of the Tribe Project could be made.

There are certain limitations with this research, however. Although the RE-AIM framework focuses attention on issues relating to the translation and generalisability of research findings, it also has various methodological challenges. Specifically, within this research there were certain challenges calculating the specific RE-AIM components due to the volume and quality of the data that was available as a resource. Certain elements of all five of the dimensions within RE-AIM were unable to be fully established due to the limited data available within the Tribe Project. Documentation and archival records associated with the Tribe Project, in particular, were extremely limited as a resource within this case study. Despite the Tribe Project having been created in 2003, documentation that was used to assess the program was available only from 2009. Besides BANES census data, there were no other archival records available to assess the Tribe Project. As a result, assessment of the five RE-AIM dimensions was based predominantly on interview, questionnaire and observational data. Equal representation of data across the different sources of evidence may have led to a more in-depth assessment of the case overall.

There are also certain challenges when conducting theory-based research in applied settings. Specifically, there were several limitations associated with calculating the reach of the Tribe Project due to the quality of data used as part of this assessment. The exact number of individuals exposed to the Tribe Project recruitment, and the number of individuals who chose not to attend or drop out, is unknown. Data accounting for the reach of the Tribe Project related to the total number of potentially eligible participants, as opposed to the actual number exposed to recruitment. To provide some indication of the characteristics of the BANES population, BANES Council census data were used. Nonetheless, this population data recorded children's ages based on school year groups, which results in an age grouping of 6-15 years. The data that was available on the number of attendees within the Tribe Project related to children and adolescents aged 7-14 years. As a result, the proportion of the eligible BANES population that were reached by the Tribe Project could only be based on estimates, and the reach of the program could not be indisputably quantified. The lack of data on non-participants also meant that there was no information relating to individuals' reasons for not participating, nor information on their demographics.

Similarly, data on the program's impact, including negative or unintended outcomes, were not formally recorded as part of the program. This limited the accurate assessment of the Tribe Project's effectiveness. The Tribe Project did not have standardised feedback or evaluation strategies in place to assess the program's impact,

nor was there a formal measure of program success. Thus, the effectiveness of the Tribe Project could not be quantified based on a specific outcome measure. In an attempt to assess the childrens and adolescents' experiences of the program, questionnaires were used to measure the importance of factors whilst participating in the program. Although useful in contributing to understanding individuals' experiences of participation, there was no indication of the impact of the Tribe Project on their physical activity levels or health-related behaviours as a result. Nor were there data on whether the importance of factors within the Tribe Project were directly associated with the programs overall impact on the attendees. For this reason the questionnaire data were used as an additional resource to the interview, documentary and observational data to strengthen the RE-AIM assessment overall.

Calculating the rate of adoption of the Tribe Project was also challenged by limitations associated with availability of data, as was the case with the reach of the program. Data on the number of organisations who were approached by the Tribe Project, and those who declined uptake of the program, was not recorded within the Project. Information relating to the characteristics of organisations that chose to, and chose not to, deliver the Tribe sports coaching was also based solely on participant accounts. Bath and North East Somerset school census data were used to calculate the proportion of schools within BANES that were adopted by the Tribe Project. However, this census data gave no indication of the representativeness of schools that chose to or chose not to participate, nor their reasons for adopting the program. The adoption rate of the Tribe Project could not be quantified based solely on community level census data as a result. Likewise, the availability of documentary data also affected the accurate assessment of the program's implementation. Financial costs attributed to delivering the Tribe sports sessions were not available across all the Tribe sports. Due to the fragmented structure of the Tribe Project, the program costs were calculated independently by each of the Tribe sports. As a result, documentation relating to the cost of implementing the Tribe Project was unavailable, and the evaluation of this RE-AIM dimension could not be made using costing information. This is an essential part of measuring intervention implementation, to ensure the program is not too intensive, difficult to administer or expensive to implement (Glanz et al., 2002).

Consistent with the challenges associated with calculating the effectiveness of the Tribe Project, data on the long-term outcomes following participation in the Tribe Project were also unavailable. There were neither records of participant attendance and dropout from the program, nor follow up procedures to record the reasons for dropout or long-term outcomes. To overcome this, the individual level maintenance of the Tribe Project was

estimated based on the duration of participant attendance within the program, and centered predominantly on interview data alone. Substantially more data were available to assess the organisational level maintenance of the program; nonetheless, the lack of data accounting for the long-term impact of the Tribe Project limits its generalisability as a program to promote physical activity. It is impossible to make inferences as to the nature of the unreported data within the Tribe Project, and whether these excluded elements were not considered important to the program implementers, or if other reasons prevented their inclusion. Conclusions relating to this missing data are based only on estimates as a result.

Irrespective of the weaknesses associated with volume, quality and accuracy of the data used to evaluate the Tribe Project; the breadth of sources used adds strength to this evaluation by counteracting inherent biases. Mixed methodology is a major strength of case study research as the inevitable limitations associated with using certain data collection methods can be offset by the strengths of using alternate techniques. Although this does present challenges to conducting a mixed-methods case study, the advantages of using a range of both qualitative and quantitative data sources to assess a physical activity intervention outweigh the potential limitations associated with the varied availability and quality of data.

The transferability of case study research is always heavily contested (Yin, 2003), and this case is no exception. Unlike reliability, a term more commonly associated with quantitative research, Miles and Huberman (1994) refer to the reliability of interpretative data in terms of its conceptual and theoretical transferability to other cases. Specifically, transferability refers to the extent to which findings from qualitative research are transferable within both the population studied and populations outside of the original case (Lincoln and Guba, 1985, Miles and Huberman, 1994). Along with credibility, dependability and confirmability, transferability is an essential component to assess the trustworthiness of research findings (Lincoln and Guba, 1985, Miles and Huberman, 1994). In particular, within case study research where less emphasis is placed on 'statistical generalisability' rather 'analytical generalisabilty' (Miles and Huberman, 1994), the extent that the study findings can be transferred to another population is key to ascertain the reliability of the evidence presented.

The restricted nature of the population reached by the Tribe Project does call into question the transferability of the study findings to a wider, more diverse population nonetheless. Secondly, there are known limitations with self-reported data in terms of social desirability and researcher-participant bias, and this is relevant to the interview

data collected as part of this case study. Due to the public profile of the Tribe Project, there is the added potential for participants to provide more socially desirable answers, and, therefore, present a more favourable image of the program. The greatest divergence of evidence was observed between the Tribe managers and the Tribe coaches and parents. In particular, there was a substantial divergence of evidence amongst the Tribe managers as a group. The nature of the job roles within the Tribe Project meant there was less anonymity attached to the Tribe managers within the case. Unavoidably, these individuals had specific job roles that were more easily identifiable than the other participants within this case study were. The public profile of the Tribe managers within this case may have led to more socially desirable answers, and could explain the divergence in evidence that was found. Despite the risk of social desirability within qualitative methodology, it provides greater depth of information than quantitative data alone can provide.

Several limitations were also identified with the use of self-report measures among the children and adolescents attending the Tribe Project. Self-report measures are criticised for their accuracy as a data collection method among children due to issues associated with the recall of information (Oliver et al., 2007). This is particularly salient among children less than 10-12 years of age (Sallis and Saelens, 2000). To minimise the potential effects of participant bias and inaccurate reporting, the questionnaire used within this case study was designed specifically to suit the youngest children in the population. The language and formatting of the questionnaire was designed to be specifically suitable for the reading age of a 7 year old.

Secondly, due to the limited sample size of participants attending the Tribe Project, as well as the fact that participants could complete multiple questionnaires to represent the multiple sports they participated in, the data collected was non-independent. Descriptive statistics alone were thus calculated. Specifically, this included the mean item scores across the two questionnaire scales. For the purposes of this research, calculating the mean item scores across the two scales was the most appropriate strategy to fulfil the research goals. Nonetheless, a more detailed analysis into the factorial validity of the scales could be conducted using factor analysis (FA). Factor analysis is a common statistical technique used to analyse the interrelationships among a large number of variables within a scale. The non-independent data that was collected using the Tribe Project questionnaires meant factor analysis was an inappropriate technique in this instance, and a larger sample of children and adolescents attending the Tribe Project would have been needed to have confidence in the stability of the estimated parameters.

# 10.4 RE-AIM Evaluation of the Tribe Project

## 10.4.1 Reach

The reach of the Tribe Project was less successful overall, as the program only reached approximately 2.5% of children and adolescents aged 6-15 years old living within BANES. The population who attended were described as white, middle-class and from an active/sporty background. Bath and North East Somerset census data revealed that as a region, BANES is less ethnically diverse than the UK as a whole. The limited ethnic disparity within BANES may somewhat account for the low representation of individuals from ethnic minority groups within the program. The prevalence of physical activity is also typically lower among individuals from ethnic minority groups (Kelly et al., 2010). Specifically, the physical activity levels of black girls have been shown in a longitudinal study to be significantly lower than those of white girls (Kimm et al., 2000). Factors relating to physical activity uptake among ethnic minority groups and the limited ethnic diversity within BANES inevitably influence the representativeness of attendees within the Tribe Project. Population level characteristics of BANES may account, to some extent, for the types of individuals reached by the program.

The limited attendance from low-income families within the Tribe Project could in part be due to cost of attending the program. Socioeconomic status has also been associated with a wide variety of social, cognitive and health-related outcomes in children (Cradock, Kawachi, Colditz, Gortmaker, & Buka, 2009; Davis et al., 2008; Salmon & Timperio, 2007). Specifically, cost has been shown as a major barrier to participation in after-school physical activity programs among youth (Pate and O'Neill, 2009). The cost of participating in the Tribe Project was an essential part of the program, due to it receiving only partial funding through Sport England. Funding is a common problem among community-based programs and an inevitable barrier to certain individuals' participation. There was a great emphasis within the Tribe Project on making sport accessible to all children and adolescents, and this was emphasised, in particular, by the Tribe managers. The program costs remained a potential barrier, nonetheless. Irrespective of individuals' interest or awareness of the Tribe Project, the cost of taking part will inevitably prevent certain sectors of the population from participating.

The limited reach of the Tribe Project may also be due to the poor advertising of the program. Word of mouth was described as the main recruitment method for the Tribe Project, thus increasing the likelihood that attendees may have had shared

characteristics. Although Tribe Project promotional material did exist, it was predominantly located within the STV on the University of Bath campus. Consequently, exposure of the Tribe Project to the wider community within BANES was reduced. Individuals living within certain sectors of BANES may have been unaware of the Tribe Project due to the location of the promotional material, increasing the likelihood that individuals with access to the University of Bath would be reached.

Demographic data collected from the questionnaires administered to the Tribe Project attendees revealed that more boys attended the Tribe Project than girls, and there was a greater representation from children aged between 7-10 years old than 11- 14 years old. The age and gender disparity within the Tribe Project is consistent with current research. Children's physical activity levels are consistently shown to decrease during the transition from childhood into adolescence (Nader et al., 2008, Janz et al., 2000, Kimm et al., 2000), and regular participation in organised physical activity becomes less frequent (Findlay et al., 2009). It is widely accepted that boys are generally more physically active then girls (Trost et al., 2002, Nader et al., 2008) and motivations to participate in sport and physical activity are consistently shown to differ across gender (Weinburg et al., 2000, Vilhjalmsson and Kristjansdottir, 2003). In particular, among older children and adolescents, boys more frequently participate in leisure time sports programs than girls do, they sustain their participation in organised physical activity and there is a higher rate of drop out amongst girls (Vilhjalmsson and Kristjansdottir, 2003). Findlay et al., 2009).

Irrespective of these known gender differences in sports and physical activity participation, however, it has previously been reported that boys and girls are both primarily motivated to participate in sport for reasons of fun and enjoyment (Sirard et al., 2006, Casey et al., 2009a). The social aspects of sport are more frequently reported as predictors of participation and non-participation than the perceived health benefits (Allender et al., 2006). Consistent with this research, all the children and adolescents reported attending the Tribe Project for reasons of fun and enjoyment, and this was demonstrated irrespective of gender or age. Unlike the findings from Allender et al (2006), all the children and adolescents attending the Tribe Project also reported the pursuit of health and fitness-related goals as a determinant of their participation. This was shown to be the case irrespective of gender, although the mean score for this item was slightly higher among the girls. Specifically among boys attending the Tribe Project, enjoyment-related factors were primary reasons for participating, whereas the motivation to improve and join a team was less important as a determinant of their participation. In comparison to the boys, competence drives, skill development and

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health and fitness goals were more important reasons for the girls to attend the program.

The gender differences observed in sports participation may also be attributed to possible gender differences in social influences (Keresztes et al., 2008). Sirard et al (2006) reported that boys were more motivated to participate in sports programs based on competitive drives, social benefits and health and fitness goals. Girls however were more consistently motivated to participate in sports programs for social and skill benefits, followed by competitive drives and health and fitness reasons (Sirard et al., 2006). In line with the findings from Sirard et al (2006), the social aspects of meeting new people, the pursuit of fun and enjoyment and health and fitness goals were more influential on the girls' participation in the program than among the boys. Specifically, the pursuit of health and fitness-related goals was most important to the adolescent girls. These findings are consistent with more recent research, which showed that adolescent girls were generally motivated to participate in sport and physical activity based on outcome goals relating to health and social benefits (Casey et al., 2009a). Conversely, however, unlike the findings from Sirard et al (2006), factors influencing the boys' participation in the Tribe Project the most were based on fun and enjoyment, and health and fitness-related goals. Competence drives were less important as a determinant of their participation in the program, and the motivation to improve and join a team was more important to the girls. The drive for recognition and competitive involvement in sport has previously been observed amongst adolescent girls. Being selected for a team competition was reported as an important marker for improvement in their ability and skill level in the activity (Flintoff and Scraton, 2001). It may be, therefore, that girls are motivated by the social recognition attached to competition, possibly accounting for the findings in this case study.

Findings from the Tribe Project also revealed that the role of friends as a determinant of individuals' participation in the program was small. However, the influence of this factor was slightly more important to the older children and adolescents' participation in the Project. Participation of peers in physical activity has been more closely related to adolescents' physical activity behaviours than the role of the family (Keresztes, Piko, Pluhar, & Page, 2008; Lown & Braunschweig, 2008). Likewise, the attendance of a sibling, the influence of family and the family's' activity level predicted the younger children's participation in the Tribe Project slightly more than the older children and adolescents. This is unsurprising as younger children spend a greater proportion of their time in the presence of their parents, and have an increased dependency on their parents for opportunities to be active (Alderman et al., 2010). During adolescence,

greater social influences become more prevalent and adolescents are influenced by a wider range of influences than those primarily at the home level.

The children and adolescents who participated in the Tribe Project were consistently described as being physically active prior to attending, and typically coming from more active families. It has been shown previously that more active children are more likely to participate in out-of-school sports programs (Sirard et al., 2006), and the results from the Tribe Project are consistent with this. Although parents attending the Tribe Project were described as typically being physically active, there is mixed support for the direct influence of parents' activity levels and the relative activity level of their children (Gustafson and Rhodes, 2006). Casey et al (2009) showed that family members who were physically active themselves, or regularly engaged in sports activities, promoted girls participation in physical activity. An increase in encouragement and provision of opportunities to be active were typically observed among these families (Casey et al., 2009a). Although the evidence from Casey et al (2009) relates specifically to adolescents, in general more positive associations are observed between parents and children's activity levels than with adolescents (Ferreira et al., 2007; Hanson & Chen, 2007; Van Der Horst et al., 2007). Consistent with this case study of the Tribe Project, the influence of a parent on individuals' attendance within the program was reported to be slightly higher among the younger than older children and adolescents.

The perceived higher activity levels among participants in the Tribe Project may also be associated with the types of schools that participants attended. The majority of participants were described as attending local private schools in which sport and physical activity were heavily promoted. This included increased access to a range of sports during PE, along with school-based policies that were supportive of a physically active environment. Adolescents' experiences of school-based PE have been positively associated with their participation in after-school and community-based physical activity and sports programs (Brooks and Magnusson, 2006). In particular, adolescents who had not previously engaged in out-of-school activities reported that experiences of PE which supported their psychological and emotional development promoted increased participation in community-based physical activity or sports programs (Brooks and Magnusson, 2006). Nonetheless, increases in physical activity within the school environment have been infrequently shown to transfer into leisure time activity (de Meester et al., 2009, Dobbins et al., 2009). The type of school, whether public or private, has, however, been positively associated with child and adolescent physical activity (de Vet et al., 2010). School policies which are supportive of physical activity have also been positively associated with children's physical activity participation

(Ferreira et al., 2007). Opportunities for physical activity and access to a wide range of sports are typically greater within private schools due to increased resources and funding available. It may be, therefore, that the children and adolescents attending the Tribe Project were more likely to attend a school supportive of physical activity, possibly influencing their uptake in the Tribe Project.

Although the Tribe parents' physical activity levels have been associated with their children's activity behaviours, a positive perception of the facilities and coaching offered within the program was also associated with the parents' reasons for attending. Parental perceptions of environmental factors are crucial to the physical activity levels of children and adolescents. Children and adolescents are still heavily dependent on their parents for access to physical activity resources, therefore negative perceptions of environmental factors can potentially restrict physical activity participation (Carver et al., 2005). It has previously been shown that parents' choice of recreational park was based on their perception of the functionality and overall appeal of the facility, irrespective of their physical proximity to it (Tucker et al., 2007). Similarly, the convenience and compatibility of sports programs with parents is a crucial factor in their decision to participate. The timings of the Tribe sports sessions meant individuals residing in closer proximity to the University of Bath campus were more likely to attend, as they were able to access the weekly sports sessions immediately after the school day finished. Although all the children and adolescents living within BANES were potentially eligible to participate in the Tribe Project, organisational factors relating to the sports session timings could prevent individuals who live further away from the University's campus from attending. This is a major barrier to the potential reach of the program and consequently affects the representativeness of the attendees. Understanding the appeal of community-based programs to certain individuals over others can help inform marketing strategies, and highlight potential disparities in recruitment and program awareness (Klesges et al., 2008).

From a public health perspective, the Tribe Project is failing to reach an important sector of the BANES population who may benefit significantly from participation. This includes children and adolescents who are less active, from less active families and may not be able to afford the cost of participation. Failing to reach individuals who are not physically active or do not come from active families is a major limitation to the reach of the Tribe Project, and an inherent weakness in the program's potential impact on child and adolescent physical activity.

#### 10.4.2 Effectiveness

Key evaluation questions surrounding the effectiveness of the Tribe Project were guided by the core objectives of the program. The core aims of the Tribe Project were to make a range of sports accessible to all children and adolescents, to get children and adolescents to improve and learn new skills, to use students as positive role models, to provide a fun and safe environment for children and adolescents to enjoy sport and to create pathways from recreational to elite sport within the community. The definition of program success among the Tribe managers and coaches was primarily based on the number of children attending the Project and rate of participant retention. The Tribe Project was perceived by all participants as a successful program to promote physical activity, as a combination of social, psychological and physical benefits was reported following participation, with the omission of any negative or unintended outcomes. The Tribe Project successfully provided a fun and enjoyable environment in which to participate in sport, developed participants' skills and the student coaches were shown to be positive role models for the attendees. There were no formal outcome measures within the Tribe Project and retention rates were inconsistently recorded within the program. The absence of measurable outcomes meant the efficacy of the Tribe Project was determined based on the extent to which the program aims were achieved, and the perceived outcomes following participation. According to the RE-AIM criteria, therefore, the Tribe Project was only moderately effective as a program to promote physical activity.

Motivations to participate in sport have previously been associated with enjoyment and the development and maintenance of social support networks (Allender et al., 2006). Likewise, social interactions with the coach have also been identified as having a significant influence on child and adolescent experiences within sport (Allen, 2003). The Tribe Project coaches were identified as a major strength to the program, and they were a key influence on the children's, adolescents' and Tribe parents' participation in the Project. Amongst both the children and adolescents attending the Tribe Project, a good rapport with the Tribe coach, the coach's ability, improvement within the sport and the pursuit of health and fitness goals were important for their continued participation. Consistent with this finding, positive role modelling and social support from PE staff have previously been associated with increased physical activity levels amongst adolescents during PE (Pate et al., 2005). They have also been positively associated with the uptake of supervised physical activity outside of the school environment among adolescents (Simon et al., 2006). Sirard et al (2006) showed that sports program coaches were linked to program attrition. Adolescents' reasons for drop-out were

associated with poor quality coaching, favouritism within the group and placing too much emphasis on winning (Sirard et al., 2006). Although attrition was not recorded within the Tribe Project, the Tribe coach was important to both the children and adolescents attending the program. This is consistent with previous research, which has shown that the quality of children's and adolescents' sport experiences are associated with the nature of the coaching they receive (Bailey, 2005). Potentially, coaches who are trained to understand the differing physical, emotional and social needs of the individuals they are coaching (Sirard et al., 2006) may be necessary to ensure adolescents' sustained participation in out-of-school sports programs.

Interventions, which use PE specialists to deliver the physical activity component of the program, have shown more positive effects on child and adolescent physical activity levels than regular PE teachers have (McKenzie et al., 2001; Sallis et al., 1997). Likewise, interventions which have promoted enjoyment of physical activity during school-based PE have previously been associated with increased physical activity levels of children (Jurg et al., 2006, Verstraete et al., 2006), and adolescent girls (Pate et al., 2005). In particular, among adolescent girls, involvement in physical activity during and outside of school has been more closely linked to their interpersonal relationship with the teacher or coach, as opposed to the physical activity itself (Flintoff and Scraton, 2001). It may be, therefore, that the relationship between participants attending the Tribe Project and their coach mediated their experiences of the Project. If the rapport between the Tribe coach and children and adolescents attending the Project is so significant, this has important implications for the effectiveness and individual-level maintenance of the Tribe Project.

Despite providing a fun and supportive environment to engage in physical activity, the limited reach of the Tribe Project meant its fundamental aim of providing access to a range of sports for *all* children and adolescents living within BANES failed to be fully achieved. Nonetheless, the Tribe Project successfully provided access to a range of competitive and non-competitive sports, and traditional and non-traditional physical activities, so in this respect its core aim was partly achieved. Providing children with a range of different types of physical activities and sports has been shown to encourage activity participation (Flintoff and Scraton, 2001). The availability of non-traditional sports was shown to minimise competency barriers associated with activity participation among adolescent girls, leading to an increase in the uptake and sustainability of their physical activity participation (Casey et al., 2009a). In particular, during PE, adolescents have been shown to value access and choice in participating in a range of physical activities, and prolonged participation in physical activity has been closely linked to the

provision of a wider choice of activities (Brooks and Magnusson, 2006). The range of sports offered within the Tribe Project may have positively influenced both the children's and adolescents' sustained participation in the Project, potentially increasing the program effectiveness and individual-level maintenance as a result.

Although the Tribe Project did not specifically aim to promote factors over and above that of sports participation, various social and psychological benefits were reported by the Tribe managers, coaches and parents. These included the successful promotion of sportsmanship, an increase in the awareness of health and fitness and an increase in the sociability and confidence of the participants. Interventions which have targeted physical activity-related knowledge, attitudes, self-concept, self-efficacy and motivation have shown some positive increases in the physical activity levels of adolescents within school (Haerens et al., 2006, Wilson et al., 2005), as well as outside of the school environment (Simon et al., 2006). Given the link between these factors and physical activity participation, the effectiveness of the Tribe Project was potentially increased. There is limited evidence, nonetheless, for the direct effect of increases in health and activity-related knowledge, attitudes and self-efficacy beliefs and that of child and adolescent physical activity levels (Kelder et al., 2005, Goran and Reynolds, 2005). Positive increases in the knowledge, self-efficacy and self-concept for physical activity are often reported in conjunction with increases in physical activity levels, not necessarily as a predicting factor. This is consistent with evidence from the Tribe Project. The perceived social and psychological benefits following participation were described in addition to sustained participation in the program, and were not necessarily a preceding factor.

Despite recognition of the positive outcomes following participation in the Tribe Project, the Tribe parents suggested that the receipt of a reward for doing well was important for sustained physical activity participation. This is contradictory to the ethos of the Tribe Project, however. Reward systems were described by some of the Tribe managers and coaches to be associated with competition and for this reason were discouraged within the Project. In particular, among the Tribe parents, recognition and praise for improvement and success were perceived as paramount to children's and adolescents' sustained participation in sport. Receiving praise and appreciation during physical activity has previously been shown to play a significant role in the promotion of physical self-confidence among adolescents (Brooks and Magnusson, 2006). This inevitably leads to more sustained physical activity participation between girls' sustained participation in physical activity and reward systems was shown by Horne et al (2007). Children's physical

activity increased as a result of receiving verbal praise and tangible rewards, with such increases maintained post intervention amongst girls (Horne et al., 2007). However, reward systems have appeared most effective in increasing physical activity when combined with behavioural goals (Cameron et al., 2001). Goldfield et al (2006) reported significantly greater increases in physical activity among children who had both behavioural goals and rewards contingencies, such as TV viewing, compared to children who didn't (Goldfield et al., 2006). This has important implications for increasing the effectiveness of the Tribe Project. This type of reward strategy may be necessary to lead to sustained physical activity from childhood through to adolescence. Although contrary to the ethos of the program, to promote recreational sport, attaching specific physical activity goals with a specific reward system within the Tribe sports sessions may be crucial to ensuring its long-term effectiveness and individual level impact.

These findings have important implications for the overall effectiveness of the Tribe Project. Despite the omission of any negative outcomes following participation, the Tribe parents evaluated the program's effectiveness based on improvements in the skill level and physical ability of their child, in addition to the social and psychological benefits of participation. Although not specific aims of the Tribe Project, the psychosocial benefits of participation played a significant role in the Tribe parents' evaluation of the program's impact. This is consistent with the findings from Alderman et al (2010) who reported that parents wanted their child's participation in organised physical activity to lead to increased motor skill development, fun and enjoyment, increased physical fitness, self-confidence, self-esteem relating to success and failure and enhanced mental health. To ensure the Tribe Project's effectiveness, therefore, promotion of individual-level factors such as social and psychological benefits, in addition to physical activity participation, may also be necessary.

# 10.4.3 Adoption

In addition to the individual characteristics of children and adolescents attending the Tribe Project, contextual factors also influence the program's potential impact. These include differences in adherence to the Tribe Project's principles at the setting level, and characteristics of the community organisations linked to the program. The adoption rate of the Tribe Project at the setting level was less successful overall. The Tribe sports adhered to the core Tribe Project principles to varying degrees, and there was a lack of unity within the program as a whole. The Tribe sports functioned independently of one

another and adopted the Tribe Project aims, objectives and ethos to differing degrees. In particular, it was unclear whether the Tribe Project was aiming to promote recreational or competitive sport.

According to Klesges et al (2008), data on organisations or settings that fail to be included in the intervention or reject invitation to participate is necessary to increase the appropriateness of the intervention to wider populations. The adoption rate of the Tribe Project at the setting level was less successful as a result, and this directly influenced the Tribe parents' evaluation of the program and their perception of program efficacy. Irrespective of the potential benefits to participation in the program, the limited adoption of the Tribe Project at the setting level was more closely related to the Tribe parents' perceived effectiveness of the program participation and representativeness at the setting level are equally as important as at the individual level (Glasgow et al., 2006). Specifically relating to the Tribe Project, factors associated with the setting level adoption of the core program principles were directly associated with the parents' perceived effectiveness of the program overall.

Unlike setting level adoption, the rate of adoption within the BANES community was highly successful overall. This assessment was based on evidence that the Tribe Project had established links with 95% of the primary and secondary schools within BANES. Delivery of the Tribe Project sports coaching within local schools meant children and adolescents who may not have been exposed to the recruitment material could still potentially be reached. There was no data on the representativeness of the schools that adopted the Tribe sports coaching. However, they were described as being supportive of sport and physical activity, and had the funding and resources to deliver the program. The representativeness of the sites adopting the Tribe Project was attributed largely to the financial costs involved with adopting the program. Schools within BANES whose pupil catchment area reached children from lower income families were often excluded from adopting the Tribe sports sessions. This exclusionary factor was not consistently reported across all of the sports delivered through the Tribe Project, however.

The adoption rate of the Tribe Project within the community was also mediated by the attitude of the schools towards physical activity promotion. Schools that had a positive attitude towards physical activity and health were more likely to implement the Tribe sports sessions. Schools that placed less importance on physical activity and sport, or had restricted facilities to deliver the Tribe sports coaching, were less likely to adopt the

program. The inclusionary and exclusionary criteria of program sites were not formally monitored within the Tribe Project, yet these findings are consistent with the majority of intervention studies (Glasgow et al., 2002, Klesges et al., 2008). Information on setting level inclusionary criteria, and the representativeness of intervention agents who participate and decline, is not widely reported despite being an important part of program adoption (Klesges et al., 2008, Glasgow et al., 2002). Although the Tribe Project was successfully adopted within the community, certain barriers were recognised as limiting the successful delivery of the Tribe sports sessions within local schools. Barriers were largely related to the practical challenges such as the resources available within schools, time restrictions, the cost of delivering the Tribe coaching and the presence of cheaper sports coaching programs within BANES. This meant uptake of the Tribe Project outside of the school environment was reduced.

Cost is a major barrier to the long-term implementation and adoption of sport and physical activity programs within schools. The restricted time for more PE lessons, competing pressures of academic performance, a lack of resources for physical activity and a non-supportive school environment are all barriers to uptake (Naylor and McKay, 2009). The structure of the school's funding system, combined with the cost of the Tribe Project coaching, was a major barrier to uptake among certain schools within BANES. Specifically, this related to schools without private funding. Creating a positive and enjoyable experience of the sport within schools was also difficult due to the varying class sizes, the mixed motivations of the children, challenges associated with disciplining the class and the inadequate sports facilities available. These factors reduced the effective delivery of the Tribe sports within certain schools, and negatively affected the likelihood of uptake within the Tribe Project. These findings are consistent with program evaluation research. If a program is demanding on resources, funding or time, or requires a high level of expertise to implement, the likelihood it will be adopted within other settings is greatly reduced (Glasgow et al., 2006). The Tribe Project was, however, easy to implement as it required no additional expertise and could be adopted with little disruption to the schools daily functioning. The sports facilities within the University of Bath's STV meant school sports events could be easily hosted, and the lack of competition within BANES from other sports programs meant the Tribe Project was successfully adopted within the community.

## 10.4.4 Implementation

Implementation is closely related to issues of adoption. The inconsistent adoption of the Tribe Project principles at the setting level was reflected in the implementation of the program overall. The implementation of the Tribe Project was shown on various levels to be unsuccessful. The Tribe sports sessions were implemented with limited structure, planning or clear aims and objectives, and the poor organisation of the Tribe coaches meant delivery of the program was inconsistent. Specifically, certain participants attending the Tribe Project had no awareness they were part of the "Tribe Project", only the specific sports sessions they attended. The lack of unity within the Tribe Project meant the children and adolescents were not always included within the group, and this was negatively associated with their experiences of the Tribe sports sessions.

Irrespective of gender or age, the structure of the Tribe sports session was important to all the children and adolescents attending the program. This related to the group dynamics, the role of the coach and being socially included. All of these factors were reported to be more important to the girls attending the program than the boys. Only among the boys was the punctual arrival of the Tribe coach to the sports session more important to their participation in the program. This is consistent with previous research which has shown that perceptions of belonging among adolescent girls are related to their relative interest and enjoyment of sport (Allen, 2003). Social inclusion is understood as a sense of belonging and acceptance. Meaningful inclusion, social engagement and cultural competence are all important to maintain children's motivation in sport (Allen 2003). Children are more likely to maintain participation in sport if they perceive that they are included in the group (Allen, 2003). Social acceptance and affiliation have also been linked to perceived and actual physical competence in physical activity (Smith, 2003). The development of physical competence has been shown to have a important role in individuals' self-esteem, confidence and peer acceptance within sport (Bailey, 2005).

This is consistent with evidence from within the Tribe Project. Although social inclusion was perceived as more important among the girls attending the Tribe Project, being with children of similar age and ability within the Tribe sports session was described by the Tribe parents as important to all the attendees' sustained participation. Children who were not 'sporty' or lacked physical competence in the activity were considered more likely to drop out. According to Bailey (2005), the development of physical competence within sport may be a necessary condition for feelings of social inclusion. Social

inclusion appears to be of significant importance to the implementation of the Tribe sports sessions, and may mediate individuals' sustained participation in the Project. Failure to fit into the social grouping within the Tribe sports sessions highlights the critical role of the Tribe coaches in the implementation of the program. Positive sport environments can be created by coaches who a build a sense of unity and cohesion within the group (Allen, 2003). This is important firstly, to maintain consistency and fidelity to the program delivery, but also to mediate factors likely to contribute to feelings of competence and peer-acceptance within a sport. The social relationships formed between children and adolescents have been identified as a primary socialising agent within physical activity contexts. Peers can significantly contribute to the quality of physical activity experiences and the likelihood of continued participation (Smith, 2003). If physical competence is associated with greater feelings of social inclusion and peer acceptance, less competent individuals within the Tribe sports sessions may be less likely to maintain participation in the program. This limits the potential impact of the Tribe Project at both the individual and organisational level.

The implementation of the Tribe Project also influenced the Tribe parents' experience of the program. Parental involvement was not an integral part of the Tribe Project, yet appeared significant to their perceptions of successful implementation of the program overall. The Tribe parents described feeling uninformed and on the periphery of the program, whilst having no 'concept' or understanding of the Tribe Project in its entirety. This negatively affected their support for the Tribe Project and their evaluation of the program's overall impact. Due to the important role parents play in facilitating child and adolescent physical activity behaviours (Oliver et al., 2010, Beets et al., 2010) it is unsurprising that parental perceptions of inclusion and integration within the Tribe Project mediated their experiences of the program. Engaging parents with the implementation and delivery of the Tribe Project may positively influence their children's sustained participation in the program, and, therefore, the long-term effectiveness of the Project as a result.

Organisational factors appeared particularly important to younger children attending the Tribe Project. Evidence for the coach being on time to the session, the sessions not being too long or short and seeing the same coach each week were all reported as moderately important to individuals attending the program. Weaknesses associated with the implementation of the Tribe Project were also attributed to the organisation of the Tribe coaches. This is a major challenge for the Tribe Project as the individuals who deliver the program are predominantly students studying at the University of Bath. Due to academic demands competing with their availability to coach within the Tribe Project,

a greater amount of unreliability and inconsistency resulted. Furthermore, the University holidays do not coincide with the primary and secondary school holidays. This means that there is a six-week time frame every year where regular Tribe coaches may be absent, yet the Tribe sports sessions are nevertheless still required to be delivered. If children and adolescents benefit from a sense of belonging, social inclusion and peer acceptance, inconsistencies in the Tribe sports sessions and limited organisation of the Tribe coaches restrict the successful implementation of the Project. The Tribe parents recognised the benefits following their children's participation in the Tribe Project, yet without communication and the facility to provide feedback as part of the program, their evaluation of the Project's implementation was negatively affected.

These issues relate directly to the potential long-term impact of the program. The inconsistent delivery of the Tribe Project invariably limits its generalisability to wider populations. The exact amount of adaptation that occurred within the Tribe Project is unknown, and the mediating effect this has on the program's efficacy is variable. This is a key factor in explaining potential outcome variability of health promotion interventions (Klesges et al., 2008), as interventions implemented consistently are likely to produce far greater generalisability (Glasgow et al., 2006). Improving the implementation of the Tribe sports sessions could potentially lead to more sustained participation, increased perception of program effectiveness and an increased likelihood of short and long-term benefits following participation.

## 10.4.5 Maintenance

Assessments of individual-level maintenance are critical to estimate the extent of an individual's behaviour change (Glasgow et al., 2006). According to Glasgow et al (2006), this may in fact be more important than maintenance issues relating to program sustainability at the organisational level. Maintenance of the Tribe Project at the individual level was moderately successful as the attendees were consistently described as joining at a young age, participating within multiple sports for several years and benefiting because of the Tribe Project, in addition to the Tribe parents' continued support for attendance within the Project. Parental support appeared instrumental to sustained participation. Specifically, this included tangible support for the provision of access to the program, and intangible support in terms of encouragement. The cost of attending and necessary transportation to the sports sessions meant instrumental support from

parents was essential to the uptake and maintenance within the Project. This is consistent with current literature. Instrumental support was shown to be significantly positively-related to adolescents' total physical activity, participation in out-of-school sport teams and physical activity classes (Hoefer et al., 2001). Instrumental support can also act as a control on children's access to sporting facilities by regulating their opportunities to be active (Pugliese and Tinsley, 2007). Barriers to participation in physical activity programs have also been shown to include high program costs and restricted access to program facilities (Allender et al., 2006). Access to the Tribe Project and financial support for the Tribe sports sessions, may potentially influence individuals' sustained participation in the Project and affect long-term activity behaviours as a result.

Intangible support such as parental encouragement, verbal support and presence at the Tribe sports sessions may also have influenced the individual-level maintenance of the Tribe Project. Although not active participants in the Tribe sports sessions, evidence during interviews revealed that, the Tribe parents had an active role within the Tribe Project. This included encouraging their child's participation within the program and regularly attending the Tribe sports sessions. Positive encouragement has previously been associated with an increased likelihood of continued participation in physical activity (Prochaska et al., 2002). Children and adolescents are also twice as likely to be physically active if they have a parent who is supportive of their physical activity participation (Pugliese and Tinsley, 2007). Children from parents who are present during physical activity, but not directly involved, have been more active as a result (Duncan, Duncan, & Strycker, 2005; Prochaska, Rodgers, & Sallis, 2002). This initial exposure by parents has been associated with an increased likelihood that children continue participation in sport (Eime and Payne, 2009). It may be that parental support for participation in the Tribe Project, and their physical presence during the Tribe sports sessions, is vital to the individual-maintenance of the program. Increases in parents' tangible and intangible support for community-based programs such as the Tribe Project could therefore potentially lead to successful maintenance of physical activity at the individual-level.

Irrespective of these findings, data on participant retention and dropout was absent from the program, and neither the reasons for dropout nor long-term program effects were measured. As such, the long-term outcomes of the Tribe Project are unknown, and the influence of individual and organisational level factors as moderators on the long-term program effects cannot be ascertained. The lack of long-term follow up measures with the Tribe Project is a common omission among physical activity interventions. Maintenance is particularly difficult to measure in real-world interventions as funding is often restricted to 2 to 3 years. This prevents longer term follow up measures 5 to 6 years post-implementation, which are so frequently needed (McKenzie et al., 2007). Estimates of maintenance remain useful, however, as a way to predict factors that may impede the sustainability of such interventions.

The organisational level maintenance of the Tribe Project was also moderately successful. This was attributed to the fact the program was institutionalised within the University of Bath and was a key contributor to Bath University's program of community sport. Pathways from the Universities Tots programs into the Tribe Project, and participation pathways within the Tribe sports, were associated with individuals' sustained participation in physical activity. These effective participation pathways increased the organisational-level maintenance of the Tribe Project as a result. The organisational level maintenance of the Tribe Project was reduced, nonetheless, based on pathways after the Project and into the community. Pathways after the Tribe Project were not consistently available across every Tribe sport, and were largely competitive routes only.

Providing opportunities for a variety of competitive and non-competitive, individual and team-based activities reduces the potential negative impact of barriers to participation such as lack of interest and competitiveness of organised team sports (Sirard et al., 2006, Gorman et al., 2007). Previous research has demonstrated that providing adolescents with a choice and preference for the context of their sport, and fostering an active role within PE, increases adolescents' motivation and willingness to participate in sport (Brooks and Magnusson, 2006). Through increasing autonomy in the choice of physical activity, feelings of empowerment to develop skills for sustained participation in sport or physical activity may, therefore, be enhanced (Brooks and Magnusson, 2006). Intrinsic motivation and positive self-concept for physical activity may also be increased as a result (Wilson et al., 2005).

Crucially, however, the links between the Tribe Project and sports clubs within BANES that did exist were ineffectively communicated to participants within the Project. Documentary evidence highlighted that a breadth of links existed between the Tribe Project and community-based sports clubs; however, during interviews it was revealed that these links were insufficiently promoted to the program participants. The organisational-level maintenance of the Tribe Project may be more closely related to the promotion and awareness of community-based links, as opposed to the omission of these links in the first place. Eime et al (2009) identified that in instances where multiple sports organisations existed in conjunction with school-based sports programs, they

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often worked in isolation from one another. This was shown despite common organisational goals. School-based sports programs implemented in this isolated way significantly reduced their potential to promote and sustain activity participation within the community (Eime and Payne, 2009). Poor integration of such programs into the community potentially limited the likelihood of a population-level behaviour change (Eime and Payne, 2009). It was argued that one of the greatest challenges to increasing participation in community-based sports programs was the establishment of cohesion between schools and the wider community (Casey et al., 2009a). Through a more cohesive approach to physical activity promotion, partnerships between community sports programs, schools and local sports clubs may facilitate participation in sport and physical activity during youth (Eime and Payne, 2009, Gorman et al., 2007).

To achieve long-term health benefits following participation in the Tribe Project, it may necessary to encourage participants to have an active role in the sports they participate in. This translates as the provision of access to both recreational and competitive sports pathways before, during and after the program. Access to recreational and competitive sports clubs following participation in the Tribe Project was perceived by the Tribe parents as important to children and adolescents attending the program. Insufficient provision of both recreational and competitive participation routes may encourage some individuals to cease participation in sport. This has important implications for the long-term maintenance of the Tribe Project, and questions the potential long-term benefits of the program as a result. As the option for recreational and competitive sport was not consistently available following participation in the Tribe Project, the long-term impact of the program at the individual level may be reduced.

# 10.5 Key Strengths and Future Recommendations for the Tribe Project

This in-depth evaluation of the Tribe Project has revealed various strengths and weaknesses attributable to all five dimensions of the RE-AIM framework. The core recommendations to improve the Tribe Project were summarised in an executive summary, presented to the Tribe Project managers on completion of this research (Appendix N). The weaknesses and, therefore, recommendations to improve the Tribe Project according to the RE-AIM dimensions are discussed below.

#### 10.5.1 Reach

Due to logistical and methodological challenges, frequently evaluations are based on program participants who are easy to reach, track or are easily motivated (Glanz et al., 2002). As a result, the predicted reach for intervention implementation is often unrealistically high, and fails to include a relevant or representative sample (Glanz et al., 2002). A strategy to overcome recruitment limitations within health promotion interventions is to over-recruit high-risk subgroups along with limited exclusionary criteria (Glanz et al., 2002).

Despite limitations with the overall reach of the Tribe Project, the program successfully reached a relatively equal proportion of girls and boys living within BANES. Consistent with current research (Vilhjalmsson and Kristjansdottir, 2003, Findlay et al., 2009), more boys were reported to be attending the Tribe Project compared to girls; however, this gender disparity was still small. This highlights a potential strength of the Tribe Project as a community-based sports program, as it appealed to both boys and girls in BANES. despite the known differences in sports participation across gender. The extensive facilities and expert coaching provided as part of the Tribe Project were also consistently described as a major strength of the program. Not only was this positively associated with the reach of the program, it was also attributed to promoting individuals' sustained participation in sport. This was also associated with the positive image of Bath University and the reputation of Team Bath. The positive perception of Team Bath was a motivation for the Tribe parents to attend the Tribe Project, and this influenced their expectations relating to the quality and impact of the Tribe Project overall. Parental perceptions of physical activity settings are crucial to their decision to engage. The positive image of Team Bath and the University's STV were identified as a key strength to uptake within the Tribe Project. As children and younger adolescents are still heavily dependent on their parents for access to physical activity programs (Welk et al., 2003), parental perceptions of the Tribe Project are key to promote sustained participation in the program.

The representativeness of participants and the breadth of uptake within the Tribe Project were major challenges to the reach of the program nonetheless. A core aim of the Tribe Project was to make the program accessible to all children and adolescents aged between 7-14 years living within BANES. However, the limited reach of the program meant this core aim could not be achieved. Children who were physically active prior to attending were over-represented within the Tribe Project, and attendance from less active children and adolescents was less likely. As these children and

adolescents represent a target population for physical activity and health promotion, the Tribe Project is failing to reach a key group of young people. Failure to target specific groups according to the services most likely to be appealing, through different recruitment methods, may result in limited uptake. To increase the reach of the Tribe Project the program's target population needs clarification. Clarifying the target population will enable the rate of attendance among potentially eligible participants to be monitored. Similarly, maintaining a record of the Tribe Project attendees would enable tailoring of the program to reach certain groups within BANES. Failure to identify a specific target audience in this way reduces the potential for effective recruitment within the Project.

Secondly, the breadth of the advertisement and promotion of the Tribe Project within BANES needs to be increased. Taking a proactive approach to marketing the Tribe Project beyond that of primarily within the University of Bath campus may increase the accessibility of the program. Parents have a major role in the uptake and maintenance of physical activity behaviours, acting as 'gatekeepers' to physical activity resources (Welk et al., 2003). Evidence from interviews that the Tribe Project may be perceived as elitist and expensive was perceived as a potential barrier to participation. Likewise, childcare was described as a key motivation for the parents to attend to the Tribe Project, despite the negative perception from the Tribe managers and coaches. If parents mediate children's involvement in physical activity as a direct result of their own perceptions and support for physical activity, then determining the strength of this influence could help promote the uptake and maintenance of a physically active lifestyle (Alderman et al., 2010). Exploration of parental perceptions of the Tribe Project may be a key strategy to increase participation from a more diverse population, and broaden the reach of the program to children and adolescents who are less active.

The ethos of the Tribe Project is to encourage individuals who want to participate in physical activity and sport, yet the negative perceptions associated with attendance for childcare reasons may limit participation from a key sector of the population. Specifically, children and adolescents who are not primarily motivated by sports participation may not be reached. If community-based interventions are to appeal to parents, the image and appearance of the program site may be critical to uptake. Every interaction needs to be considered as important in promoting physical activity participation, irrespective of the motivations of the parents whose children attend. Increasing the accessibility of the Tribe Project to individuals living within BANES and providing a more systematic way of quantifying the extent of the programs uptake would increase the reach of the program overall.

#### 10.5.2 Effectiveness

Effectiveness is one of the most challenging RE-AIM dimensions to collect information on in real-world settings, due to the lack of robust information on program impact (McKenzie et al., 2007). Calculating the effectiveness of the Tribe Project was strengthened by contextual information provided during interviews and evidence from the other RE-AIM dimensions relating to implementation and individual level maintenance. Evaluation of the Tribe Project's effectiveness was guided by its accomplishment of the program's core aims and objectives. Based on this criterion, the Tribe Project was moderately effective as it successfully met all of the program aims, and only positive outcomes following participation were described. The Tribe Project successfully provided a fun and enjoyable environment in which to participate in sport. developed participants' skills and the student coaches were shown to be positive role models to the attendees. The Tribe Project was consistently described as a successful program to promote physical activity and sport, and the wide range of sports it provided was associated with individuals' sustained participation in the program. The definition of program success was based on attendance within the program, monetary profit gained and children's positive experiences of the Project. Based on these criteria, the program was deemed successful.

The provision of a wide range of both traditional and non-traditional sports has previously been shown to encourage physical activity participation (Flintoff and Scraton, 2001), and to increase the uptake and sustainability of the physical activity participation among adolescent girls (Casey et al., 2009a). The Tribe Project was unique in this respect as it provided access to variety of ten different sports within one complete program. However, the lack of program outcomes within the Tribe Project substantially limited the overall effectiveness of the program. This reduces understanding of the program's impact and the mediators that may influence the long-term outcomes. Inevitably this prevents conflicting or ambiguous results to be isolated, nor control conditions to rule out alternative hypotheses (Glanz et al., 2002). A way to overcome this is to assess a broad set of program outcomes, including possible negative effects, and measures of hypothesised mediators. Using a subgroup analysis, moderator effects could be isolated and a control condition could be implemented to assess the successful attainment of specific program goals (Glanz et al., 2002).

According to Glanz et al (2002), a limitation in assessing the effectiveness of programs in applied settings is that assessment of the program impact is too narrow, whereby measures of potential mediating variables on the program effects are omitted. A major 298

limitation to the Tribe Project's potential effectiveness was that standardised feedback and evaluation procedures were not in place, nor was there a formal measure of program success. Despite evidence from interviewees that the Tribe Project had a positive impact, no formal measures of individual-level outcomes were reported. The criterion for program success was the monetary profit gained. To increase the potential effectiveness of the Tribe Project the aims and objectives of the program at the individual and organisational level need clarification. Establishing clear program goals would enable tracking of outcomes following participation in the Project. Implementing feedback and evaluation procedures as part of the Tribe Project would also provide a way to monitor the program effects. Monitoring of both the positive and negative effects following participation in the program would be feasible as a result.

## 10.5.3 Adoption

Although high rates of adoption are crucial to issues relating to external validity, unless the adoption of such programs leads to increased physical activity participation, the long-term impact of the program may be limited. Challenges to adoption include the program being studied only in high-functioning optimal settings or used in academic settings only (Glanz et al., 2002). According to Glanz et al (2002), too few health promotion interventions have been conducted in representative, real-world settings (Glanz et al., 2002). By involving a broad range of potential program sites during the initial design phase of the intervention, reports on setting exclusions, participation and representativeness becomes more feasible (Glanz et al., 2002). Adoption of the Tribe Project within the BANES community was the only dimension of the RE-AIM framework that was highly successful overall. Reasons for successful program adoption at the community level were largely attributable to the expertise, facilities and opportunities that the Tribe Project provided access too. Specifically, this was related to the range of sports facilities available within the University of Bath's STV to host youth sports events, and the fact the Tribe coaching could be adopted with little disruption, extra cost or expertise to the schools' daily functioning. A key strength of the Tribe Project, which potentially increased the likelihood of program adoption, was the limited competition from other sports programs within BANES.

Whilst the Tribe Project is a real-world example of a community-based sports program, the rate of program adoption was restricted by the unavailability of data accounting for the representativeness of program sites. Likewise, the mixed adoption of the program at the setting level was negatively associated with the program's implementation overall. To increase the adoption rate of the Tribe Project, a record of the organisations within BANES that chose to, and chose not to, adopt the Tribe Project needs to be maintained. This should include data on the shared characteristics of these organisations. This would enable the adoption of the Project within the community to be evaluated, and barriers to its successful implementation to be identified. Sites less likely to adopt the Tribe Project could therefore be targeted specifically by challenging the barriers to its successful implementation. Likewise, to increase the Tribe sports' adherence to the core Tribe Project principles, the program aims and objectives need clarification. Establishing clear program goals, and communicating these effectively among the Tribe coaches, would promote increased consistency within the Project as a whole. This would increase the consistent delivery of the sports sessions and improve individuals' experience of the program. Inevitably, a clearer and more consistent presentation and implementation of the Tribe Project would be created.

#### 10.5.4 Implementation

Despite the implementation of the Tribe Project emerging as less successful overall, the Project was described as providing a fun and enjoyable environment in which to engage in physical activity and sport. Alongside the student coaches who were positive role models, the Tribe Project successfully developed participants' skills within the Tribe sports and positive psychosocial outcomes from participation were described. Nonetheless, the implementation of the Tribe Project was described at various levels to be poor and failing to adhere consistently to core Project principles. This was largely attributed to differences in the abilities, motivations and reliability of the Tribe coaches and differences in the delivery of the sports sessions. Furthermore, clarity in the Tribe Project's branding was lacking, and participants felt confused and disconnected from the program's aims and objectives.

A major weakness to program implementation in applied settings is the insufficient delivery of protocols as intended, and, therefore, the incorrect conclusion that an intervention is not effective when the program was not delivered as intended (Glanz et al., 2002). This limitation was relevant to the implementation of the Tribe sports sessions. Consequently, the perceived potential impact of the Tribe Project was negatively affected by the poor implementation of the program. Information on the financial costs attributed to delivering the Tribe sports sessions was not available across all the Tribe sports, and this limited the assessment of the program's implementation. According to Glanz et al (2002), by systematically varying the types of

staff delivering the program, their impact as well as costs can be ascertained. A common criticism with evaluation studies of health promotion interventions is the inability to answer specific questions relating to program costs, time or staff requirements (Glanz et al., 2002). Due to the fragmented structure of the Tribe Project, the evaluation of this RE-AIM dimension could not be made using financial data.

To improve the implementation of the Tribe Project, therefore, the program aims and objectives need to be clarified within the different Tribe sports and across the program as a whole. Establishing clear program goals would improve the consistent implementation of the Tribe sports sessions, promoting a more unified Project. Engaging the target population within physical activity interventions and promoting their participation in the program's implementation is an essential part of achieving the program objectives (McKenzie et al., 2007). The extent to which program participants engage with the objectives of an intervention mediates the potential effectiveness of the program overall (McKenzie et al., 2007). By specifying the essential elements within the program that can and cannot be altered, the critical program goals can be still be achieved (Glanz et al., 2002). Increased coherence in program delivery costs and a better understanding of the differing financial demands of the specific Tribe sports sessions would improve the effective implementation of the sports sessions according to their resource and equipment needs.

Secondly, the brand image of 'Team Bath' and the 'Tribe Project' needs to be presented with more clarity. Implementing regular Tribe Project meetings would also provide a scheduled opportunity for feedback within the program to ensure the consistent delivery of the sports sessions. This would improve the parents' perception and understanding of the Tribe Project, and improve the children's and adolescents' sense of belonging within the organisation. Incorporating the Tribe parents within the Tribe Project would improve their awareness of the different Tribe sports, and increase their overall understanding of the program's delivery. By implementing such strategies to promote the consistent delivery of the Tribe Project, the positive impact of the program overall may be increased.

## 10.5.5 Maintenance

Establishing high program maintenance is one of the most challenging of all the RE-AIM dimensions, largely due to the lack of information on the maintenance of heath promotion programs at the setting level (Glanz et al., 2002). This includes the lack of

sustained program effects over time and the substantial attrition of program settings, implementation staff and participants over time (Glanz et al., 2002). Maintenance of the Tribe Project was moderately successful, and this was largely attributable to the established pathways prior to and during the Tribe Project. Participants were described as attending the program for several years, and this was associated with the participation pathways the program had established from the Universities Tots programs (aimed at 4 - 6 year olds) leading into the Tribe Project. These participation pathways were directly associated with individuals' sustained attendance within the Project, and were a major strength of the program's maintenance. Irrespective of these program strengths, the Tribe Project failed to record any long-term outcomes following participation in program, or rates of program attrition. The inconsistent availability of pathways after the Tribe Project and into sports clubs within the community meant that the individual-level maintenance of the program was challenged. Despite evidence for partnerships between the Tribe Project and community-based sports clubs, awareness and promotion of these partnerships among the Tribe parents was limited.

Recommendations to improve the maintenance of the Tribe Project would be to maintain a consistent record of the rates of attendance and attrition from the program. Incorporating follow-up procedures as part of the Tribe Project would ensure that the frequency of participant attrition, and the reasons for drop out, could be monitored and used as an evaluation procedure. This would enable the long-term impact and overall effectiveness of the Tribe Project to be measured. To increase the organisational level maintenance of the program, community-based sports clubs linked with the Tribe Project need to be more actively promoted to participants. Increasing the Tribe parents' awareness of the sports clubs within BANES may sustain their child's participation in physical activity and sport beyond the Tribe Project. Sustainable physical activity programs are more likely to succeed if they are designed to support the transition from physical activity within a controlled intervention environment into that of the wider community. Promoting sustained participation in physical activity and sport beyond that of the Tribe Project is an essential part of the program's maintenance. Maintenance needs to be incorporated during both the protocol and evaluation stages in order to plan for institutionalisation, sustainability and dissemination (Glanz et al., 2002). Ensuring that the links between the Tribe Project and the community-based organisations are utilised would promote the program's organisational-level maintenance and institutionalisation within BANES.

# 10.6 Public Health Implications of this Research

There are various public health implications raised resulting from this research, as the Tribe Project is a typical example of a real-world intervention aimed at promoting physical activity during youth. Assessment of the Tribe Project is useful to further knowledge of population-level physical activity programs, as it is a realistic example of interventions implemented at the community level.

To date, few studies have used the RE-AIM framework to report on issues relating to the external validity of physical activity interventions (Antikainen and Ellis, 2011, Glasgow et al., 2002, Glasgow et al., 2006). Despite a focus within the physical activity literature on the efficacy of physical activity interventions in tightly controlled settings, greater emphasis has since been placed on effectiveness research. The aim of effectiveness research is to ascertain whether an intervention can reach a large number of people, especially those at high risk, have a positive impact on the participants, be adopted by different settings, be consistently implemented by staff members with moderate levels of expertise and produce replicable and long-lasting effects at a reasonable cost. Unlike physical activity interventions implemented in controlled settings, the Tribe Project does not centre upon a theoretical model of behaviour change. Rather than produce a measurable change in the physical activity levels of children and adolescents, the aim of the program was to provide access to sport and recreational facilities and promote partnerships with local schools and community-based sports clubs.

The results of this research have indicated that community-based physical activity interventions such as the Tribe Project can have a positive impact on children and adolescents aged 7-14 years. Alongside the social, psychological and physical benefits of participation, such programs can be easily adopted within the community and maintained at the organisational level. For community-based physical activity interventions to have a positive impact on children and adolescents, therefore, greater consideration should be given to factors associated with the program's compatibility with other settings, and its sustainability within the community. Although high-intensity interventions may produce a more immediate behaviour change amongst participants, settings with fewer resources or staff to implement the program will be less likely to adopt the intervention. There is the potential for only a relatively small and unrepresentative proportion of the population and intervention sites to sustain the program as a result (Glasgow and Emmons, 2007). Although few studies have

specifically addressed the public health impact and generalisability of physical activity interventions to real-world settings (Antikainen and Ellis, 2011), this is essential to estimate their potential long-term sustainability.

It was shown earlier in this thesis that adolescents of higher activity levels achieved a significant proportion of their daily physical activity from outside and sport-related activities. This is consistent with previous research highlighting the important contribution of sports program participation to youth physical activity and health (Wickel and Eisenmann, 2007, Dowda et al., 2001). To increase the uptake and participation in physical activity, interventions need to be targeted specifically towards the activities most likely to increase participation and maximise retention. It is recommended that the focus of physical activity interventions within the community take a more tailored approach to behaviour change, rather than a 'one-size-fits-all' strategy. By targeting interventions to promote specific types of activities, the long-term impact and effectiveness of the intervention on participants may be increased.

Understanding child and adolescent motives for sport and physical activity participation is central to understanding the reasons underpinning engagement as well as the quality of their physical activity experiences (Smith, 2003). Such factors are also essential to understanding the potential mediating influences these factors may have on long-term activity patterns. The differences observed between the children and adolescents attending the Tribe Project suggest that tailoring physical activity programs to be gender and age specific may be more appropriate. Failure to create an environment supportive of factors central to physical activity. For a long-term sustained behaviour change, it may be necessary to create a pathway of change from early years, into childhood and throughout adolescence. To increase the overall impact of community-based physical activity programs, therefore, an environment supportive of individual's motives to take up and maintain participation in physical activity may be necessary.

Factors influencing the uptake and sustained participation in the Tribe Project were a combination of social, interpersonal, intrapersonal and environmental/organisational factors. Differences were observed across gender and age; however, there was no unifying influence at one level. If children and adolescents are influenced by such an array of different factors, targeting one level of behaviour change within one type of physical activity is unlikely to create a sustained behavioural impact post-intervention. The transition from childhood into adolescence is a crucial period for the maintenance of physical activity behaviours, and there is a dramatic reduction in physical activity and

sports participation during this time (Findlay et al., 2009). The Tribe Project was specifically aimed at individuals within this age category (7-14 years old). Parental support, individual program experiences and pathways before and during the Tribe Project were of great importance to the individual-level maintenance and effectiveness of the program. To achieve lifelong physical activity at a population-level, therefore, it may be necessary to create pathways from early years into childhood, and maintain these throughout adolescence. A major weakness in current programs promoting physical activity is the inconsistency in their availability throughout childhood and adolescence. This fragmentation could lead to an increase in dropout of activity among individuals who, if provided with access to the activity, may have continued. Strategies that promote leisure-time physical activity more consistently during childhood and adolescence, which include a sport or outdoor component, may be more effective at increasing and sustaining physical activity during this period.

Consistent with program evaluation research (Antikainen and Ellis, 2011, Glasgow et al., 2005, McKenzie et al., 2007), the Tribe Project failed to sufficiently address all five components of the RE-AIM framework. This significantly affected its overall potential to have a positive impact on population-level physical activity. Focus among the Tribe Project's management was placed predominantly on the uptake and retention of participants in the program, and there was less emphasis on the representativeness of the study population or the implementation and delivery of the program. Weaknesses associated with the setting level adoption, implementation and maintenance of the Tribe Project directly related to the Tribe parents' evaluation of its overall impact. If external validity factors relating to the adoption, implementation and organisational-level maintenance have a mediating effect on program impact, then failure to address these criteria may limit the program's long-term effectiveness. Consideration of factors that may mediate the real-life impact of evidence based interventions is of great importance within health promotion and effectiveness research (de Meij et al., 2008). For physical activity interventions to have a true public health impact, they need to succeed at more than large effect sizes under controlled research conditions (Glasgow et al., 2006). The focus on internal, as opposed to external, validity factors within the Tribe Project meant its potential to have a long-term sustained impact on health was greatly reduced. To achieve a sustained increase in the physical activity levels of children and adolescents, community-based interventions need to address issues of adoption, implementation and maintenance in addition to the individual-level outcomes.

Although based primarily within the community, the individual and organisational level impact of the Tribe Project was mediated by referents at the home, school and

community level. Parental support was associated with the uptake, efficacy and individual-level maintenance of the Tribe Project, whereas links with local schools and sports clubs within the community were associated with the organisational-level maintenance and adoption of the Project. Parents have a significant role in the uptake and maintenance of physical activity during childhood and adolescence, as their own beliefs and motivations towards physical activity can mediate their child's involvement (Beets et al., 2010). If community-based programs are reaching only the highly motivated parents, or those who recognise the benefits of physical activity could help promote the uptake and maintenance of an active lifestyle. Interventions designed to increase physical activity using parents as a mediator may benefit, therefore, from strategies that enhance supportive and encouraging environments. This has the potential to increase participation in physical activity and sport within the community.

The long-term effectiveness of the Tribe Project was limited due to inconsistent links within the community. This was also linked to the potential drop out of sports participation amongst adolescents. Positive links with local schools and sports clubs were perceived to have had a substantial impact on the overall effectiveness and organisational-level maintenance of the Tribe Project. Poor integration of physical activity programs within the community, and limited promotion and awareness of these links, substantially reduced the potential to promote and sustain behavioural changes at a community-level. The implication is that a more collaborative approach to behaviour change may be necessary to change physical activity behaviours at a population level. Effective incorporation of local schools, sports clubs and parents to participate in community-based physical activity programs may lead to more sustained behavioural changes. Creating a chain of communication between each party appears significant to long-term changes in health behaviour.

For effective health promotion, community-based physical activity programs such as the Tribe Project should be integrated with individual-level factors in mind, yet with acknowledgement of the context within which they are implemented and the common organisational goals that may exist. Although dissemination research is needed to inform public health policy, the adoption of evidence-based physical activity interventions is needed to ensure ongoing maintenance and success (Austin et al., 2011). Engaging key community stakeholders in the implementation and maintenance of programs such as the Tribe Project would increase the opportunities for physical activity participation outside of the home and school setting. This would foster a more active environment as a whole. Developing specific strategies for specific communities

to reach children and adolescents at greatest risk of physical inactivity may increase the uptake and maintenance of this behaviour.

Modifying the target and design of the intervention at each stage would accommodate the differing influences on physical activity at the different stages of childhood and adolescence. The motivations and values children place on aspects of physical activity differ, and physical activity programs should be designed to accommodate the age and gender-specific intentions of participants. If a program is designed to target a range of children and adolescents of both sexes, then it has to incorporate flexibility and variety in structure or it is unlikely to achieve a population level impact. Gender and agespecific programs should therefore be implemented and designed specifically to appeal to the activity-related motivations and interests of participants. Targeting specific mechanisms of behaviour change through different components of an intervention would increase the likelihood of permanent changes in the physical activity behaviours of this population as a result.

# 10.7 Future Research Directions

There are various ways in which to build upon this RE-AIM evaluation of the Tribe Project, and there are components of this case study that would be useful to explore further.

# 10.7.1 Future Evaluation of the Tribe Project

To evaluate the Tribe Project further, specific elements of the five RE-AIM dimensions could additionally be explored. The practical implications of this case study's findings are that the implementation of real-world physical activity programs poses additional practical challenges to health promotion to that of controlled interventions. Health promotion interventions can have a lengthy causal pathway, and attributing any long-term behaviour changes to a specific component of an intervention can be challenging (McKenzie et al., 2007). Establishing causal relationships between potential mediators and physical activity behaviour change is complex. The reciprocal nature of behavioural influences (Kraemer et al., 2002), and the fact that individual-environmental interactions are not unidirectional (King et al., 2002) makes the replication of successful interventions more difficult.

It was shown within the preliminary epidemiological study conducted prior to the case study evaluation that adolescents who were more active were more likely to engage in sports and outdoor-related activities. Comparably it was shown within this case study of the Tribe Project that physically active and 'sporty' children and adolescents were more likely to be reached by the program. A limitation to the effectiveness of the Tribe Project was this restricted reach of the program. If community-based interventions, such as the Tribe Project, are reaching the more active children and adolescents and sports-related behaviours are associated with increased physical activity levels, future research could assess the direction of this pathway. Specifically, an improvement to this research would be to assess in more detail the differences between individuals who chose to participate in the Tribe Project and those who did not. Further exploration into the characteristics of participants who are eligible to attend, and those who chose not to, would increase the generalisability of the study findings. Assessing the inter-variability between gender, age, ethnicity and SES would highlight the differences between participants according to the factors that positively or negatively affect their physical activity behaviours. This would also lead to more accurate and specific policy-level recommendations as a result.

Social inclusion, coach rapport and the group dynamics were consistently perceived as important among all the participants attending the Tribe Project. What is unknown, however, is the extent of influence social interactions and an individual's perception of belonging had on their participation. Likewise, the extent to which these factors mediated individuals' decisions to remain physically activity is also unknown. Sportrelated social behaviours have largely been studied at the individual level, with emphasis being placed on individual perceptions of peer relationships (Smith, 2003). At the individual level, the Tribe coach interaction and the sports session group dynamics had an important role in the program's overall effectiveness and successful implementation. Further analysis of the complexity of social influences at the group and organisational level would considerably enhance knowledge of the role of peer and coach relationships. Examination of contextual factors surrounding individuals' perceptions of belonging may provide greater insight into ways of promoting positive physical activity and sport-related experiences of youth. Programs need to accommodate the differing motivations of children and adolescents, as well as factors that may negatively influence their continued participation in physical activity. Further assessment of context-specific, perceived and actual social acceptance, group-level processes and coach rapport would greatly add to this research.

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The likelihood that more motivated and physically active participants engage in physical activity interventions is well known (Antikainen and Ellis, 2011), yet this restricts the generalisability of the theory-based interventions to real-world settings, and vice-versa. Reach is a fundamental part of a programs effectiveness, and a high investment in the program's reach is more likely to lead to a greater impact (McKenzie et al., 2007). Specifically, future research needs to address the inter-variability between parents whose children participate and do not participate in physical activity, and the differing influence of factors along the causal pathway. To increase the uptake within the Tribe Project from less motivated or physically active parents, research is needed to assess the factors they perceive as facilitating or hindering their participation. Future evaluation of the Tribe Project could investigate whether participation in the program is significant during the initial uptake of physical activity and sport, or whether it is crucial to the maintenance of sports participation among children and adolescents who are already highly active.

Although it was shown within the preliminary epidemiological study that sport and outdoor-related activities were most commonly reported among the more active adolescents, differences across the specific type of sport or outdoor activity were unknown. Comparably within this case study of the Tribe Project, the children and adolescents could participate in a range of up to 10 different sports through the program, yet differentiation between these 10 sports was not possible. The sports delivered as part of the Tribe Project included a wide range of different types of activities. These included team-based sports, individual and paired activities, and both traditional and non-traditional activities. Future research could explore differente activities that it encompasses. This may lead to recommendations for interventions that include a sport or outdoor component, and promote participation from individuals less likely to engage in physical activity.

Whilst the REAIM framework includes an assessment of the programs maintenance, the exact timing and frequency that interventions should be evaluated during and postimplementation are not unequivocal (Glasgow et al., 2005). The reality is that the translation of a large majority of theory-based interventions into practice is difficult (Antikainen and Ellis, 2011), as external validity factors are often unaccounted for. Sustainability, or program maintenance, is measured at the level of individual outcomes and organisational and community-level changes (McKenzie et al., 2007). The maintenance of the Tribe Project was negatively affected by the lack of long-term follow up measures to assess the sustained impact of the program. Sustainability is paramount to ensure the value and potential impact of health promotion programs, as it is the permanent shift in health behaviour patterns that is particularly challenging. Future evaluation of the Tribe Project that included a long-term follow up assessment of the attendees would provide greater insight into the program's sustainability, and, therefore, value as a physical activity intervention. To improve our understanding of successful physical activity interventions, the long-term sustainability of program effects needs to be explored, specifically factors that moderate the cause–effect relationship between the Tribe Project's program components and the related outcome variables.

In the current climate of physical activity promotion where evidence-based public health interventions are highly valued, demonstrating the long-term significance of an intervention is challenging (McKenzie et al., 2007). The Tribe Project is no exception. The organisational level impact of the Tribe Project was less successful overall and this was largely attributed to issues of setting-level adoption, implementation and organisational maintenance. It is known that these factors had major weaknesses within the Tribe Project, however, the degree of impact they had on the long-term effectiveness of the program is unknown. Having no long-term follow up measures within the Tribe Project meant there was no indication of the long-term implications following participation, or the mediating role that organisational-level factors within the Project may have had. To gain further knowledge of the impact of the Tribe Project and community-based physical activity interventions in general, long-term follow measures are needed. They are needed primarily to ascertain the potential mediating impact of organisational-level factors on individual-level outcomes, and also to gain a better understanding of the dose-response relationship between such factors and the resultant changes in behaviour (King et al., 2002). Conducting an evaluation that specifically targets the long-term impact of the Tribe Project would greatly strengthen this research and promote dissemination of the findings to varied populations and settings. This could lead to more effective and sustainable physical activity interventions, thereby being more likely to produce a population-level impact.

## 10.7.2 Future Mixed Methods Research on the Tribe Project

A key strength of the current research was the range of data sources used to assess the Tribe Project, and the mix of both qualitative and quantitative data to assess the program's impact. Although useful when exploring complex research questions, mixed methods research does involve certain challenges associated with integrating the two different types of data. A concurrent triangulation design was the strategy employed within this case study, whereby the quantitative and qualitative data were collected independently to answer the research questions. In this particular case study, different participants provided the qualitative and quantitative data. There are also specific challenges using concurrent designs in mixed method research. Specifically this relates to the fact that concurrent data collection designs prevent follow up on unexpected or interesting findings. For future mixed methods research, studies that collect both qualitative and quantitative data from the same participants may improve our understanding of an intervention's impact. This mixed methods strategy would also be a useful way to compare the findings for consistency and divergence across participants. Limitations associated with quantitative data collection methods prevent a more indepth assessment of the factors that may mediate children's and adolescents' experiences of physical activity interventions. Conducting interviews with a sample of such program participants would provide a more in-depth and contextualised understanding of the program's impact.

Another way to potentially overcome this is through a sequential mixed methods design, whereby the data from one method is used to inform the design and data collection from the other method (Creswell and Plano Clark, 2007). Collecting the data in an iterative, sequential process can provide important information on unexpected or interesting themes (Sale et al., 2002, Teddlie and Tashakkori, 2009). Future research using a sequential data collection design could collect preliminary quantitative data to gain insight into the children's and adolescents' determinants and experiences of participation in sports-based community interventions. The findings from this data collection could be then used to inform a more in-depth qualitative assessment from the same participants, to explore in more detail the factors that mediate their sustained participation in physical activity interventions. Sequential, iterative, mixed method approaches to program evaluation are useful when a range of potential program outcomes may occur, and when participation in the program is a central component of the program design and implementation. In light of this, future mixed method research using a sequential data collection design may provide greater insight into the impact of community-based physical activity interventions aimed at children and adolescents, and build on the findings from this case study.

## 10.7.3 Future Design, Implementation and Evaluation of Communitybased Physical Activity Interventions

Previous research has shown that health promotion interventions have a general consistency in addressing the internal validity of the program, such as the observed outcomes and rates of attrition at the individual level. Factors influencing the uptake, impact and sustainability of interventions are less frequently reported (Dzewaltowski et al., 2004a, Klesges et al., 2008, de Meij et al., 2010, Antikainen and Ellis, 2011). External validity issues relate specifically to the potential interactions between intervention conditions and contextual factors (Glasgow et al., 2002). Interventions which focus predominantly on obtaining a high level of program effect do not necessarily lead to a successful behaviour change at a population-level (Dzewaltowski et al., 2004a). An intervention must also have high representativeness and adoption in order to be successfully and feasibly implemented within the community (Dzewaltowski et al., 2004a).

Based on the findings of this case study, if significant changes in physical activity participation at a population level are to be achieved, future research needs to focus on issues relating to external validity criteria as outlined in the RE-AIM framework. The RE-AIM framework provides a comprehensive strategy to determine what a program achieved, how it was achieved and why it was achieved. By identifying specific program weaknesses based on the five RE-AIM dimensions, program recommendations can be made and the likelihood of effective dissemination increased. Process evaluations are an essential part of evaluation research (Antikainen and Ellis, 2011), and consideration of both internal and external validity factors is necessary during the planning and implementation stages of physical activity interventions (Austin et al., 2011).

Focussing on a program's reach is key to promoting successful program implementation, effectiveness and maintenance. Identifying successful reach strategies and barriers to uptake is useful to program funders and potential adoptee sites (McKenzie et al., 2007). Programs, which demonstrate a high reach, are essential for evidence-based health promotion, not only by maximising program participation, but also through the potential positive impact on the other RE-AIM dimensions. The representativeness of program participants has important implications for the generalisability of program effectiveness (Glasgow et al., 1999). This relates directly to program adoption, which is essential for organisational level impact, and this underpins program maintenance and sustainability (McKenzie et al., 2007). For future physical

interventions to demonstrate adequate program effectiveness, factors contributing to the programs effectiveness at the setting level are crucial. Although reaching high-risk groups for physical inactivity at an individual level is paramount among health promotion interventions, future physical activity interventions need to account for program reach at a setting level as well. Interventions need to be successfully adopted by a variety of intervention settings, implemented relatively consistently and maintained over an extended period of time.

Barriers to adoption of the Tribe Project within the community were related to financial restrictions and resources associated with its implementation. From an economic and public health perspective, the costs associated with the uptake and sustainability of community-based interventions means that, despite potentially high levels of program effectiveness, the economic constraints can limit sustainability in the long-term (Klesges et al., 2008). The practical constraints in delivering the Tribe Project were associated with barriers to participation in the Tribe Project following delivery within schools. Although it is known that these practical barriers to adoption and implementation existed, it is unknown how these factors influenced the long-term effectiveness of the program and the potential impact on public health. As with program adoption, barriers to the successful implementation of community-based physical activity interventions has important implications for the likelihood of program transferability to more varied sites using a range of program implementers (McKenzie et al., 2007). Targeted implementation strategies are useful to assess the likelihood of program adoption, as well as the reliability and validity of any observed program effects. The likelihood of program adoption among sites that may be directly linked to high-risk, targeted populations can be vital to the potential impact of the program overall (McKenzie et al., 2007).

Despite challenges associated with implementing the RE-AIM framework, it nevertheless serves as a good theoretical model for public health program evaluation (Austin et al., 2011). Future program evaluation is still needed, as the most effective way to implement and evaluate evidence-based physical activity interventions in community-based settings is still unclear (Austin et al., 2011). Based on what is now known about the significance of individual and setting level factors for intervention impact, future program design needs to place equal emphasis on the uptake and impact of the program, in line with program sustainability and dissemination. This will help identify the types of interventions most likely to produce a meaningful impact at a population level across a wide range of populations and settings. By focussing on the unique challenges of program design, implementation and effectiveness at each stage of the research, the likelihood the findings can be translated and successfully implemented in applied settings will be increased (Glanz et al., 2002). A better understanding of the organisational, policy and economic constraints associated with the adoption, implementation and maintenance of community-based physical activity programs is needed. By achieving a more detailed understanding of the cost effectiveness of implementing physical activity programs within the community, a more accurate estimate of their long-term behaviour change potential would result. Inevitably, this would lead to more informed public health strategies aiming to promote physical activity among children and adolescents in the future.

## 10.8 Conclusion

The aim of this current research was to evaluate the impact of the University of Bath's Tribe Project based on the five dimensions of the RE-AIM framework (Glasgow et al., 1999). This research has revealed that a sports-based community intervention can be easily adopted within other program sites, institutionalised within the community and maintained over time. This in-depth evaluation has added knowledge surrounding the multiple levels of influence on children's and adolescents' physical activity behaviours, and the potential importance of targeted strategies to promote physical activity among this population. The findings from this study are useful to inform the design and implementation of community-based physical activity interventions, and highlight the importance of organisational level factors to a programs potential impact.

The innate physical activity behaviours of children and adolescents have not changed over the years; rather the opportunities, facilities and health-related education have (Boreham and Riddoch, 2001, de Vet et al., 2010, Shaya et al., 2008). The opportunities for physical activity have been greatly reduced, yet the importance of a physically active lifestyle is greater than ever before. Currently there is mixed agreement on the criteria necessary to measure the public health impact of health promotion interventions (des Jarlais et al., 2004, Dzewaltowski et al., 2004b, Glasgow, 2003). The RE-AIM framework is based on the premise that individual, organisational and setting-level factors combined reflect the public health impact of an intervention (McKenzie et al., 2007). Knowledge of the association between program design, implementation and the related program outcomes are crucial to effectively evaluate their potential health impact. RE-AIM was developed in order for the effects, and the importance of evidence-based health promotion interventions, to be assessed in a range of real-world settings (McKenzie et al., 2007). Although the translation of

evidence-based research into practice is heavily advocated in health promotion research, there has been a limited focus on external validity factors within intervention studies. A combined assessment of internal validity criteria, along with issues relating to the generalisability, contextual impact and practical implementation of an intervention is essential. The RE-AIM framework was designed specifically to address these factors.

RE-AIM provides a comprehensive body of information to assess the public health impact of a program, and it is a logical method of assessing the real-world domains that are of interest to funders, policymakers and health promotion practitioners (McKenzie et al., 2007). Such factors are frequently overlooked in conventional program and impact evaluation research (McKenzie et al., 2007). The public health impact of health promotion interventions is insufficiently predicted at the individual level alone. Only when combined with assessments at the organisational level can an accurate estimation of population level change be achieved. This shift in focus from internal to external validity factors within the RE-AIM framework does not replace emphasis from intervention efficacy to generalisability; rather the implication is that a greater balance between internal and external validity factors is needed (Glasgow et al., 1999). It allows the program effects to be evaluated in relation to the context within which they occur, and, therefore, the likelihood of successful transferability and dissemination. Within the RE-AIM framework, program effectiveness is measured in light of the contextual factors that may exert an influence. This includes reach, adoption and implementation-related factors. As such, a lack of program impact can be equally assessed along with any program success. This is essential for improving the promotion of physical activity and future intervention implementation in wider settings (McKenzie et al., 2007).

To achieve a broad public health impact, successful interventions need to address a multitude of factors, and a whole-society approach to behaviour change is necessary. This will maximise consumer exposure to health promotion interventions and changes can be made not only at an individual level, but also at a population and service level. For changes at the community level to be successful, a change in the culture and climate of physical inactivity needs to be adopted. Accountability for changing such behaviours needs to be placed at multiple levels within society. Evaluating the Tribe Project based on individual and organisational level criteria has highlighted the disparity between short-term efficacy and long-term program sustainability. Failure to address factors relating to external validity criteria is unlikely to lead to a long-term change in the physical activity behaviours of youth. In order to have a true public health impact, physical activity interventions need to succeed at both the individual and organisational level. Not only will this lead to more sustainable strategies to improve health

behaviours, but increases in population-level physical activity may be more likely as a result.

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# **APPENDICES**

# Appendix A: Analyses for Physical Activity Tertiles Defined by Counts/min

# Data adjusted for 'Season of Accelerometer Wear'

# Table 23: Physical activity levels, counts/min, by activity tertile

	Total	al T1: Less Active		7	T2: Moderately Active		T3: Highly Active		
		Ν	Median (IQR)	Ν	Median (IQR)	Ν	Median (IQR)		
School Day									
All Children	1715	571	354 (309, 388)	572	485 (457, 525)	572	680 (612, 774)		
Boys	840	280	402 (351, 441)	280	551 (514, 585)	280	741 (681, 841)		
Girls	875	291	329 (292, 357)	292	440 (407, 469)	292	595 (540, 681)		
Non-school Day									
All Children	1013	337	309 (260, 351)	338	456 (421, 500)	338	664 (598, 761)		
Boys	459	153	349 (291, 396)	153	521 (484, 558)	153	720 (663, 847)		
Girls	554	185	287 (231, 324)	184	421 (394, 450)	185	611 (531, 696)		

Table 24: Daily distribution of boys' physical activity by activity tertile, counts/min, on a school da
---------------------------------------------------------------------------------------------------------

	Total o	occasions of phys	sical activity perf	ormed at six diffe	erent times on a sc	hool day.
	Getting Up - Start School	Start School - Lunch	Lunch Break	Lunch - End of School	End School - Evening Meal	Evening Meal - Go to Bed
T1: Less Active	728	264	448	142	778	493
T2: Moderately Active	747	290	475	144	807	565
T3: Highly Active	825	338	512	162	907	614
<b>Observed Differences</b>	$X^2 = 6.89$	$X^2 = 9.48$	$X^2 = 4.32$	X <sup>2</sup> = 1.62	X <sup>2</sup> = 11.03	X <sup>2</sup> = 13.29
between T1, T2 & T3	df =2 p = 0.03	df =2 p = 0.01	df =2 p = 0.12	df =2 p = 0.44	df =2 p = 0.001	df =2 p = 0.001

 Table 25: Daily distribution of girls' physical activity by activity tertile (counts/min) on a school day

	Total o	occasions of phys	sical activity perf	ormed at six diffe	rent times on a sc	hool day.
	Getting Up - Start School	Start School - Lunch	Lunch Break	Lunch - End of School	End School - Evening Meal	Evening Meal Go to Bed
T1: Less Active	777	225	449	119	834	593
T2: Moderately Active	751	266	461	152	885	614
T3: Highly Active	836	268	480	145	907	655
Observed Differences	X <sup>2</sup> = 4.81	$X^2 = 4.66$	X <sup>2</sup> = 1.05	$X^2 = 4.36$	$X^2 = 3.20$	$X^2 = 3.20$
between T1, T2 & T3	df =2 p = 0.09	df =2 p = 0.10	df =2 p = 0.59	df =2 p = 0.11	df =2 p = 0.20	df =2 p = 0.20

350

	Total occasions of physical activity performed at six different times on a school day.							
	Getting Up – Breakfast	Breakfast – Lunch	nch Lunch – Evening Meal Evening Meal – Bed					
T1: Less Active	305	378	387	284				
T2: Moderately Active	301	364	401	299				
T3: Highly Active	350	407	421	330				
Observed Differences	$X^2 = 4.65$	X <sup>2</sup> = 2.51	$X^2 = 1.45$	$X^2 = 3.62$				
between T1, T2 & T3	df =2 p = 0.10	df =2 p = 0.28	df =2 p = 0.48	df =2 p = 0.16				

Table 26: Daily distribution of boys' physical activity by activity tertile (counts/min) on a non-school day

Table 27: Daily distribution of girls' physical activity by activity tertile (counts/min) on a non-school day

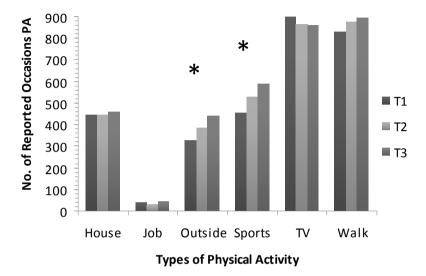
	Total occasions of physical activity performed at six different times on a school day.							
	Getting Up – Breakfast	Breakfast – Lunch	Lunch – Evening Meal	Evening Meal – Go to Bed				
T1: Less Active	419	489	479	367				
T2: Moderately Active	415	443	465	378				
T3: Highly Active	479	487	508	379				
Observed Differences between T1, T2 & T3	X <sup>2</sup> = 1.71 df =2 p = 0.42	$X^2 = 2.86$ df =2 p = 0.24	$X^2 = 1.99$ df =2 p = 0.37	$X^2 = 0.24$ df =2 p = 0.89				

Figure 24: Frequency of reported PA occasions, by activity tertile, amongst boys on a school day.

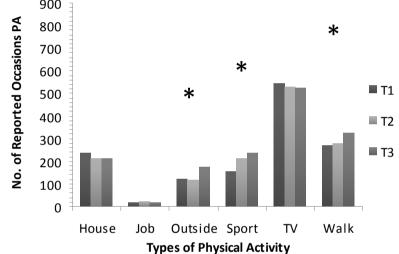
900 \* No. of Reported Occasions PA 800 \* 700 600 \* 500 T1 400 T2 300 T3 200 100 0 Outside Sport ΤV Walk Job House **Types of Physical Activity** 

Activity tertiles delineated by accelerometer counts/min. \* indicates differences between activity tertiles, p<0.05. T1 = least active tertile

Frequency of reported PA occasions, by activity tertile, amongst girls on a school day.



Activity tertiles delineated by accelerometer counts/min. \* indicates differences between activity tertiles, p<0.05. T1 = least active tertile



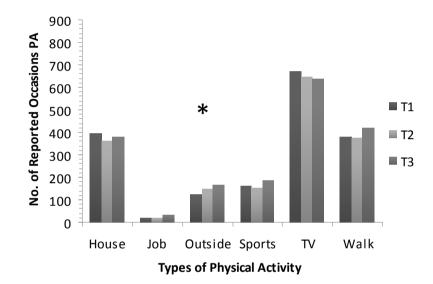
900 ∃

amongst boys on a non-school day.

Figure 25: Frequency of reported PA occasions, by activity tertile,

Activity tertiles delineated by accelerometer counts/min. \* indicates differences between activity tertiles, p<0.05. T1 = least active tertile

Frequency of reported PA occasions, by activity tertile, amongst girls on a non-school day.



Activity tertiles delineated by accelerometer counts/min. \* indicates differences between activity tertiles, p<0.05. T1 = least active tertile

# **Appendix B: Participant Interview Information Sheet**

Researcher: Harriet Koorts (PhD Student) Supervisor: Prof Chris Riddoch

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October 2009

You are being invited to take part in a research study. Before you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully.

# **Project Title:**

Programs to Promote Physical Activity in Children and Adolescents: A Case Study of the Team Bath Tribe Project.

# What is the purpose of the study?

- The aim of this research is to establish in what ways the Tribe Project has been effective in providing and delivering a sports activity program for children, what motivates the children to attend the Tribe Project, and in what ways the Tribe Project could be improved.
- This study will run from October 2009 until approximately June 2010, and will be written up in the form of a detailed research report.

# Why have I been invited to participate?

- You have been asked to participate in this study as you have an important role within the Tribe Project.
- It does not matter how long you have been involved in the project or how much you think you can contribute, as any thoughts, suggestions and experiences you may have regarding the Tribe Project is valuable to this research.

# Do I have to take part?

- No. Taking part in this research project is completely voluntary; it is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet and be asked to read and sign a consent form.
- Even if you decide to take part now you are still free to withdraw at any time, even at a much later date, and without giving a reason. If you decide to withdraw from the study at a later date, all you need to do is send me an email and I will remove your data from inclusion in the study.

# What is involved if I take part?

- All that is required is for you to take part in either an informal one to one or group interview that would last approximately 1 hour, and will be recorded on a Dictaphone.
- You will be posed a series of informal questions relating to your experiences of the Tribe Project and the ways it has been successful, unsuccessful, and could be improved.

# Will what I say in this study be kept confidential?

- Yes. This research project is run independently of the Tribe Project and all the information collected during the interviews will be kept strictly confidential within the Department for Health at the University of Bath.
- Participants involved in the group interviews will all be informed that any information shared should remain confidential and not discussed outside of the group. As there is the possibly that confidentially may be breached by other participants, please consider the information you chose to divulge beforehand.
- The transcription of your interview will be stored electronically and in a paper format within the Department for Health, and any quotes that are used in the published report will be annonymised.
- Information that you provide will be coded uniquely so your identity will remain anonymous throughout the collection, storage, and publication phases.

 The data generated during the course of this study will be kept securely in paper and electronic format for a period of five years after the completion of this research project.

# What will happen to the results of the research study?

- The results of this research will be written up in the form of a detailed Case Study report, used as part of my PhD thesis and will be published.
- If you would like to contact me in the future for more information about this research, if you have any concerns regarding the information you have provided, or you would like a copy of the published report; please contact me via email on:

# ps1hak@bath.ac.uk

# What should I do if I want to take part?

- If you wish to take part please ensure you have read this information sheet carefully.
- Please feel free to ask any questions you may have, or seek clarification if there any points you would like explaining further.
- If you wish to take part please read and sign the consent form overleaf.

Thank you for taking the time to read this information sheet.

# **Appendix C: Participant Interview Consent Form**

# Researcher:

Harriet Koorts (PhD Student) Department for Health University of Bath BA2 7AY

# Full title of Project:

Programs to Promote Physical Activity in Children and Adolescents: A Case Study of the Team Bath Tribe Project.

- 1. I confirm that I have read and understood the information sheet for the above study and have had the opportunity to ask questions.
- 2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason.
- 3. I agree to take part in the above study.

# Yes No 4. I agree to the interview consultation being audio recorded Image: Construct of the use of anonymised quotes in publications Image: Construct of the use of anonymised quotes in publications Image: Construct of the use of anonymised quotes in publications Image: Construct of the use of anonymised quotes in publications Image: Construct of the use of anonymised quotes in publications Image: Construct of the use of the use of anonymised quotes in publications Image: Construct of the use of the

# \_\_\_\_\_

Please initial box



Please tick box

# Appendix D: Interview Notification Email for Tribe Managers and Coaches

Hi,

I am a PhD researcher within the Department for Health at the University of Bath, and as part of my Doctorate I am conducting an in-depth evaluation of the Team Bath Tribe Project. The aim of this research is to establish in what ways the Tribe Project has been successful, or unsuccessful, in providing and delivering sports activities for children aged between 7 - 14 years, and in what ways the project could be improved.

I am emailing you to ask if you would be willing to share your thoughts and experiences of the Tribe Project with me at some point during October. All that would be required is for you to take part in an informal one to one interview which would last approximately 1 hour. This I will arrange it so it fits in with your schedule on campus, and when you have an hour to spare!

It does not matter how much or how little you think you have to contribute because it is an informal discussion, so you can talk about things you have more experience with, and less about things you don't. I just want your perspective of the Tribe Project and your opinions/experiences of it, as there isn't anything "right" to say. Your opinions, suggestions, and ideas about the Tribe Project are invaluable to my research, and I would be extremely grateful if you would be willing to participate.

If you think you are able to take part, or if you would like some more information about this research project, please email me directly at: <u>ps1hak@bath.ac.uk</u>. I can then contact you to arrange a time which will be the most convenient for us to meet and to give you any further details.

Thank you for your time, any help you can give with this research project will be greatly appreciated.

Harriet Koorts (PhD Student) Supervisor: Prof Chris Riddoch.

# **Appendix E: Interview Notification Letter Tribe Parents**

Dept. for Health, University of Bath, Claverton Down, Bath, BA2 7AY.

Dear Parent/Guardian,

I am a PhD researcher within the Department for Health at the University of Bath, and as part of my Doctorate I am conducting an in-depth evaluation of the Team Bath Tribe Project. The aim of this research is to establish in what ways the Tribe project has been successful, or unsuccessful, in providing and delivering sports activities for children aged between 7 - 14 years, and in what ways the project could be improved.

I am sending you this letter to ask if you would be willing to share your thoughts and experiences of the Tribe project with me at some point during October and November. All that would be required is for you to take part in an informal one to one or group interview which would last approximately 1 hour. The interviews would take place at the University of Bath campus, and I would schedule them so they ran during the time when your child was in one of their Tribe sports sessions. You will not be required therefore to commit to any extra time or travel to a different location; I would meet you there.

It does not matter how long or your child has been a member of the Tribe Project, or how frequently they attend, as any contribution you make is important because your opinions and suggestions are invaluable to this research project. If you would be willing to take part, or if you would like some more information about this research project, please email me directly at: <u>ps1hak@bath.ac.uk</u>. I can then contact you to arrange a time which will be the most convenient for us to meet, and to give you any further details.

Thank you for your time, any help you can give with this research project will be greatly appreciated.

Yours Sincerely

Harriet Koorts (PhD Student) Supervisor: Prof Chris Riddoch. Appendix F: Interview Schedules for the Tribe Managers, Coaches and Parents

# 1. Interview Schedule - Tribe Managers and Coaches

The Staff and Coaches interview schedule was based on the RE-AIM framework, so the questions were centred on the 5 main components of it (*Reach, Effectiveness, Adoption, Implementation* and *Maintenance*).

Two preliminary questions were asked to establish the role of each participant being interviewed.

- 1. What I would like to start with is with you telling me who are you, what are your roles and responsibilities within the Tribe Project?
- 2. How many years have you been involved in the Tribe Project?

# <u>Reach</u>

# Population

- 3. What is your target population?
- 4. How do you advertise, promote the Tribe Project to the schools/children who attend?
- 5. What is the process for children to join?
- 6. What are the exact criteria for a child to come to the Tribe project?
- 7. Who are the children/parents that come? Are there any similarities/differences?
- 8. Have you tried to use any strategies to attract more people?
- 9. Which groups of children are the most difficult to attract?

# Determinants of Participation

- 10. Why do you think the children/parents chose to attend the Tribe Project?
- 11. From your experience, which segments of the population are most likely to attend Tribe?
- 12. Do you monitor who is coming in the program, are there any standard procedures?

# **Effectiveness**

## Aims and Objectives

- 13. So what is the main aim of the Tribe project? What are the specific objectives, that you want to achieve?
- 14. How many different activities are the children aged 7-14 able to take part in?
- 15. What are the main targets you have to meet?
- 16. How did you identify the need for the Tribe project?
- 17. And where do you get the funding from?

### Measuring Success

- 18. What do you think are the strengths of the Tribe Project?
- 19. What is the main outcome measure?
- 20. Do you think the Tribe Project is successful?
- 21. How do you define success? What is successful for you in this project?

# Evaluation

- 22. Do you have any evaluation measures in place to find out what the children and parents like or don't like or what seems not to work?
- 23. Are the parents/children able to give feedback? Are they given the opportunity?
- 24. What do you think are the weaknesses the Tribe Project?
- 25. What would you suggest as a way to overcome these problems?

### Drop Outs

- 26. What does it mean to 'drop-out'?
- 27. Do you measure the drop-out rates? Do you have data?

# **Adoption**

- 28. How many activities/sports do you offer?
- 29. How many people are involved in running the project?
- 30. How many people coach, how many people go out in schools, what is your team?
- 31. How many schools are you linked with?
- 32. Are there any challenges involved with linking to the schools/clubs?

- 33. Do all schools support the project equally? Are there any similarities with the ones that do or don't?
- 34. What are the benefits for the schools you are linked with?
- 35. What would you say are the biggest challenges to running physical activity programs for children and young people?

# **Implementation**

- 36. What are the minimum qualifications are necessary to deliver the Tribe Project?
- 37. Who delivers the training to staff?
- 38. Are the sessions delivered consistently throughout the program? Is this monitored?
- 39. What information do you have on the children, quantitative or qualitative?
- 40. Do you monitor the children at any point? Record data at the baseline, half way through or at the end of their program?

# **Maintenance**

### Individual

- 41. What would estimate as the length of time, children typically participate in the Tribe Project?
- 42. Are there any exit routes once the Tribe sports sessions have finished?

### Organisational

- 43. What would you suggest as ways for improving the project overall?
- 44. What do you think are the biggest challenges for attracting more young people to do more physical activity and participate in programs like Tribe?
- 45. What do you think is a successful pathway from the Tribe project into the community?

# 2. Interview Schedule - Tribe Parents

The Tribe Parents interview schedule was based on the RE-AIM framework, so the questions were centred on the 5 main components of it (*Reach, Effectiveness, Adoption, Implementation* and *Maintenance*).

A preliminary question was asked to establish each participant's connection to the Tribe Project.

- 1. If you could start by telling me what your relationship is with the Tribe Project;
- In terms of which sport(s) your child/children currently participate in, and any sports they used to participate in with the Tribe Project.
- How frequently they attend these sports sessions.
- The age(s) of your child/children
- How long your child/children have been attending the Tribe Project.

# <u>Reach</u>

# Population

- 2. Do you think the Tribe Project has a target population? If so, which segment of the population is this?
- 3. How did you hear about/find out about the Tribe Project?
- 4. What was the process for your child to join the Tribe Project?
- 5. Were you aware of the Tribe Project prior to joining?
- 6. Who do you think are the children/parents that typically come to tribe? Are there any similarities/differences?
- 7. Which groups of children do you think are the most difficult to attract?

# Determinants of Participation

- 8. Why did you/your child decide to attend the Tribe Project?
- 9. From your experience, which segments of the population are most likely to attend the Tribe Project?

# **Effectiveness**

# Aims and Objectives

- 10. What do you think are the aims and objectives of the Tribe project? What are they trying to achieve?
- 11. How many different activities the children aged 7-14 able to take part in?
- 12. What would you say are the Tribe Projects main targets?

# Measuring Success

- 13. What do you think are the strengths of the Tribe Project?
- 14. What do you think is the main outcome measure?
- 15. Do you think the Tribe Project is successful?
- 16. How do you define success? What is successful for you in this project?

# Evaluation

- 17. Are you aware of any evaluation measures that are in place to find out what the children and yourselves like or don't like?
- 18. Are you or your children able to give feedback about the project? Are you given the opportunity?
- 19. What do you think are the weaknesses the Tribe Project?
- 20. What would you suggest as a way to overcome these problems?

# Drop Outs

- 21. Has your child ever stopped attending a sports session? If so, were you contacted to find out why?
- 22. What do you think it means to 'drop-out'?

# **Adoption**

- 23. Do you know what other activities/sports the Tribe Project offers? If so, how did you become aware of them?
- 24. Are you aware of the structure of the Tribe Project, in terms of the organisation and who runs it?
- 25. What would you say are the biggest challenges to running physical activity programs for children and young people?

# **Implementation**

- 26. If your child attends more than one sport through the Tribe Project, are you aware of any similarities/differences between them?
- 27. Are the sessions you attend delivered consistently?

# **Maintenance**

## Individual

- 28. What would estimate as the length of time, children typically participate in the Tribe Project?
- 29. Are there any exit routes once your child no longer wants to / is no longer able to attend the Tribe Project?
- 30. Are you aware of the Tribe Project being linked with local schools in Bath?
- 31. Are you aware of any strategies in place to prevent your child from dropping out, or encourage you to participate in other sports run through the Tribe Project?

# Organisational

- 32. What would you suggest as ways for improving the project overall?
- 33. What do you think are the biggest challenges for attracting more young people to do more physical activity and participate in programs like Tribe?
- 34. What do you think is a successful pathway from the Tribe project into the community?

## Appendix G: Tribe Parent Questionnaire Notification Letter

Dept. for Health, University of Bath, Claverton Down, Bath, BA2 7AY. January 2010.

Dear Parent/Guardian,

I am a PhD researcher within the Department for Health at the University of Bath, and as part of my Doctorate I am conducting an in-depth evaluation of the Team Bath Tribe Project. The aim of this research is to establish in what ways the Tribe project has been successful, or unsuccessful, in providing and delivering sports activities for children aged between 7 - 14 years, and in what ways the project could be improved.

I am sending you this letter to ask if you would be willing to give consent for your child to take part in this research study, which will require them to fill in a short questionnaire at the end of their Tribe sports session during the week of Saturday 6<sup>th</sup> - Friday 12<sup>th</sup> February 2010. If your child is absent from their sports session during this week, a second data collection will take place during the week of Saturday 20<sup>th</sup> – Friday 26<sup>th</sup> February 2010. Participation in the February Tribe half-term holiday camp will not be affected by this data collection.

The aim of this questionnaire is to establish the reasons why the children and adolescents who participate in the Tribe Project chose to do so, and which components of the Tribe Project are important to them.

The questionnaire your child would fill in will cover issues relating to the physical activities they currently participate in, their reasons for participating in the activity, and which parts of the Tribe Project they consider important or unimportant to their enjoyment of the sports sessions. The results generated from these questionnaires will be used to evaluate the Tribe Project, and the ways in which it could be improved.

Attached to this letter is an information sheet detailing the purpose of this research and what is involved if your child were to take part. Please read the information sheet and if you are happy for your child to complete the questionnaire, then you do not need to do anything further as they will automatically be included.

If you do not wish them to take part, please complete and sign the attached 'Parental Opt-Out of Participation' form, and this must be returned to the Tribe Project Administrator Leanne Matthews by Friday 5<sup>th</sup> February 2010.

Your child's participation in this study is completely voluntary therefore any help you can give with this research project will be greatly appreciated. If you would like further information, or to ask any questions regarding this study, you can contact me in writing at the above address, or via email on: <u>ps1hak@bath.ac.uk</u>

Yours Sincerely

Harriet Koorts (PhD Student) Supervisor: Prof Chris Riddoch.

# Appendix H: Tribe Parent Questionnaire Information Sheet

Researcher: Harriet Koorts (PhD Student) Supervisor: Prof Chris Riddoch

Department for Health University of Bath BA2 7AY ps1hak@bath.ac.uk

Please take time to read the following information carefully. Before you decide whether or not to give consent for your child to take part it is important for you to understand why the research is being done and what it will involve.

If you do not want your child to take part in this study, then please fill in and sign the 'Parental Opt-Out of Participation Form' which is attached. You will need to return this form to the Tribe Project Administrator Leanne Matthews, by Friday 5th February 2010.

# **Project Title:**

Programs to Promote Physical Activity in Children and Adolescents: A Case Study of the Team Bath Tribe Project, at the University of Bath.

# What is the purpose of the questionnaire?

- The aim of the questionnaire is to establish the reasons why the children and adolescents who attend the Tribe Project, chose to do so, and which factors they consider important or unimportant to the sports sessions they attend.
- The results from this questionnaire will be used to evaluate the Tribe Project, and the ways in which it could be improved as a program to promote physical activity among children and adolescents.

# Why have I been asked to give permission for my child to take part?

 As your child is less than 18 years of age, you will need to give consent for them to complete the questionnaire. If you <u>do not</u> wish to give consent for your child to be included in this study, you will need to fill in the 'Parental Opt-Out of Participation Form' attached, and this must be returned to the Tribe Project Administrator Leanne Matthews, by Friday 5<sup>th</sup> February 2010.

# What is involved if my child does take part?

- Your child will be required to fill in a questionnaire at the end of their Tribe sports session, which should last no longer than 15 minutes. This will take place during the week of <u>Saturday 6<sup>th</sup> Friday 12<sup>th</sup> February 2010.</u> If your child is absent from their sports session during this week, a second data collection will take place during the week of <u>Saturday 20<sup>th</sup> Friday 26<sup>th</sup> February</u>. This will <u>only</u> be for children who were unable to complete the questionnaire during the first week.
- There are no risks, discomforts, or stresses foreseen from taking part in this study. There will be absolutely no negative consequences if your child does not participate. If your child does not take part they will be free to leave the sports session as normal, so that they do not feel alienated by not taking part in the study.

# Will my child's answers be kept confidential?

- Yes. All the data collected from the questionnaires will be kept strictly confidential within the Department for Health at the University of Bath.
- Your child's name is not required on the actual questionnaire. The sports they participate in, their gender, and date of birth will be required. Their date of birth is required so the data can be compared across different age groups.
- Your child's questionnaire will be coded numerically so their data remains confidential during the analysis and publication phases, and can be identified if you wish to withdraw it at a later date. Once the data from the questionnaires had been converted from a paper into an electronic format, the data will no longer be linked to their questionnaire number; therefore will not be able to be withdrawn from the study.
- The data generated from these questionnaires will be kept securely in paper and electronic format for a period of five years after the completion of a research project.

# Does my child have to take part?

 No. Taking part in this research project is completely voluntary. You will need to 'opt out' of this study if you do not wish them to take part. Your child will also be able to choose whether or not to complete the questionnaire at the onset of the study despite prior consent.

- After reading this information sheet, if you do decide that your child may take part you do not need to do anything. If you would not like them to take part you will need to fill in and sign the 'Opt-Out of Participation' form overleaf and return to the Tribe Project Administrator Leanne Matthews, by Friday 5<sup>th</sup> February 2010.
- If you decide to withdraw your child's questionnaire from the study at a later date you will need to do send me an email stating your child's questionnaire number, gender, and their month and year of birth; and I will remove your child's questionnaire from inclusion in the study. You may request for this to be destroyed or returned to you by post. There will be no negative consequences if child does not participate, it is completely voluntary.

# What will happen to the results of the research study?

- The results of this research will be written up in the form of a detailed Case Study report, used as part of my PhD thesis and will be published.
- If you would like to contact me in the future for more information about this research, if you have any concerns regarding the information your child will provide, or you would like a copy of the published report, please contact me via email on: ps1hak@bath.ac.uk

# What should I do if I want to take part?

- If you wish to take part please ensure you have read this information sheet carefully. It is advised that you discuss with your child the purposes of the questionnaire, why they have been asked to take part, and explain that you are happy for them to complete it.
- Please feel free to email me if you have any further questions, or to seek clarification if there any points you would like explaining further. If you are happy to give permission for your child to take part in this study, you do not need to do anything after reading this information sheet.

Thank you for taking the time to read this information sheet.

# Appendix I: Tribe Parent Opt-Out of Participation Form

Researcher: Harriet Koorts (PhD Student) Supervisor: Prof Chris Riddoch

Department for Health University of Bath BA2 7AY ps1hak@bath.ac.uk

# Full title of Project:

Programs to Promote Physical Activity in Children and Adolescents: A Case Study of the Team Bath Tribe Project, at the University of Bath.

If you do not wish your child to take part in the above research study, please complete the form below and return it to the Tribe Project Administrator Leanne Matthews, by <u>Friday 5<sup>th</sup> February 2010.</u>

- 1. I confirm that I have read and understood the information sheet for the above study and have had the opportunity to contact the researcher to ask any further questions.
- 2. I understand that in order to 'opt-out' of this study I will need to return this form to the Tribe Project Administrator Leanne Matthews, by Friday 5<sup>th</sup> February 2010, and if I fail to do so my child may be included in the study.
- 3. I understand that there will be no negative consequences if my child does not participate in this study.

I (Parent/Guardian name)
would <u>not</u> like my child (child's name)
to take part in the research project stated above, and wish to opt-out from
participation. They participate in the following activities through the Tribe
Project (state activities)
Their date of birth is ( <u>month</u> and <u>year</u> only)
Parental/Guardian Signature Date
Researcher Signature Date

Please Initial box

_		_	

# Appendix J: Tribe Project Questionnaire

No.....



# **PHYSICAL ACTIVITY QUESTIONNAIRE**

# **Please Read the Following Information Carefully:**

- The following questionnaire should take no longer than 15 minutes.
- Please answer as many questions as possible, as accurately as you can.
  Your name is <u>NOT</u> required.
- Your answers will remain confidential, and you may withdraw at any time.
- By filling in this questionnaire you are giving consent for your answers to be used for the purposes of this research project.





1. Are you a boy or a girl? (Please tick the box)

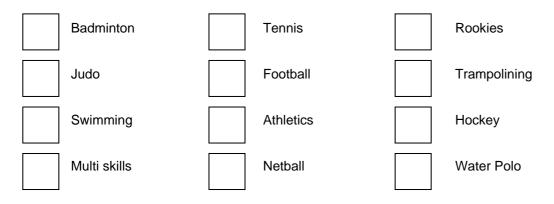
Boy	Girl



2. What is your date of birth? (Please write below)

..... (Day) ..... (Month) ..... (Year)

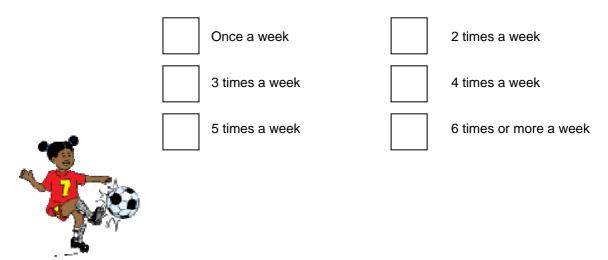
3. Look at the list of activities below. Tick the box next to the ones you TAKE PART IN at the University. (You may tick as many boxes as you want)



**4.** Now think about the activity you have JUST BEEN DOING. Which activity is this? (Please write below)

.....

5. How many times a week do you normally do this activity at the University? (Please tick one box)



Keep thinking about the activity you have JUST BEEN DOING and start to think about WHY you do it.

- Below is a list of possible reasons WHY you might do this activity.
- If you think the reason is **REALLY TRUE** for you, circle the number 5.
- If you think the reason is **NEVER TRUE** for you, circle the number 1.

Here is an example, so have a practice first:

	Never true for me 1	Hardly ever true for me <b>2</b>	l Don't know <b>3</b>	Sort of true for me 4	Really true for me <b>5</b>
When I get home from school I like	to				
1. Watch television	1	2	3	4	5
2. Start doing my homework	1	2	3	4	5

6. Keep thinking about the activity you've just been doing. Read the list below, and circle which number is MOST TRUE FOR YOU. (Please circle)

Never true H	Hardly ever	l Don't	Sort of true	Really true
for me	true for me	know	for me	for me
1	2	3	4	5

# I do this activity at the University because ...

1. I enjoy the activity and just want to take part	1	2	3	4	5
2. The University is a cool, fun place to be	1	2	3	4	5
3. My dad wants me to come	1	2	3	4	5
4. I want to do the activity competitively	1	2	3	4	5
5. My family are active so I want to be active	1	2	3	4	5
6. I want to meet new people	1	2	3	4	5
7. I want to do this activity in a relaxed place	1	2	3	4	5
8. I want to learn new skills	1	2	3	4	5
9. I like the place where I do the activity	1	2	3	4	5
10. I like the coaches that teach me	1	2	3	4	5
11. I want to keep fit and healthy	1	2	3	4	5

1 2 3 4 5
-----------

### I do this activity at the University because ...

12. My friends also come	1	2	3	4	5
13. There are top athletes training here	1	2	3	4	5
14. I want to improve and join a team	1	2	3	4	5
15. I want to have fun and enjoy myself	1	2	3	4	5
16. My brother or sister comes	1	2	3	4	5
17. It is near to where I live	1	2	3	4	5
18. I want to hang out with my friends	1	2	3	4	5
19. It's easy for me to get here	1	2	3	4	5
20. My mum wants me to come	1	2	3	4	5
21. Being part of a sports group is cool	1	2	3	4	5



7. What is important to you when you come to the University to do this activity?

Please read the list below and circle the number which is MOST TRUE FOR YOU. (Please circle)

Unimportant	Of Little	Moderately	Important	Very
	Importance	Important		Important
1	2	3	4	5

#### When I do this activity at the University, it is important that...

1. I have something to aim for, or improve on	1	2	3	4	5
2. It is close to where I live	1	2	3	4	5
3. I feel included in the group	1	2	3	4	5
4. I win or beat the other children in my group	1	2	3	4	5
5. The coach turns up on time	1	2	3	4	5
6. I have a nice, friendly coach	1	2	3	4	5
7. I improve and gain new skills	1	2	3	4	5
8. I am with children of my age	1	2	3	4	5
9. I receive a reward when I do well	1	2	3	4	5
10. The sessions aren't too long or too short	1	2	3	4	5
11. I am with children who are as good as me	1	2	3	4	5
12. I keep fit and healthy	1	2	3	4	5
13. I get on well with my coach	1	2	3	4	5
14. I feel part of the sports club	1	2	3	4	5
15. I feel safe when I'm at the University	1	2	3	4	5
16. I see the same coach each week	1	2	3	4	5
17. I get on well with the other children	1	2	3	4	5
18. I can take part in competitions	1	2	3	4	5
19. The coach is good at the activity	1	2	3	4	5
20. I don't have to take part in competitions	1	2	3	4	5
21. The place is clean and well looked after	1	2	3	4	5

Thank you for filling in this Questionnaire!



#### Bath and North East Somerset Primary Schools Census Data (October 2009)

#### Bath and North East Somerset

SCHOOL CENSUS - Primary, Infant & Junior Schools YR-Y6

Census Date 1st October 2009

NUMBER ON ROLL			National	Curricul	um Year			Grand		
School	R	¥1	Y2	Y3	¥4	¥5	Y6	NOR	Places 2009	PAN 2009
Bath South										
Combe Down C.E. Primary	60	59	56	58	60	60	56	409	392	56
Freshford C.E. Primary	20	20	20	22	21	21	23	147	140	20
Moorlands Infant	60	54	51					165	180	60
Moorlands Junior				57	43	59	46	205	249	64
Newbridge Primary	58	60	60	57	62	66	61	424	420	60
Oldfield Park Infant	60	59	60					179	180	60
Oldfield Park Junior				56	62	59	64	241	260	65
Southdown Infant	37	23	36					96	135	45
Southdown Junior				26	34	23	28	111	180	54
St. Martin's Garden Primary	33	23	33	24	31	45	35	224	315	45
St. Michael's C.E. Junior	40	25	42	43	42	42	51	178	224	56
St. Philip's C.E.Primary Twerton Infant	42 49	35	43	40	29	33	41	263	280	40 60
	49	50	40					145	180	00
Bath North	10	25	10	22	15	10	10	105	140	30
Bathampton Primary	19	25	18	23	15	12	13	125	140	20
Batheaston C.E. Primary	30	30	30 28	29	31	30	34 20	214	209	30
Bathford C.E. Primary	28				25	18		169	175	25
Bathwick St Mary C.E. Primary	30 28	30 25	30	34 23	34	34 20	35	227	210 210	30 30
St. Andrew's C.E. Primary St. John's Catholic Primary	43	44	41	42	36	33	58	297	315	45
St. Mary's Catholic Primary	27	29	30	28	30	29	30	203	210	30
St. Saviour's Infant	58	58	53	40	30	29	30	169	180	60
	30	30	35	50	40	38	26	154	240	60
St. Saviours C.E. Junior St. Stephen's C.E. Primary	60	60	60	60	59	61	56	416	420	60
Swainswick C.E. Primary	7	11	13	10	12	12	8	73	78	12
Weston All Saints C.E. Primary	52	52	47	50	53	51	44	349	378	54
Widcombe Infant	60	60	60	30	33	51		180	180	60
Widcombe C.E. Junior	60	00	00	56	59	55	56	226	225	60
Keynsham and Saltford										
Castle Primary	29	20	29	26	24	32	25	185	210	30
Chandag Infant	57	58	60	20				175	180	60
Chandag Junior				65	68	66	68	267		68
Saltford C.E. Primary	50	51	48	49	52	50	50	350	350	50
St. John's C.E. Primary	30	30	30	30	33	32	34	219	210	30
St. Keyna Primary	30	27	28	25	30	27	40	207	210	30
Whitchurch Primary	26	26	30	21	30	28	25	186	210	30
Chew Valley	· · · · ·									
Bishop Sutton Primary	20	19	13	14	15	17	22	120	147	21
Chew Magna Primary	14	13	19	15	17	15	14	107	105	15
Chew Stoke C .E. Primary	24	24	24	30	26	24	27	179	175	25
Clutton Primary	21	17	13	16	16	21	20	124	147	21
East Harptree C.E. Primary	6	9	10	6	7	11	11	60	91	13
Pensford Primary	8	8	13	8	10	9	13	69	105	15
Stanton Drew Primary	7	4	9	6	4	6	11	47	70	10
Ubley C.E. Primary	5	11	10	13	- 11	5	9	64	78	12
Central Bath and North East Somerset										
Cameley C.E. Primary	21	12	14	9	23	15	15	109	126	18
Camerton C.E. Primary	2	3	2	4	1	6	10	28	70	10
Farmborough C.E. Primary	13	15	12	13	11	11	13	88	105	15
Farrington Gurney C.E. Primary	16	14	9	12	14	11	10	86	102	15
High Littleton C.E. Primary	20	14	18	21	21	16	23	133	140	20
Marksbury C.E. Primary	14	15	17	11	12	14	13	96	90	15
Paulton Infant	53	58	60					171	179	60
Paulton Junior				63	60	58	59	240	240	60
Peasedown St John Primary	59	51	60	69	46	73	- 55	413	420	60

#### Bath and North East Somerset Secondary Schools Census Data (October 2009)

#### Bath and North East Somerset SCHOOL CENSUS - Secondary Schools Y7-Y14

Census Date 1st October 2009

NUMBER ON ROLL			Nati	onal Cur	riculum `	Year			Grand			Grand	
School	7	8	9	10	11	12	13	14	Total NOR Y7-Y11	Places Y7 Y11 2009	PAN 2009	Total NOR Y12-Y14	Places Y12-Y14 2009
Bath													
Beechen Cliff	168	170	164	170	169	180	129	10	841	810	162	319	255
Culverhay	49	56	61	59	83	55	1		308	510	102	56	88
Hayesfield	191	186	153	198	199	123	84		927	1050	210	207	134
Oldfield	134	168	142	150	142	59	52		736	960	192	111	59
St. Gregory's Catholic College	170	169	170	165	160				834	800	160	0	0
St. Mark's C.E.	50	65	46	48	73				282	540	108	0	0
Ralph Allen	175	179	182	182	175	104	100		893	875	175	204	204
Keynsham and Saltford													
Broadlands	155	201	216	209	214				995	1089	217	0	0
Wellsway	212	215	208	214	221	139	121		1070	1050	210	260	309
Chew Valley													
Chew Valley	199	185	187	198	198	113	97		967	980	196	210	235
Midsomer Norton and Radstock													
Norton Hill	263	251	248	230	251	173	112	1	1243	1235	247	286	278
Somervale	77	110	93	77	117	40	38		474	705	141	78	134
Writhlington	237	241	237	224	220	133	112		1404	1080	216	245	16
Total	1912	2026	1943	1954	2053	939	717	1	10974	11684	2336	1976	1712

**NHS** Bath and North East Somerset

Working together for health & wellbeing

## The Population of Bath and North East Somerset in 2009

Release	Version 1.5						
Purpose	For Release						
Status	Final						
Access	Public						
Issue Date	13/11/10						
Project brief	To provide an overview of historic and projected population trends in the Bath and North East Somerset area to support needs assessment and infrastructure delivery processes.						
	Author:	Jon Poole Research & Intelligence Manager					

#### The Population of Bath and North East Somerset in 2009

#### **Executive Summary**

- Mid-year estimates suggest that there were 177,700 residents in Bath and North East Somerset in 2009.
  - (This number is reduced from estimates produced for 2008 181,300 due to an improvement in counting methods by the ONS)
- The local age structure is broadly similar to the population as a whole except for the 20-24 age range, which is over-represented.
- Bath and North East Somerset remains less ethnically diverse than the UK as a whole, 89.2% (159,000 in 2007) of local residents define their ethnicity as White British. This is followed by 3.9% defining as White Other and 1.2% defining as Chinese.

#### Historic Change

- The local population has grown by 7.7% between 1981 and 2009 (from 161,000 to the current figure). This is greater than the UK as a whole, but lower than the South West Region.
- This increase has been largely experienced due to 'migration and other' factors. In particular, the number of students in the two Universities doubled between 1995 and 2009.

#### **Population Projections**

- The ONS project that the Bath and North East Somerset population will increase by 12% to 198,800 by 2026.
  - It is likely that this figure will change slightly following the publication of the Core Strategy which will allow more accurate estimation of the impact on housing growth on population change.
- This increase is expected to mainly be experienced in older people, in particular the 80+ population is projected to increase by 40% from 9,900 in 2010 to 13,900 in 2026.
  - The exact makeup of these population changes is likely to be influenced strongly by the type of housing that is developed over this period
- An above average increase is also expected in the 4-11 age range, which is projected to increase from 14,500 to 16,900

#### **Population Density and Distribution**

- Bath and North East Somerset has a greater population density than both England and the South West region.
- Locally there is an enormous variation in population density. Farmborough Ward has a population of 70 people per square kilometre, compared to 6900 in Walcot Ward.

#### 1. Introduction

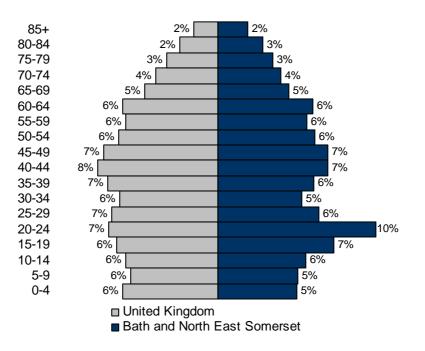
This report provides a summary overview of historic, current and projected makeup of the Bath and North East Somerset population. The analysis is principally based on Office of National Statistics (ONS) data and as such all data is to be considered subject to their onward licensing agreements.

For further information, background data or methodological information please contact <u>research@bathnes.gov.uk</u>.

Please Note: All information provided for population projection purposes is done so for the purpose of estimating demographic change only and does **not** represent formal planning policy.

#### 2. The Population as a whole

According to ONS estimates, in 2009 there were an estimated 177,700 residents in Bath and North East Somerset of which 87,800 (49.4%) are male and 89,900 (50.6%) are female. This represents a downwards revision from 2008 estimates (181,300) due to improvements in the methods used by the ONS to calculate the movement of international migrants.



#### % Population 5-year age groups - mid-year 2009

Source: ONS Mid-year estimates 2009 © Crown Copyright 2010)

## Fig.1 - Population proportions by 5-year (quinery) Age Groups – ONS Mid-Year 2009, UK and Bath and North East Somerset.

Bath and North East Somerset has a similar structure to the UK, however the proportion represented by the 20-24 age range is 3% higher than the population as a whole. This increase is explained by the presence of two higher education establishments in the area.

Ethnic Group	%	No.
White: British	89.2%	159,100
White: Irish	0.7%	1,300
White: Other White	3.9%	7,000
Mixed: White and Black Caribbean	0.5%	900
Mixed: White and Black African	0.2%	300
Mixed: White and Asian	0.4%	700
Mixed: Other Mixed	0.4%	700
Asian or Asian British: Indian	0.8%	1,500
Asian or Asian British: Pakistani	0.3%	500
Asian or Asian British: Bangladeshi	0.2%	300
Asian or Asian British: Other Asian	0.3%	500
Black or Black British: Black Caribbean	0.4%	800
Black or Black British: Black African	0.6%	1,000
Black or Black British: Other Black	0.1%	100
Chinese or Other Ethnic Group: Chinese	1.2%	2,100
Chinese or Other Ethnic Group: Other	0.7%	1,200

#### Table 1 – Ethnic Background – Bath and North East Somerset (2007 estimates)

Source: ONS Experimental Population Estimates by Ethnic Group (2007) © Crown Copyright 2009

Table 1 demonstrates the estimated breakdown of the population by ethnic grouping. The most significant non White British population the White: Other White Group, who represent an estimated 3.9% of the population, followed by the Chinese Group, who represent an estimated 1.2% of the population.

Bath and North East Somerset remains less ethnically diverse than the population of England, where 84% are classified within the White: British Group.

In addition these estimates of ethnic background have demonstrated an increase in ethnic diversity compared to the 2001 census, where 94% of the population were recorded as white British<sup>6</sup> to 89.2% in 2007. The most significant increase has been experienced in the White: Other White ethnic group which has increased from 4,265 (2001) to an estimated 7000 in 2007. This increase can be largely attributed to members of EU Accession States.

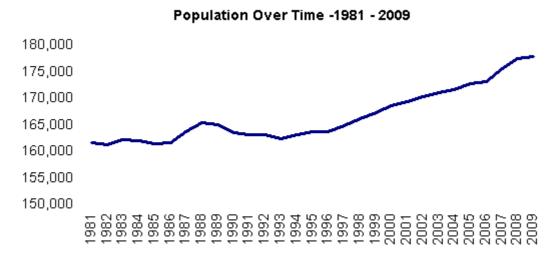
#### 3. Historic Trends

Between 1981 and 2009 the Bath and North East Somerset population grew by 12,700 from 161,000 to the current figure (A growth of 7.7%). This growth is greater than the UK as a whole but lower than Regional growth. Table 2 and Fig 2 (overleaf). show that this growth has been focussed on the last ten years.

<u>Table 2 - % Population change 10-year ranges,</u> 1989-2009.									
	Bath and North East Somerset	<u>South</u> West	<u>Great</u> Britain						
1989-1999	1.3%	4.9%	2.7%						
1999-2009	6.3%	7.2%	5.3%						

Source: ONS Mid-year estimates © Crown Copyright 2010

<sup>&</sup>lt;sup>6</sup> Source: (2004) 2001 Census Standard Tables © Crown Copyright



Source: ONS Mid-year estimates 1981-2009 © Crown Copyright 2010

#### Fig 2 – Bath and North East Somerset Population Change over time – 1981-2009

General Population change can be further understood in terms of specific components of change, fig 3 demonstrates how births and deaths have compared with migration and other change in influencing this change.

#### Components of population change - 1991 - 2009



Source: ONS Mid-year estimates 1991-2009 © Crown Copyright 2010

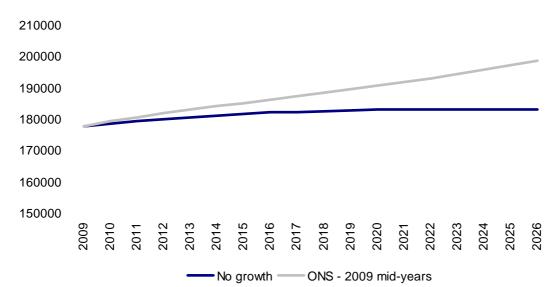
## <u>Fig 3 – Bath and North East Somerset Components of Population Change over time – 1991-2009</u>

In addition to these broad changes there are a number of other factors which can be shown to have an impact on these population increases, in particular European migrant workers and full time Students studying in Higher Education institutions.

#### 4. Population Projections

Projecting the future population of any area is an inexact process. The ONS produce annual projection information based on historic change which forms the majority of this analysis.

Fig. 6 demonstrates a comparison between ONS projections and those where limited growth is experienced



#### **Comparative Projections 2009 - 2026**

Source: ONS Population Projections 2009 © Crown Copyright 2010, Local Estimates based on GLA projections with 2009 Base – Bath and North East Somerset (2010)

#### <u>Fig 6 – Comparative population projections – Bath and North East Somerset 2009 – 2026.</u> <u>No growth and 11,000 projections based on extrapolated GLA projections, ONS</u> <u>projections based on 2009 mid-year estimates © Crown Copyright.</u>

Based on linear growth projections, the general population is expected to increase to 198,800 (+12%) by 2026.

A note on household composition and population change: Availability of different housing will have an impact on the changing population, however it should be noted that it is not possible to know the makeup of developments in a particular area until initial plans are submitted. For example, it is not possible to know for certain the proportion of the area which may contain family dwellings or residential care homes at this stage.

In addition, local planning policy decisions will have a significant impact on the potential supply of dwellings and thus place an external control on population levels

The ONS projections provide estimates for a number of variables; table 3 provides a breakdown of certain key demographics.

	2010	2015	2020	2026	% Change 2010 - 2026
Births	1.8	1.8	2	2	11%
Age 4-11	14.5	15.4	16.1	16.9	17%
Age 11-16	12	11.4	12.1	12.7	6%
Under 18	34.2	34.5	36	37.9	11%
Working age adults*	113.8	116.7	118.1	120.5	6%
Older People**	37	39.5	41.9	46.1	25%
80+	9.9	10.6	11.8	13.9	40%
Deaths	1.6	1.5	1.5	1.5	-6%

Table 3 - Demographic Change by key groups – Bath and North East Somerset 2010 – 2026 – 000 population

\* M 16-65/ F 16-60

\*\* M 65+/F 60+

Source: ONS Population Projections 2009 © Crown Copyright 2010

While the most significant increases expected are in older people, in particular the 80+ population (from 9,900 to 13,900. A 40% increase), it is also notable that the 4-11 age range is projected to increase by 17% from 14,500 to 16,900.

An on-line tool providing more in-depth analysis of this data can be found at: <u>http://www.statistics.gov.uk/populationestimates/flash\_pyramid/Subnational-pyramids/base.html</u>

#### 6. Population Density and Distribution.

Table 4 demonstrates that In 2009 the Bath and North East Somerset population density the population was greater than that for both England and the South West Region as a whole.

	Area (sq km)	People per sq. km
Bath and North East Somerset	346	514
South West	23,837	219
England	130,279	398

Table 4. - Comparative Population Density 2009

Source: ONS Demography Local profile 2010 © Crown Copyright- experimental statistics not formal national statistics<sup>7</sup>

The authority-wide picture does not give an accurate description of population distribution within the authority however. The ONS currently provides data at a smaller geographical level for the 2008 mid-year estimates allowing for more detailed analysis of the makeup of the local population.

There is a strong degree of heterogeneity in terms of population distribution within the Bath and North East Somerset area. Fig. 7 (overleaf) demonstrates these differences by local government ward. Walcot ward has a population density of 6900 people per square km compared to Farmborough ward with a population density of 70 people per

<sup>&</sup>lt;sup>7</sup> ONS Local Profiles are available by download from ONS direct at <u>http://www.statistics.gov.uk/local-profiles/</u>

square km. In addition the ONS are now providing smaller geographical population estimates. Fig 8 (overleaf) demonstrates the population density of the area broken down by Lower Level Super Output Area (LSOA), geographies of approximately 1500 residents and provides a more geographically defined area. This analysis demonstrates an even greater variation; Bathavon North LSOA (reference 6 on fig 8) has a population density of 41 residents per square km compared to over 16,000 Oldfield LSOA (reference 68 on fig. 8).

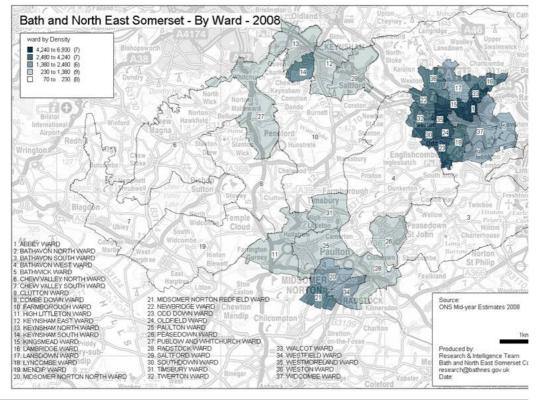


Fig.7 – Ward level population density – 2008 mid-year estimates

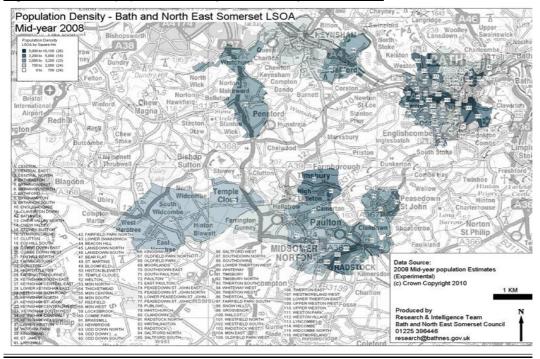


Fig. 8 - LSOA level population density – 2008 mid-year estimates

#### <u>Tribe</u>

Tribe is the University's programme of community sport.

The objectives of Tribe have been to create pathways for people to follow sport from a young age and into an active future. The programme starts with mother and baby classes, progresses into Tots activities (4-7 years), Tribe activities (7-16 years), Futures (7-16 years), Academies (16-18 years) and Adult Recreation.

#### Participation Pathway; Overview

The pathways allow at each stage of development, routes into performance pathways and participation pathways inter-changeably. This development pathway allows people access to sporting opportunities throughout their life, contributing to a healthier lifestyle.

Our pathway begins with our Learn to Swim programme and the tots classes which are aimed at children aged 8 months to 7 years of age. The tot's classes cover a number of sports and basic multi skill based sessions. From 7 years to 16 years we organise sport specific sessions across 20 different activities including football, netball, judo, athletics, swimming, trampolining and tennis.

Within those age ranges we support participation and development groups allowing young athletes to develop at their own speed in a suitable environment. In some sports these have developed into junior clubs. In the past 12 months we have developed partnerships with the largest football and netball clubs in the Bath area, supported them with facilities and coaches. These two programmes alone operate around 30 teams supporting over 500 young athletes.

From 16-18 we have developed links with three local educational sites in Beechen Cliff, Wiltshire College and City Academy Bristol to support athletes whilst remaining in full time education. These opportunities have included locally funded academies and government funded projects to assist an athlete's development whilst not compromising their education.

From 18 years onwards we have University based programmes and adult tribe opportunities to access sports clubs and organised activities to maintain participation throughout life

#### Participation Pathway; Facts

Across the programmes the University has hosted on its facilities within the Tribe programme, it has currently 45,000 interactions with individuals from the local community per year.

The Tribe Programme now offers an array of activities covering every day of the week and at all times of day to allow accessibility to as many groups as possible.

The Tribe programme has engaged local coaches, organisers and officials to work within the programme and help to develop the direction of the pathway.

The Tribe programme has brought a local football club, Bath Arsenal and netball club, Bath Netball under its organisation supporting activities for over 30 teams from 6 years of age to 16 years of age involving over 500 children.

Individual sports have developed their own junior clubs in Judo, Hockey and soon to be launched, Badminton, which will be the only Badminton Club in BANES.

The Swim School has on average 400 children per week learning to swim and become familiar with water in the city of Aqua Sulis.

An Academy for football was established at Beechen Cliff school with partnership funding from the school and the University. The success of this year has led to the Academy expanding to include Hockey and Athletics in Year 2.

The Academy design has led to the successful application to be an AASE (Advanced Apprenticeship in Modern Excellence) in partnership with Wiltshire College allowing up to 40 athletes to be funded through their tertiary education.

The most recent progressions in this area is the appointment of a joint position with the City Academy, Bristol to support young athletes within their school environment and create pipelines for them to progress into clubs and sports pathways whilst maintaining their educational focus.

Adult opportunities include trampolining where it is possible for families to exercise together, regular classes in Pilates, Yoga, Circuits and Aerobics. There are also organised leagues in football and coaching in netball as well as taster sessions in Badminton, Fencing and Tennis.

The pathway is inclusive supporting disabled members of the community, the facilities are IFI (Inclusive Fitness Initiative) approved (2006) which has led to the funding of a disability sports coordinator who is working with our partners from the MENCAP association, Sportsability and British Paralympic Association.

#### Bringing Sport to the Community; Overview

The University's objective is to bring sport to the community either by visiting schools, clubs, social groups or by transporting groups to the University and hosting events to encourage the community into sport and physical exercise.

The University sends coaches to schools to deliver sport within curriculum time, breakfast, lunch and after-school clubs. The programme employs young student coaches who are wonderful role models, enthusiastic and unique communicators with young people.

These role models visit local schools and groups to speak to young people, open fetes, work with gifted and talented pupils, young offenders and other local authority groups.

The University hosts out-of-term time activities for children to participate in and during term time hosts a wide range of activities working with multiple partners including local education authority, the school sports partnership, youth sports trust, county sports partnership, British Olympic Foundation and National Governing Bodies.

The University hosts several national programmes each year including the Toplink Festival, Step into Sport Volunteers Festival and the Olympic Day Run

#### Bringing Sport to the Community

Delivery of activities to over 80% of Primary schools in BANES, and to a large number of primary school in Wiltshire and North Somerset. This has resulted in over 30,000 interactions with young people in the past school year and over 50 schools per week visited by the Tribe programme.

The programme has received sponsorship from a local business, Roper Rhodes of £15,000 per year for three years. This has been Sportsmatched (Government Programme to match business sponsorship for sport) to create a £30,000 fund that was spent in year 1, this programme created an additional 10,000 interactions and Year 2 has been planned in conjunction with the Active Leisure Team and School Sports Partnership which will have nearly 50,000 interactions in just one year on one programme.

The programme is aimed at Key Stage 2 of the national curriculum and is known as K2CC, there are already plans for similar programmes at Key stages 1 and 3.

The University based programme within the holidays has increased this year to over 3,000 interactions on a programme offering more choice of sports and allowing families to participate together.

The University has organised a large number of visits to the campus both locally and nationally to allow groups to experience the environment, receive coaching and participate within the facilities. Over 500 children have attended with their schools travelling as far as Chesterfield and as close as Beechen Cliff.

The University has organised and hosted a gifted and talented programme that has supported the local school sports partnership and supported links between state and independent schools within BANES providing opportunities for their pupils to participate together.

Annually, in June we have hosted the Olympic Day Run, a fun run in celebration of the Olympic Ideals with over 150 runners taking part receiving free T-shirts from the British Olympic Foundation.

Annually, in March, the University hosts the Youth Sport Trust, Toplink Festival where school children from BANES, Wiltshire and Dorset attend a day at the University led by students where they received information about how to run a sports festival. Over 50 schools attend resulting in over 50 festivals across the region in the Summer terms.

Within the community the University has helped to support a number of local authority groups such as the BANES Racial Equality Council, the Wiltshire Splash TAP Scheme, the BANES Youth Offenders Team to name a few.

Tribe has created excellent partnership links with the local authority, county sports partnership and the school sports partnership which has enabled it to have a huge impact on the local community brining role models, inspiration, ambition and accessibility to the community groups of BANES and surrounding areas.

#### Appendix M: Weekly schedule of Tribe Sports Sessions & Attendance Records

#### Data accessed 04/06/2009

#### Monday Tribe Sports Sessions 20/04/2009 – 04/05/2009

Class	Break Even	Wk 1 (20/4)	Wk 2 (27/4)	Wk 3 (4/5)
Soccer Tots 4pm-5pm	11	13	14	16
Judo 4pm-4.45pm	4	10	10	14
Parent and Child	7	7	7	7
LTS	34	65	69	66
Merit	9	23	23	23
Adults	9	13	16	16

#### Tuesday Tribe Sports Sessions 21/04/2009 - 05/05/2009

Break Even	Wk 1 (21/4)	Wk 2 (28/4)	Wk 3 (5/5)
5	2	3	3
5	11	14	16
8	6	3	6
7	6	6	8
34	70	70	70
	Break Even 5 5 8 7 34	Break Even         Wk 1 (21/4)           5         2           5         11           8         6           7         6           34         70	Break Even         Wk 1 (21/4)         Wk 2 (28/4)           5         2         3           5         11         14           8         6         3           7         6         6           34         70         70

#### Wednesday Tribe Sports Sessions 22/04/2009 – 06/05/2009

Class	Break Even	Wk 1 (22/4)	Wk 2 (29/4)	Wk 3 (6/5)
Judo 4.30pm	10	18	18	18
Development Tramp 4pm-6pm	5	8	8	8
Trampolining 4pm-5pm	4	7	7	7
Trampolining 5pm-6pm	8	13	13	15
Trampolining Tots 4pm-5pm	4	5	3	5
Parent and Child	7	2	3	4
LTS	34	67	67	69
Merit	9	10	10	10

#### Thursday Tribe Sports Sessions 23/04/2009 - 07/05/2009

Class	Break Even	Wk 1 (23/4)	Wk 2 (30/4)	Wk 3 (7/5)
Trampolining 9.30-10.30	4	2	3	3
Trampolining 10.30-11.30	4			1
Athletics 4.30pm-6pm	8	6	7	8
Soccer Tots 4pm-5pm	6	12	14	15
Soccer Tots 5pm-6pm	6	9	9	13
Judo 4pm-5pm	4	1	4	
Parent and Child	7	5	5	5
LTS	34	58	58	63
Adults	3	2	2	5

Friday Tribe Sports Sessions 24/04/2009 – 08/05/2009

Class	Break Even	Wk 1 (24/4)	Wk 2 (1/5)	Wk 3 (8/5)
Netball 4.30pm-6.00pm	15	25	26	28
Development Trampolining 4.45-6.45	10	14	8	10
Tramplining 4.45-5.45	8	14	14	16
Tramplining 5.45-6.45	8	11	14	14
Parent and Child	7	4	6	6
LTS	34	55	58	61

#### Saturday Tribe Sports Sessions 25/04/2009 – 09/05/2009

Class	Break Even	Wk 1 (25/4)	Wk 2 (2/5)	Wk 3 (9/5)
Soccer Tots 9.30am-10.30am	18	29	28	28
Soccer Tots 10.30am-11.30am	18	21	22	22
Soccer Tots 11.30am-12.30pm	18	16	17	18
Tribe Football 9.30am-11.00am	13	21	23	23
Tribe Football 11.00am-12.30pm	13	9	11	12
Development Trampolining 10.30-12.30	10	14	14	14
Trampolining 10.30-11.30	8		8	7
Trampolining 11.30-12.30	8		5	4
Parent and Child	4	6	8	10
LTS	37	72	79	79
Merit	11	25	25	25
One to Ones	17	23	26	22
Swimming 50m pool RS Bronze	20	33	33	32
Swimming 50m pool RS Silver	9	16	16	17
Swimming 50m pool RS Gold	10	15	15	15

Appendix N: Executive Summary of the Tribe Project

# Evaluation of the Team Bath Tribe Project at the University of Bath

Harriet Koorts

March 2011

#### **Executive Summary**

The University of Bath has a key objective of bringing sport into the local community, and it is through the Team Bath Tribe Project that this key objective is achieved. The Tribe Project is aimed a children and adolescents aged between 7-14 years old living within Bath and North East Somerset (BANES). Launched in the summer of 2003, the Project encompasses a series of sports courses and programs that allow children and adolescents to have access to sport and physical activity, receive a positive experience of sport and maintain an active lifestyle. The Tribe Project is delivered through coaching within local primary and secondary schools, and both term and out of term-time activities at the University of Bath campus.

The purpose of this summary is to report the findings of the case study evaluation of the impact of the Tribe Project. Five sources of data were used to conduct this in-depth evaluation. Semi-structured interviews were conducted with the organisers of the Tribe Project, the coaches who deliver the Tribe sports sessions and the parents of children and adolescents who were attending the Project. Questionnaires were administered to the children and adolescents who participated in the Tribe sports sessions. Further data was collected through direct observations of the Tribe Project, documentation relating to the Project's implementation and archival records relating to population data within BANES.

The results showed that Tribe Project had a positive impact on the children and adolescents attending the program beyond that of just sports participation. The children and adolescents were described as having improved self-confidence, an improved level of fitness, an increased knowledge of health and fitness, a better understanding of sportsmanship and improved sociability with other children. The Tribe Project successfully maintained individuals' participation in sport as the attendees were described as typically attending the program for several years. Overall, the Tribe Project had a positive impact within the community. The program was successfully linked with 95% of the primary and secondary schools within BANES, and multiple sports events were hosted at the University of Bath due to these community links.

Recommendations for the organisers and coaches delivering the Tribe Project include the following action points:

- Establish the Tribe Project's target population and maintain a consistent record of the program attendees. The rate of attendance from potentially eligible participants could then be monitored, and the program tailored to reach specific groups.
- Increase the breadth of Tribe Project advertising and promotion within BANES.
   This will make the Project more accessible to children and adolescents within the community and may increase participation rates overall.
- Clarify the different aims and objectives of the individual Tribe sports. Creating a clearer image their unique program goals through promotional material or communication pathways with the parents, will manage the parents' expectations of the Tribe sports sessions. This will lead to a more consistent delivery of the Tribe sports and potentially more effective outcomes following participation overall.
- A record of the organisations within BANES that chose to, and chose not to, form links with the Tribe Project also needs to be recorded. This would ensure that factors, which enable and prevent the uptake of the Tribe Project within the community, are recognised.
- Implement regular Tribe Project meetings. This will encourage communication
  pathways between the Project organisers and coaches. Providing a scheduled
  opportunity for feedback will promote unison between the different Tribe sports
  and increase the effective, consistent delivery of the sports sessions. This will
  also foster a team environment within the Project and a strategy to monitor
  whether the program aims have been achieved.
- Communication links between the Tribe Project organisers and the parents need to be increased. Engaging parents within the Project will maximise their awareness of the different Tribe sports and increase their support and understanding of the Project.
- The Tribe Project needs to create a clearer brand image of "Tribe". This will improve the parent's perception of the Tribe Project, the children's and

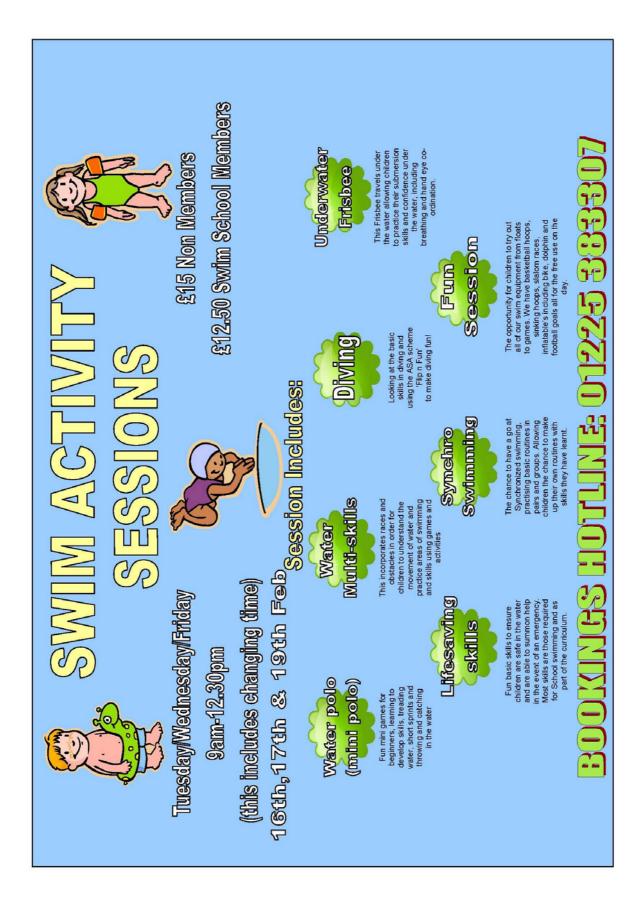
adolescents' sense of belonging within the organisation. This may potentially increase sustained participation in the Tribe Project as a whole.

 Pathways following the Tribe Project into the community need to be more actively promoted to participants. Increasing parents' awareness of the sports clubs available within BANES will support the Tribe Project's participation pathway, and potentially increase sustained participation in sport during childhood and adolescence. Appendix O: February Half-Term Holiday Camp Brochure 2010



CAMPS CAMPS	These sessions are aimed at children aged 2-6yrs, though some age ranges may change depending the sport. These are fun and enjoyable sessions that allow the children to have a taster of new sports in a fun and safe environment.	We ask that all parents are present during these sessions and that you bring plenty for them to drink and a snack.	Soccer Tots – children will learn individual ball skills and also fun skill based games and activities.	<b>Trampoline Tots</b> – children will learn how to bounce safely and also some very basic shapes and skills. Under 4's will be taught how to bounce and also some very basic shapes. We have two trampolines and two coaches (depending on numbers attending) but we do ask that	parents are there to supervise children when they are not on the trampoline.	DATES TIMES PRICE	Soccer Tots (4-6yrs) - £2.75 per session	Trampolining Tots     Thursday 18 <sup>th</sup> February     9.30 -10.30am     £3.60 per session       2-6yrs)     2-6yrs)     2-6yrs     2-6yrs	To book places please call:	01225 386915
FEBRUARY Half Term Holiday	SPORTS CAMPS Our October camps will focus primarily on the development of the skills and fundamentals essential to the success of your child in that particular sport. Our coaches also try very hard to create a "fun" atmosphere throuch various thrones of shorts and activities	We have three levels of activities available:	Team Bath Tribe Tots - Children aged 2-6yrs,	These sessions are fun and structured, introducing children to sport in a fun and friendly environment. Parents are asked to stay with their children during these sessions. <b>Activities Include:</b> Trampoline Tots, Soccer Tots and Tennis Tots among others.	These sessions are all about trving out new sports and enjoying ones	you already know. These are relaxed, fun mornings or afternoons with a session plan guiding the children through their development and	enjoyment of their chosen sport. <b>Activities Include:</b> Mix and Match, Startrack: Athletics, and Tennis among others.	These sessions are aimed at children who may already attend an out of school club or compete at school level in the sports available. These will be fun vet structured daws tailored especially for the sport the	children will be doing. Activities Include: Hockey, Futsal, Trampolining, and Beach Volleyball among others.	All of our activities are taken by fully qualified coaches, and all have been recently CRB checked. All of our activities take place in the sports facilities at the University of Bath.

CAMPS	These camps are for all abilities, the ages will be relevant to the sports available. These are day or half day camps that are sports specific, and there will be activities during the sessions that are specifically	designed for that sport. Some of these sessions are run in line with the Mix & Match so you can do another activity in the afternoon 1.30-5pm.	You do not have to have taken part in any of the sports available	before, you can be a complete beginner and still be able to attend these camps.	Children are supervised by our coaches during their lunch break. Please send your child with a packed lunch and plenty to drink. Please be advised that we are not allowed to administer suntan cream, please	send your child with some and our coaches will remind the children when to apply it.	DATES TIMES PRICE	HOCKEY 15 <sup>th</sup> & 16 <sup>th</sup> & 10am-4pm £25 per Day (8-15yrs) February £40 Both Days	Please note that places on the sessions <b>must</b> be booked and paid for	in advance. To book places please call: 01225 386915	*Please note that the prices for the Swim Sessions are different to that of the normal Mix & Match Sessions	
afternoon or	all day option we will look	the activities	PRICE FULL	DAY	វជ	Non Staff Members	£20 Staff	Members				
er a morning,	ould like the a	to book and pay for the activities	PRICE 1/4	DAY								
<b>Step 1</b> - Choose whether you would like either a morning, afternoon or an all day activity.	<b>Step 2</b> - Choose your desired sport, if you would like the all day option you can mix and match the sports we have on offer and we will look after your child from 9am-5pm.	s Hotline to boo	AFTERNOON ACTIVITIES	1.30-5pm	Trampolining or Sports Combo		Sports Combo	Trampolining		Sports Como Or Football	Sports Combo Or Trampolining	
hoose whether you	Step 2 - Choose your desired you can mix and match the s after your child from 9am-5pm.	<mark>Step 3</mark> - Phone our bookings Hotline tyou would like.	MORNING ACTIVITIES	8.45-12.30pm	Badminton or Trampolining	Sports Combo	Swim Activity Sessions*	Volleyball Or Trampolining	Swim Activity Sessions*		Sports Combo Or Football	Swim Activity Sessions*
Step 1 - Choose an all day activity.	<u>Step 2</u> - Cl you can mi after your c	Step 3 - Phon you would like.	7-14yrs			Tuesday	5	Wednesday 17 <sup>th</sup>	February	Thursday 18 <sup>th</sup> February	Friday 19 <sup>th</sup> February	



## BOOKINGS

#### For bookings please call:



(Between the hours of 9-5pm)

(01225) 384454 For outside of hours

For more information on holiday camps please call our enquiry line on: (01225) 386915 All courses must be paid for in advance



What should my child bring with them? Each child must bring plenty to drink and a packed lunch if staying all day.

Children will be both indoors and outdoors, so please provide appropriate clothing - A jacket for cold weather and a sunhat for the hot days.

No jeans, jewellery, skirts or dresses. Heeley's are not allowed to be worn in any of our sessions.

Please ensure during hot weather that the first application of suntan cream is applied in the morning before camps begins, then send them with the suntan cream and our coaches will remind the children during the day to reapply the lotion, unless you advise us otherwise.

Any valuables or precious possessions, such as electronic games and devices are brought along at your own risk. We cannot be held responsible for any loss, damage or theft.

#### What happens at drop off/collection?

All parents <u>must</u> sign their children in with our coaches and leave an appropriate contact number for the day.

Our Tribe Coaches will assume that the person signing the child in will be the same person collecting and signing out in the afternoon. If this is different please ensure you have informed one of our Tribe Coaches at the start of the session.

#### What happens If a Sport is cancelled?

TEAMBATH reserve the rights to cancel courses due to insufficient numbers. These cancellations will entitle the customer <u>either</u> to a full refund or a transfer onto a different camp. Some sessions may be altered due to bad weather.

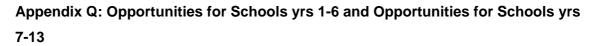
#### Appendix P: Tribe Project Sports Session Schedule September – December 2009

#### TEAMBATH Tribe Saturday 5th September - Friday 15th December 09 14 Week Courses (excluding week of 26th Oct)

Day	Course	Age Group	Time	Venue	Course Cost
	Soccer Tots	4-5yrs	4pm-5pm	STV Hall*	£38.50
Monday	Judo tribe	7+yrs	4.30pm-5.00pm	Dojo	£5.50
Tuesday	Badminton	6-9yrs	4pm-5pm	STV Hall*	£38.50
Tuesday	Badminton	10-14yrs	5pm-6pm	STV Hall*	£38.50
		Andreas Marcala			
	Trampoline Tots p&p*	Pre-school	4pm-5pm	Indoor Athletics	£3.60
Wednesday	Trampoline Tribe	5-9yrs	4pm-5pm	Indoor Athletics	£50.40
	Trampoline Tribe	10-16yrs	5pm-6pm	Indoor Athletics	£50.40
	Trampoline Tots p&p*	Pre-school	10am-11am	Indoor Athletics	£3.60
	Trampoline Tots p&p*	Pre-school	11am-12pm	Indoor Athletics	£3.60
Thursday	Soccer Tots	4-5yrs	4pm-5pm	STV Hall*	£38.50
	Soccer Tots	6-7yrs	5pm-6pm	STV Hall*	£38.50
	Athletics	6-14yrs	4.30pm-6.00pm	Indoor Track	£49.00
		0.44	4.00	073/11-11	640.00
	Hi 5 Netball	9-11yrs	4.30pm-6.00pm	STV Hall*	£49.00
Friday	Trampoline Tribe	5-9yrs	4.45pm-5.45pm	Indoor Athletics	£50.40
	Trampoline Tribe	10-16yrs	5.45pm-6.45pm	Indoor Athletics	£50.40
	Soccer Tots	4-6yrs	9.30am-10.30am	St Johns Pitch	£38.50
	Soccer Tots	4-6yrs	10.30am-11.30am	St Johns Pitch	£38.50
	Soccer Tots	4-6yrs	11.30am-12.30pm	St Johns Pitch	£38.50
Saturday	Football	7-14yrs	9.30am-11.00am	St Johns Pitch	£49.00
	Football	7-14yrs	11.00am-12.30pm	St Johns Pitch	£49.00
	Trampoline Drop-in p&p*	5-14yrs	10.30am-11.30am	Indoor Athletics	£3.60
	Trampoline Drop-in p&p*	5-14yrs	11.30am-12.30pm	Indoor Athletics	£3.60
J					

\*p&p = Pay and Play sessions

\*STV = Sports Training Village







We would like to invite your school to experience some of the facilities and top level coaching available at the University. The day will consist of activities tailored to the students needs depending on the curriculum, time of year and the needs of the group as a whole.

Key Stage 1 Festivals

3 hour multi-sport festival based on fundamental movement skills

#### Multi Skills Academy

Programmes tailored to group's needs for one day to five days, residential possibilities. Session which can be included are multi-ability profiling, basic movement skills and sports tasters.

#### Multi Skills Assessments

Multi-ability profiling and field testing to build up a profile of your group

Generic Sports Visits Create a programme based on the sport (s) of your choice

#### Gifted & Talented Support Days

Enrichment days for your gifted and talented pupils which could include multi-skill sessions such as hand-Eye coordination and Core Stability.

For more information or to discuss options available please contact Jess Clements on: Email: J.C.Clements@bath.ac.uk Tel: 01225 386915

## www.teambath.com







We would like to invite your school to experience some of the facilities and top level coaching available at the University. The day will consist of activities tailored to the students needs depending on the curriculum, time of year and the needs of the group as a whole.

#### **Tailored Educational Visits**

Build a programme based on your needs, from 2 hours to 5 hours which can include elements such as Careers talks, Tours, Sports Specific Sessions, Multi-skill sessions, training methods and video analysis

#### Sports Laboratory Testing

For GCSE and A-Level groups, experience a VO2 max test, lactate testing or Wingate tests.

#### Gifted & Talented Support Days

3 hour workshops to include topics such as Nutrition, Psychology, Video Analysis, Training Methods and Sports Specific Support

#### **GCSE/A-Level Revision Days**

Use the University as an inspirational factor for pupils needing additional support leading up to exams, combine tours of the facilities with use of rooms and staff on topics determined by you

#### Sports Teams Enrichment Days

Utilise the facilities and expertise of the University to support your school teams, bring your netball, football, rugby or hockey teams to work with players and staff from the performance teams.

For more information or to discuss options available please contact Jess Clements on: Email: J.C.Clements@bath.ac.uk Tel: 01225 386915

www.teambath.com



#### Appendix R: Charted Table of Themes from Interviews with the Tribe Managers, Coaches and Parents

#### Table 28: Charted Themes for Tribe Manager – Participant Code M1

Summary Title	Position in Transcript	Example Quote
	Page - Line No	
Aims & Objectives 1. Improvement		
- Develop Skills	3.54	"most of our eight to fourteen year old market is all about developing and learning skills"
2. Level of Enjoyment	11.11	"it's very much about individual development"
- Fun, Pleasure	1.38	"So for them it's their experience without stress all about fun, enjoyment, being positive"
- Positive Experience	1.37	"One is to provide children with their first positive experience of sport."
	1.39	"even if they don't stay with us, they'll have that positive outlook to sport and will continue to be active and healthy throughout their life"
3. Access to Sports	11.26	"for us they need to be active, but there needs to be that positive experience"
- Making Sport Accessible	2.26	"children was a market that we said well actually we could provide a very unique experience for young people that that can't get in their school"
- Try a Range of Sports	3.49	"we have an opening kind of market for our tots to come in, experience all range of different sports and try and deliver multi-skills rather than sport specific sessions"
		417

<ul> <li>Ability Levels and Success in Sport</li> <li>Progress through Team Bath into</li> </ul>	4.5	"that's good for us as long as they maintain that participation and they got the spark from us, that's our kind of core aim"
Elite sport	4.12	"it's very much more about the first step on a longer pathway. For us it's not about 'can we keep them', it's 'we need to make sure there's and environment for those that wish to stay', but we also need to be proactive in signposting where they can go on to do something different."
	7.42	"So we are in some essence looking to go all the way up through to elite athletes and through to long term recreational playersso for us, at the back of our minds must always be that there is a pipeline that individuals can follow."
- Recreational Sport	3.55	"rather than being in competition."
5. Opportunities for student coaches	11.12	"rather than external kind of winning and gaining achievements"
- Gain experience	1.40	"The second element is with our coaches, it's to give out student coaches the opportunity to put what they learn in the classroom into practice with actual coaching. So we have a huge number that are studying for coach education degrees or sports science degrees, who are on a daily basis being told how to coach, how to interact with people, how to create development programs and plans and what we do is give them the opportunity to put that knowledge into practice"
<ol> <li>Definition of Success</li> <li>Number of Kids</li> </ol>	2.60	"for us the core essence of our targets are all based on participation numbers"
	8.52	"Um successes have to be the numbers"
- Monetary Profit	3.1	"for us we know that if participation numbers are at the right levels, because of the way the money works, that will always make the business break even"

Population who attend		
7. Physically active or sporty		
- Physically Active	4.29	"The majority would be active already"
	7.34	"you know our programs do target those that are already interested."
	4.29	"The majority would be active already or would come from active families where they have parents who are have been active much or have been active."
	4.36	"we have targeted other markets but probably the largest bulk will come from those already active families, not necessarily active children, but active families."
- Sporty	8.3	"its also very difficult to stop the sporty kids wanting to go,"
- Those who don't want to be there	4.44	"In a small number of cases we've had, more often in the holiday programs, we will have children that we know don't want to be here"
9 Main Audianaa ar Targat Audianaa	4.46	"some of our programs at times will have two or three people we know we'll be babysitting, who don't want a coach, don't want to do the sport, would quite happily sit on the side all day long."
<ol> <li>Main Audience or Target Audience</li> <li>Tots</li> </ol>	3.45	"Tribe's kind of biggest target is actually the younger age group, is actually the five to eight year olds it's what we call our tots market, it's where we get our large numbers because it's their first experience"
9. Socioeconomic Status		
- Wealthy, Private School	5.14	"Bath is so dominated by white, middleclass, socio-economic group. When we were doing our research 6, 7 years ago for all the local councils, the percentage was something like 1.2% of ethnic minorities in the Bath area, so predominantly our groups are white middle class because that's the immediate market on our doorstep."

Recruitment and Awareness of Tribe		
10. Organised by Tribe office - Within School	6.3	"you know we are actually out in the schools so we market our courses that come in at a later date."
- Website	3.36	"The website is kind of updated on a regular basis. So there is lots of information about different activities on our website"
<ul><li>11. External to Tribe within population</li><li>Word of mouth</li></ul>	3.29	"what we try to make sure is those interactions are always kept positive, because most of our business will come from word of mouth, parents telling other parents this is a really a good program you should bring your son or daughter along. This is where we get most of our new opportunities from in terms of delivery."
	8.32	"as soon as the program breaks down you get negative feedback, negative comments, and all it takes is a small issue for our parents to sharefor the program to fall. And in the past we've had incidences where you know, parents have not enjoyed the session and caused an activity to finish."
- Links with other bodies, schools	5.33	"what we've done to target groups is to work through their community leaders and their community groups so Keynsham Mencap is a group to work with disabled people with learning difficulties. We had to work with through Keynsham Mencap rather than try and target disabled people ourselves."
	8.9	"what we've done is we've then done the work with the community groupswithin the Black Families support group they'll feel quite happy to come in and do sports sessions, so at least we can give them a taste of activity and help them to say 'look there are opportunities within school, don't be shy, step up and you could be really good', and we've kind of done it through those means rather than trying to hit 30% on our own."
	5.48	"we have about now eight sports that will rotate round the school clusters. So

12. Difficulties promoting sessions - Schools, don't get real		our programs actually work with every single primary school in Bath and every single secondary school in Bath to some degree."
experience of sport	7.36	"The schools themselves find it difficult to target that 30%and give them something to do."
- Schools Attitude	6.48	"the schools themselves are reluctant to spending their own money. [on coaching which they can get for free]"
- Access	6.5	"we can't make use of being able to go in there on our own and put out own message across all the time, we're having to do it in a partnership"
- Uni and school term times	6.15	"The timings of the University academic year don't match what the schools years. So the schools start in the first week of September and sometimes our students won't arrive till the second week in October. So we have a period at the start of the year and at the end of the year because the students leave in June, schools don't finish till the end of July, where our capacity to deliver diminishes largely."
	6.35	"The academic years are a problem for us in terms of our capacity to deliver."
Factors Affecting Children's Motivations 13. Influence in decision making		
- Childrens power in decisions	5.1	"I think once, at the age of ten to fourteen it is the child's motives"
	4.51	"on the whole most of the larger majority will be those that want to come themselves"
	4.53	"by and large it's the children driving the parents saying I want to go to that."
	5.3	"Once they get to about seven or eight it is very much the child's decision about, when they wish to remain or not"

	5.7	"So in that group it's very, very much higher proportion probably almost 100 percent where it's the child's choice to stay ion a recreational environment rather than go into a club."
	10.7	"Quite often the children will drive individual sessionsbecause the nature of the group is they will come in and they will go up to the coach and say 'can we play this, this week?"
- Parents Influence	5.1	"in our younger program there are more parent interactions"
14. Influence from peers		
- Friends Attend	4.51	"partly because their friends might be here"
- Less Sporty	8.4	"usually the attendance for sporty kids quite often puts off the ones we really want to bring in, because they'll see themselves as not being able to do it as well as the kids that are already there."
<ul><li>15. Development of self within the Sport</li><li>Personal Gains</li></ul>	11.13	"they've made a conscious decision not to go into club atmospheres, and they want to stay in a program that's fun where they can start to learn individual skills"
	5.11	"Their internal competition is usually quite highso if they can learn a new skill, or they can demonstrate a new activity, or they can say that they've achieved something they've been trying to achieve, quite often that means a lot more to them than being able to say they won the matchor being able to say they scored the goalquite often its being able to say I managed a somersault on the trampoline this week."
- Focussed on sport	10.11	"So quite often you'll find the children themselves will drive individual session content"
	4.52	"they love the particular sport they want to do and they see this as a good

r		
		outlet"
16. Experience of Sessions - Coaching Staff	10.45	"our facilities are fantastic, but we run our programs outside, inside, on a bit of grassyou know its not the facility that drives them, quite often it's the coach and they'll ask to work with particular coaches."
<ul> <li>Impact on child's experience</li> </ul>	4.49	"sometimes that causes us the difficulties of making their day enjoyable because we recognise there is no point in forcing them into the sport because it's the last thing they really want to do."
- Relaxed atmosphere	11.34	"they do seem to find this atmosphere quite relaxing compared to school"
17. Image of Physical Activity		
- Un-cool	8.6	"And quite often that's a barrier to them. If they feel that they're not good enough and will look silly, they won't go"
Parents Motivation to Attend		
18. Physical Environment		
- Coaches	10.47	"So if you identify an individual who has the abilities to interact at different levels, with different people, in the same 45 minute periodthen you're a long way there to making sure your program is successful."
19. Compatible with Lifestyle		
- Childcare	4.44	"In a small number of cases we've had, more often in the holiday programs, we will have children that we know don't want to be here, and it will be a case of the parents have no other option because of work that they need to book someone into a program"
20. Interests of the child		
- Improve sociability of child	5.2	"'I want my child to start to learn to do sport and start to engage with other children in, through sport"
Structure of Tribe		
21. Offers something unique		
- Recreational	11.4	"I think the only thing for the 10-14 year old age group is the understanding that the element of external competition is quite often not what they're after. Their internal competition is usually quite highso if they can learn a new

		skill, or they can demonstrate a new activity, or they can say that they've achieved something they've been trying to achieve, quite often that means a lot more to them than being able to say they won the match"
- Good Coaching	3.25	"the affinity of the program has grown from just being a come-along session and try it, to a huge amount of interaction, not only between the children and coaches, but between parents and the coaches."
	10.41	"I'm trying not to go into too much clichés, but every single child that comes through the program is completely different. Thethe only thing that makes the biggest difference is getting the right coach. If you have the right coach that can interact with young people, then you are halfway there to making sure your environment is the best one, because that's the person they see week in week out"
- Lack of competition within BANES	2.9	"No it is very, very unique. There is not a University in the country that has a program of this nature. There are other universities that invite school groups onto campus and run school visits, and there are some universities that create volunteer placements and send students out into class and into schools to do work. But, there is no one that has systematically worked with schools sports partnerships, county sports partnerships whose funding priority is to set up a sustained delivery mechanism utilising student coaches out in the community."
- Competition in BANES	6.36	"We have many, many competitors in terms of the fact that there's huge amounts of people who are considered to be one man and a bandwho are a football coach, a judo coach and they're not the size of our operation, but quite often there will be the parent of someone in the school so we'll build up that personal link and for us that kind of program will always take away opportunities that we can actually use."
	6.41	"there are so many programs that go into schools that are free, that we willthat are free to the schools, so the schools don't have to pay anything

		for them. So if we go and create a link for a school and ask for funding from the school, quite often they'll say 'well we won't go with you, we'll wait until our program comes round to us next term, when we'll get our free coaching'. We might still be delivering that free coaching, because we're in that partnership, but for the school, they've not had to pay anything out."
- Environment and athletes	2.28	"they won't get in any other club and with the athletes that are based here, it would be a very inspiring environment to bring young people into"
22. Strength of Brand		
- Brand Image	6.4	"We have a presence in the schools, people are aware of who we are, our delivery levels are high"
- Clearer Brand Image	8.46	"So that more of awareness againthat, that very simply can cause issues for us as a program, because people don't understand where it fits, what it does, and bad feedback can cause a program to just fall away."
Communication		
23. Links with Tribe Office		
- Lack of Interest	5.60	"We have so much funding streams that come through the schools' sports partnership or through the local authority that by delivering all of those, our capacity is reduced for having our own individual interactions"
Implementation of Sessions 24. Program Structure		
- Consistency in coaching	3.18	"What we have created now is some real continuity to the program, so that we have coaches that will stay with the program for a full year and will deliver itand parents and children becomeassociated to that person, will actually request them by name for other activities such as parties and things because they've worked with that person for so long"
	7.1	"so we have kind of a core group of what we consider our most reliable coaches, and then we have groups that are good coaches but we know can't commit to us for long periods of time. So we've been able to identify coaches on that basis, and go to the right people for the right element of work"

<ul> <li>Lack of consistency between lessons</li> </ul>	6.22	"our kind of backup coaches and our supply network disappears in those two months of the year which means that, for us to try and grow a lot of individual interactions we are at risk of not being able to maintain those interactions."
- Coaches Motivations	11.18	"from the coaches you'll get the full spectrum, some people who will completely understand what you're trying to do, they'll say yeah I work with the same group week in week out, I take them to thisespecially in the swim schoolbut then you'll get the coach that goes, I do it for the moneyand we understand their different motivations"
- Mixture of interests and abilities	10.50	"But that coach will change in each sport, will change with each age group and you need a different set of skills when working with tots, to working with 10-14 year olds, to working with adultsand some coaches can adapt and do all 3, some find themselves pigeon holed because that's where their skill set is best"
25. Experience and ability - Unreliability of Students	6.12	"our weakness is with using students are that potentially the loyalty is not as high because there will be exam times, there will be essay deadlines, there will be so many things that can potentially cause them to say 'I don't want to work today because there is something more important in my life'."
	6.32	"they are not allowed to have cars on campus which means that potentially we can't get them out to schools unless they have proactively brought their own car and leave it somewhere else in Bath So transport issues have been a big one over the last couple of years for us."
Proactive and Reactive behaviour 26. Active Promotion		
- Need to Increase Awareness	8.29	"So I'd say the most difficult aspect is the recruitment"
	8.22	"I think in terms of hardest, at times our hardest is actually the recruitmaking people aware of the programs that operate here is really difficult because no one associates the university with running childrens community programs, everyone's first impressions of the university is there

		are students up there and the facilities are for the students that are here. So
		for us its always been breaking down that barrier of no there are opportunities, here's what you can do"
- Proactive Advertising	5.24	"so equally as much as we are kind of, pushed towards a socio economic group, we've been proactive enough to try and work outside of that when we can."
27. Feedback and Evaluation		
<ul> <li>Feedback, evaluation none or bad</li> </ul>	9.1	"we're kind of at the moment work on a complaints ratio of something around, and not always complaintsstructured criticisms, ways for us to improveof about 3 per week, which we worked out is like 0.01% of our interactions."
	9.16	"Not a formal one"
	9.18	"um its something that we need to bring in over time, but at the moment its kind of been done sporadically in different parts of Tribe at different times"
	10.16	"but its nothing formal that really goes to the kids themselves."
	9.36	"What we're trying to do over the next year is actually start to create some tracking mechanisms to see how long people stay with us on our own programs and some of our partnership programs as well."
- No recording, pursuit of drop outs	10.30	"its not something that we've monitored yet because it has been so low"
	10.5	"Yeahin all honesty its not too often that the children themselves have been asked. Quite often the parents are the ones that will receive the surveys and kind of the questionnaires, and quite often they'll be coming in with what they would like to see."
<ul> <li>Parents approaching Tribe to</li> </ul>		
give feedback	9.10	"we've reached the level where parents are now willing to actually tell us how good it israther than tell us what they think could be improved."

	9.4	"Now obviously parents might be out there saying 'I'm not happy but I don't wish to complain'butwe have to work on the basis that these are the feedback we're getting"
- Feedback is a last resort	9.19	"So quite often if we've reached a point where either we're stuck for how it can improve, or we've had a similar number of issues or criticisms raisedwe'll go out to the whole group and say 'this is what we're thinking of doing, do you agree, what else would you like to see, can you please let us know other areas that you're happy with'so we've been a little bit reactive rather than in terms of proactively going out there and seeking it"
- Too big a job for staff	9.46	"What we're trying to do is work out how we can make that a little bit easier in terms of labour intensiveness"
- Drop out not fault of Tribe	9.32	"Umour drop out rate is really low in terms of people not completing the course they've signed up forso on the average sports we might only have one or two that might not complete that course themselves,"
	10.23	"sometimes the child's too young to start, just because of maturity levels, and they find they keep running back to their parent on a Saturday, and they turn around and they say 'look we're not ready yet, so we'll some back a year later', and that will be considered now that persons dropped off from competing the sport."
	10.31	"that part of us have said well actuallywe don't, its not a concern as of yet, because we're not getting people dropping out because they don't like it, or they don't think its good enoughusually its because there's another commitment or they're not old enough yet, the parent doesn't feel that they're getting enough from the program"
- Lack of time or money	9.24	"um but at certain times we have to hold our hands up and just say actually we don't have the time and the staff to be able to do as much of that side as

		we'd like to, its about time."
	3.39	"We sort of look at out market, think of what our numbers are like, look and see what we have left in our marketing budget and try and hit areas that will give the greatest return."
<ul><li>28. Overcoming drop outs</li><li>Ensure can deliver what promise</li></ul>	6.24	"before we agree a session we always make sure that we know we've got timescales. So if we say we can come and deliver four terms with this coach guaranteed. If we can't, we won't accept to be able to deliver."
	7.46	"And we've always been quitecautious about initiating experience for children that really inspires them, and then telling them there's nothing to it and you cant go anywhere"
29. Pathways - Routes within Team Bath	2.46	"what we've done is work with community clubs to provide that outlet. So we now we have a Team Bath football club, Team Bath netball club, Team Bath hockey club, Team Bath judo club and what we're trying to do is feed anyone coming into Tribe if they want to partake in that sport into those clubs."
<ul> <li>Opportunities for recreation and comp.</li> </ul>	3.47	"Then we have the group that kind of eight of fourteen which are our market which don't want to go into competitive clubs"
30. Beyond Tribe - Progression after Tribe	3.51	"what we recognised over the years, not every single child, even though they want to continue sport, don't want to go into, your normal club atmosphere. They get turned off the competitiveness, having to make the team, where they will fit in the team and some of them just still want to play and learn"
	4.19	"at every single point someone can ask us 'what is the best option for me?', then we can point them internally or externally into the right environment for them."
	7.44	"us trying to do outdoor education would be great as a starter activity, but we can't send them anywherewe don't have anywhere for them to go."

~	
2.49	"We don't run them ourselves, they're run by volunteers in the community the same as any community club, they just take on our brand name use the facilities, and this creates another pathway"
7.46	"And we've always been quitecautious about initiating experience for children that really inspires them, and then telling them there's nothing to it and you cant go anywhere, cos its usually those levels will drop to below than when they started"
7.49	"we've always made sure we've got somewhere to sign post them, an outlet, it might not always be in Bath, you know it might not be one of our own clubs, but we always want to be able to say 'if you really enjoyed this activityhere's where you can go a bit more with it'."
11.35	"you don't get your kind of groupings in here, they only do come in 45minutes once a week, so you don't get to have those little cliques which cause problems in schools"
6.59	"loyalty programs in terms of saying, if you work for us for our courses you'll be first on the list for the offer of camps work in the holiday programs or for school visits to come in"
10.56	"So its very much just being able to identify the skill set of your coach, and put them in the right environment."
6.58	"little problems like that we've managed to overcome with proper procedures"
8.30	"the most important is all 3because if we don't have the right procedures
-	7.46 7.49 11.35 6.59 10.56 6.58

numbers		and the right methods at all of those 3 stages that you've mentioned, the program breaks down"
<ul> <li>Making promotion more specific to target audience</li> </ul>	7.25	"in terms of delivery it's really in terms of who you're targeting."
	10.40	"I don't think there's one recipe at all for working with children"
	7.32	"our barrier really isif you're looking at it as a recreational program, how do we manage to engage with the 30% that might be considered obese, that might be not doing their 3x30 a day that might not have an enjoyable experience of sportyou know our programs do target those that are already interested. Our programs are suitable for those to get a first taste of it, but whether we market strongly enough into that 30%is a difficult question"
	8.1	"I think that in all honesty there is very few programs across the country that are managing to effectively work with that 30%"
	8.7	"so it's a very difficult kind of balancing act between creating a program and keeping away one groupto try and target another group"

## Table 29: Charted Themes for Tribe Manager – Participant Code M2

Summary Title	Position in Transcript	Example Quote
	Page - Line No	
Aims & Objectives		
<ol> <li>Improvement         <ul> <li>Develop Skills</li> </ul> </li> </ol>	8.19	"They want to be running around having a good time so it's keeping that happy balance of making sure they go away every lesson, every session making sure they go away having learnt something."
- Give Life Skills	8.22	"They've had fun but they have also gone away learning at least one new thing."
- Improve in Sport	1.29	"I think it's to develop kids fitness and sports abilities"
2. Level of Enjoyment		
- Fun, Pleasure	1.31	"I think its to get kids involved in fitness and sport in a fun environment."
	12.44	"it's about them going away, going yeah I love that I want to be back next week."
2 Assess to Croasta	11.46	"making it so that it doesn't feel like a lesson, it doesn't feel like sport, it doesn't feel like they're doing it there because they're unfit and they've got to exercise. So it's not a lecture of how they have to keep their weight down, or they have to because obviously that's not healthy."
<ol> <li>Access to Sports         <ul> <li>Making Sport Accessible</li> </ul> </li> </ol>	6.36	important thing that we encourage and that we do"
	6.6	432 "we want every kid to have a chance not just the ones that their parents can

		afford for them to do x amounts of activities a week so that's why we keep the prices as low as possible"
- Try a Range of Sports	12.14	"I think every child should have the opportunity to do that."
- Retain them	8.5	"I definitely think that the main goal is to get people in and keep them in. There's no point in just getting them in taking their money and then having to do a refund because they have not enjoyed the session and they don't want to come back for any more."
<ol><li>Ability Levels and Success in Sport</li></ol>		
<ul> <li>Produce Quality Players</li> </ul>	1.29	"[name of M1] calls it 'developing the sports performer"
5. Definition of Success		
- Retention	11.4	"I think that is what makes it successful the fact that we can the majority of the time get kids in and keep kids in."
	10.55	"they tend to hang around and I think, I think that is what makes it successful, the fact"
- Number of Kids	11.13	"Because obviously not only do we have to pay the coaches with each activity we also have to pay the facility fee, So, it is a lot of money to be paying out if you're only getting four or five kids. So I think that is when we decide that something is not successful not getting the interest we are not getting the numbers."
- Monetary Profit	2.54	"Um, yeahfinance obviously is the most important thing, and we set our prices"
Population who attend		
6. Physically active or sporty		
- Physically Active	6.53	"[a lot of parents are active?] Yeah um I think so."
	4.11	"they just wanna run around and release energy, especially the younger ones, they're just completeyou know they just wanna run around release

		energy"
- Sporty	4.16	"you've got the ones that are sports mad and just want to run around, kick a ball, bouncewhatever"
<ul><li>7. Main Audience or Target Audience</li><li>Tots</li></ul>	12.19	"I think it's important to get kids interested at a very young age, because they are more likely to go on forward"
- 7-14 years	1.57	"Um mostly 7 – 14 year olds"
8. Socioeconomic Status	2.1	"as far as the schools are concerned, they're usually 7+."
- Wealthy, Private School	6.2	"I mean this is what I've noticed is we get a few that are from sort of less privileged backgrounds and they don't tend to stick around for very long"
	6.1	"they are usuallyI don't want to say well off, but it is more so the kids thatthe families are comfortable"
	6.9	"I have noticed it is the more comfortably off peoplebut that's possibly because of the area that we're in cos Bath is aquite a wealthy area."
<ul> <li>9. Links with schools</li> <li>- linked with private schools</li> </ul>	6.29	"I think the ones that are, that are closest we see on a regular basis, and the ones that our coaches go out to after school, they're more likely to come to us as well"
- general schools in BANES	1.36	"most schools in the BANES area we work with on a regular basis, um either they sort of come in and have multi-skilled days here, where a bunch of our coaches will work with throughout sort of the 10 – 3 day. Or we send coaches out for after school clubs, most days of the week we have coaches at various schools doing after school clubs for various activities."
Recruitment and Awareness of Tribe		
10. Organised by Tribe office - Within School	1.44	"sometimes the kids come back yeah, I mean like I said most of the schools

11. External to Tribe within population		our coaches go out to, also come back for like the multi-skilled days and things like that"
- Links with other bodies, schools	6.18	"we recently brought out these little postcards for each individual sport that we do, and we've sent a load of those to all the schools in the area, we've also sent them to dentists and doctors, because we find thatespecially with the doctors surgery's, parents take their kids their after school if they've got an appointment they're gonna be reading something while they're waiting, so umthey've got them. Youth clubs things like that in the area"
Factors Affecting Children's Motivations		
<ul><li>12. Influence in decision making</li><li>Childrens power in decisions</li></ul>	12.15	"Obviously when they get to that age there have less of an influence on them as well. Cause when they're four their parents can say "right get in the car, we're going to soccer tots", when they're thirteen it's a bit harsh to do that"
- Pushy Parents	7.2	"Yeah I mean like I said, you're always going to get the kids that, they come along because their parents have made them but they're not their hearts are not in it. If somebody's heart is not in it then you can't force a kid."
<ul><li>13. Development of self within the Sport</li><li>Personal Gains</li></ul>	4.30	"and the ones that want to get fit they stay until they reach their goal, or they develop a passion for it."
- Progress from Tots to Tribe	9.6	"lots of them have started young and they've worked right up and they are still with us"
- Focussed on sport	4.23	"the ones that tend to stay in are the ones that get passionate about their individual sport"
	4.28	"I think it's the ones that are more sports minded and they develop a passion for whatever sport they're decided onthey tend to stay"
14. External Factors	10 10	"I think at that age group it is harder to get people interested if they haven't
- Access to a variety of sports at school	12.12	been before."

15. Image of Physical Activity - Un-cool	12.20 9.12	cause it maybe that you've got a thirteen year old who is interested in something, but the school does not offer that particular activity"
- Lose interest	8.4	"I think it is always keeping them in it is easier to get people interested, but once you have got them interested you have to keep them interested"
	11.39	"Um I think it's keeping their interest is the biggest challenge of, I would say any, anyone that teaching anything, is keeping their interest."
- Other interests	9.13	"A lot of them want to be out with their friends. They're that little bit more um aware of what other stuff they can do during their time off school so um a lot of them don't want to be in with a bunch of potential younger kids."
Parents Motivation to Attend		
<ul><li>16. Perceptions of Brand, Project, STV</li><li>Fully booked implies popular</li></ul>	12.31	"if you've got a, if you've got a club that is fully booked people kinda look at that and say "well they they've got to be doing something right because I can't get in because this thing is so popular so I'll go on the waiting list cause if I can get in thenyou know I'm obviously going to benefit"."
17. Compatible with Lifestyle		
- Childcare	4.13	"the parents want to get rid of them for an hour and then pick them up when they're tired."
- Use the facilities themselves	6.55	"I do know that a lot of the people that bring their kids, especially on a Saturday morning, might use the gym as well or go swimming."
18. Structure of Tribe		
- Cost	2.54	"you know our prices are fairly cheap, I mean a lot of parents call me and say that we're the cheapest, especially for football, around at the moment,"
19. Interests of the child		

- Increase fitness levels	4.14	"I get a lot of phone calls from parents saying my child is slightly overweight, I want to do something to helpumhe's lacking in confidence is another, I want to build the child's confidence"
	4.17	"you've got the ones that kinda need that bit of motivation to either get fit or to gain a bit of confidence."
Structure of Tribe		
20. Offers something unique		
- Multi sport	6.39	"So I think that's a really good point that we do and um offering sports like trampolining which are less common sports so it's not just your footballs and your netballs and your hockey"
	6.44	"So I think that the fact that we offer a wide variety of choices that still fall under the sports and fitness bracket."
- Lack of competition within BANES	10.7	"whenever we look into start something new up we always do find out what else is on offer in the area."
	10.6	"So there's no point to do something that every one else is doing unless you can offer something completely different or a lot cheaper or whatever. So whenever we look into start something new up we always do find out what else is on offer in the area"
	10.11	"I don't know of any other any other sports facility in the area that do as many activities for kids under one kind of one name if you know what I mean."
	6.4	"we're sort of cheaper than a lot of places "
- Coach to kid ratio, small classes	9.49	"because we have for every 10 children we have one coach so it's, that's the ratio of coaches to kids."
- Has facilities for parents too	6.45	"Also the fact that we are, as far as the parents are concerned, we are based

		in an area where they must come into if they want to come into the gym or they want to go swimming. They want to do something themselves so there's something their kids can do at the same time, so they're not worrying about "
Communication		
21. Links with Tribe Office		
- Communication with Tribe Staff	7.23	"I don't really see the courses because I'm office based and I don't work at weekends, I very rarely see the courses when they are running"
- Lack of Interest	7.25	"Now if I don't hear anything then the only thing I can do is to assume that everything is fine."
- Feedback, contact	7.24	"all I know is what the coaches tell me and what the parents tell me."
Implementation of Sessions		
22. Experience and ability		
- Unreliability of Coaches	7.28	"I think one of the coaches didn't turn up or somethinga lot of the time you'll find the coaches' story and the parents' are slightly different. That's where I'd say I get the most frustrated because when you've got one word against another it is difficult to sort out and a lot of the time we write back to the parents and say look we are sorry this is what you experienced."
- Unreliability of Students	7.8	"a lot of them are students, so when summer comes and they go home then sometimes we're left trying to find more coaches or struggling"
Proactive and Reactive behaviour		
23. Feedback and Evaluation		
- Feedback, evaluation none or bad	11.10	"if we're not getting any more than four or five then there is obviously not that interest [ironic as this is an assumption and no evidence that any feedback has been sought to conclude this]"
	7.22	"you know, it is common knowledge that unless somebody tells you a lot of time you don't know."
	7.25	"Now if I don't hear anything then the only thing I can do is to assume that

		[
		everything is fine."
- Feedback not taken seriously	7.35	"we do get the ones they just want to find something to moan about and they will"
<ul> <li>No recording, pursuit of drop outs</li> </ul>	7.5	"I don't think that is our biggest problem because I would say the majority of kids, of the vast majority of kids that come along just to try out do tend to stick around at least for a term or two."
	3.58	"so we don't really keep a huge record of anyone that's dropped out."
- Does record drop outs	4.3	"I've got a record of all the kids that have ever been on our courses and I can look back on that and see who's still with us and who isn't."
	11.21	"I keep all the kids that we've had on the like that we've ever had, even if they're too old now to do any of our other stuff. I keep them all in the database and I know which ones are still with us and which ones aren't, so we have"
- Feedback forms exist	3.53	"we always have feedback forms, so if the parents are pulling their kids out for a reason that is our fault, then obviously we get a feedback form and we deal with it then and there."
	7.17	"we always make sure that if a parent has got a problem with anything that we've done or how their kid's been taught, we, I have these feedback forms I try and make sure that everyone and I also send those out, even if I'm just sending out a letter a courtesy letter or a letter to remind them of re- enrolment I will send a feedback form back to us so if they've got any problems that they want to write down and send back to me"
	11.21	"Yeah. I keep feedback form"
- Feedback looked at	11.28	"Yeah, I mean we keep like we keep all our feedback forms as well so we can

		always look over them and say we know what works and what doesn't work through what we are the feedback we get."
<ul> <li>Feedback Not to do with Tribe/Coaches</li> </ul>	9.32	"I also keep a list of people that have requested things that we don't currently do um. We get a lot of requests for basketball"
<ul> <li>Parents approaching Tribe to give feedback</li> </ul>	724	"all I know is what the coaches tell me and what the parents tell me"
- Feedback is a last resort	9.36	"if I get requests I keep a log of it and when I get enough people on that list and obviously when I've got the coach and the facility and everything else then I will call those people, find out if they're still interested, if they are then we'll put that special on."
<ul> <li>Only react when there's LOTS of people</li> </ul>	11.30	"So if a parent says it doesn't work and we are not happy with it, we look at that thing OK how many other people have expressed concern about that, and if it's, if it's trends then we have to do something about it."
- Drop out not fault of Tribe	7.36	"when we actually do the research and look into it we realise that actually it's not always our fault"
	3.59	"Mostly because its for reasons that aren't our fault, its just that they're too old or not very well or something like that."
<ul><li>24. Overcoming drop outs</li><li>Vouchers bring a friend</li></ul>	3.9	"I think it was a money off voucher for every child that introduced a friend, the friend and the child got money off and that brought in a load of people, and now with our soccer tots we're fully booked for most sessions."
- Priority booking	4.60	"they get a letter which says they get a 2 week priority booking from the date that I give them to 2 weeks laterand um providing they re-book in that time their place is secured. If they don't re-book in that time then I open it up to my waiting list and any places that aren't taken get offered to those people."
25. Pathways		

- There ARE routes within Team Bath	5.45	"So obviously, anything that's under the team bath bracket, if we can push them in that direction and they're happy to do that, then that's great for us becauseyou know just because they're not with Tribe anymore they're still with Team Bath, so we still get thatyou know as a department thingso, but I do have a umlike a diary of all the clubs that there are in the general area so if a parent wants to know more about what else is on offer then I wouldI will give that information out."
	11.55	"we've got with most of our courses we do have once they reach an age where they are, we're not beneficial to them any more because they're just beyond that ability, then we do have various other Team Bath activities that can take them further depending on where they want to go"
- Opportunities fro competition	5.33	"there's always things that we can push them to, if they want to do that."
26. Beyond Tribe - Lack of routes for Progression after Tribe	12.2	"it does get to a point where it's out of your hands and we just to hope that we've we've done the groundwork to we've got them interested so they're gonna take that with them and they're gonna remain interested and they'll join the university club or, you know, if they're good enough go professional"
<ul> <li>Inconsistent progression. Not all sports the same</li> </ul>	5.27	"I mean it depends what activity they're doing but we, the majority of our after school clubs especiallyum, there iswe've got links to other clubs"
Increasing Motivation & Participation 27. Incentives for Participation and Improvement		
- More Sports	9.25	"I don't think it would harm us if we could offer more activities um maybe get tramp um sorry gymnastics up and running"
	9.27	"So I think I definitely think introducing more activities so the bigger our options obviously the more"

	9.40	"The only way to move forward with anything is to offer new new things that people can try out and possibly move forward with. I think that's like everything that would be a way of improving the whole department being able to offer our customers more."
- Finding a unique niche 28. Awareness of project	10.6	"So there's no point to do something that every one else is doing unless you can offer something completely different or a lot cheaper or whatever."
- Increase awareness and numbers	11.45	"I think it's getting the kids in obviously is the first hurdle"
	2.56	"obviously we do have to keep a check on the numbers as well, as there's no point in having something really cheap if you're not getting the numbers every week"
- Promotion	12.17	"I think we have to work with the schools and the parents to keep kids interested and get new kids interested."
<ul><li>29. Population difficult to attract</li><li>Older children 10+</li></ul>	9.5	"I would say the higher age groups, the sort of twelve, thirteen, fourteen year olds"
	9.20	"I would definitely say the older age groups are harder."

## Table 30: Charted Themes for Tribe Manager – Participant Code M3

Summary Title	Position in Transcript Page - Line	Example Quote
	No	
Aims & Objectives 1. Improvement - Develop Skills	1.18	"allow them to develop their skills"
	1.10	
	4.41	"Its all about sort of their own personal skills rather than say football turning into a team, or that kind of thing."
- Give Life Skills 2. Level of Enjoyment	1.25	"the really small ones because they're like little sponges and if you teach them the right things it can help them for like the rest of their lives"
- Fun, Pleasure	1.15	"the first thing I always say is that its funso if a kid wants to come in and try any sport under the sun, the first thing its got to be for them is fun"
	1.19	"I'd probably say it is about fun and sport"
- Positive experience	1.20	"positive interactions with kids and parents"
	1.30	"Because if they do it at school, its not always fun, they might be picked onstuff like that."
	1.32	"it's a positive experience and its trying to instil that sport is good and fun"
	1.17	"its just a positive, their first sort of positive experience in sport"

<ol> <li>Access to Sports         <ul> <li>Making Sport Accessible</li> </ul> </li> </ol>	4.36	"we're open to anybody"
<ul> <li>Ability Levels and Success in Sport         <ul> <li>Progress through Team Bath into Elite</li> </ul> </li> </ul>	1.18	"progress on through our little Team Bathladder and start competing and all the rest of it."
- Recreational Sport	1.16	"really sort of recreational, nothing competitive"
- Recleational Sport	1.32	"not competitive, you have to be in a team you have to be the best, its all about running around"
	4.36	"because Tribe is recreational we don't have, you have to be a certain level to be in this course."
<ul><li>5. Opportunities for student coaches</li><li>Gain experience</li></ul>	8.46	"[Name of M1] and I give them the opportunity to find new experiences and new qualifications. We'll chuck them into anything, if they pop their head up and say 'oh we'd really like to learn so and so on a school visit', fine, go join whoever, make a session plan and then next time you'll do it on your own"
6. Definition of Success		
- Retention	10.38	"my ideal thing is to see somebody come in at 2 of a trampolining tots or football tots or something like that and still be with us."
	10.51	"a success for me someone that has been with us for the whole year and has done a whole school terms worth of activities"
- Number of Kids	10.21	"but our main priority is getting that number of interactions up every year and so far we've done that."
	10.30	"So our minds are on this interactions number, the money keeps us in a job and allows us to fill other activities."

- Monetary Profit	10.26	"Yeah rather thanI mean big bosses and things like that are gonna look at the money, they're not gonna look at numbers"
Population who attend		
7. Physically active or sporty		
- Sporty	13.18	"I said it'll be the ones that are sporty"
8. Main Audience or Target Audience		
- Parents	3.16	"its almost you have to target the parentsespecially for 10-14 you have to target the parents and not necessarily the children."
	5.53	"I think the initialI would say the initial first point of contact comes from the parent, wanting their kid to do something,"
9. Socioeconomic Status		
- All social classes	5.32	"I think because we're not expensivewe get a mixture, so you will maybe get some kids form Twerton Park, yeah not the greatest place in Bath, um but
		you will also get parents from Lansdown and places like that and I think it is because of, sort of the price of themum, that we end up getting them"
- Cost of sessions	10.9	"its not expensive because I think people go 'oh its really expensive' and its like hang on a minute £2.50 for an hour, most places are charging 3, 4 quid, £2.50 is notand that's across the board"
- White	5.56	"we get a mixture of sort of different classes, but not necessarily ethnic
Winte	0.00	minorities,"
Recruitment and Awareness of Tribe		
10. Organised by Tribe office		
- Within School	2.57	"obviously we send coaches out to local primary schools to do after school clubs, so we send a whole load of leaflets out with them to give out"
	2.6	"So we make sure we send them as much information as possible to go on that board"

	2.58	"we do a mail shot to all the schools because we have a really good relationship with the developments mangers for all the schools in the area, and we do a lot of their delivery for them"
- Website	2.48	"if you type in "kids activities" or "childrens activities" on search engineswe pop up, I think that's purely because if you type in "childrens" we are literally the first one"
<ul><li>11. External to Tribe within population</li><li>Word of mouth</li></ul>	2.43	"they'll hear about it either from a school friendso somebody that is already here"
	3.34	"the majority of them will say 'word of mouth'so, if we can make the sessions as good as possible, then it tends to roll so"
- Links with other bodies, schools	2.59	"we have a really good relationship with the developments mangers for all the schools in the area"
12. Difficulties promoting sessions - Schools, don't get real experience	3.2	"we have good relationships with the Primary schools"
of sport	13.4	"sport in primary schools needs to be better"
- Schools Attitude	3.7	"some schools are really proactive because they love us, and other schools are like, well we'll stick it in the corner somewhere"
- Time and cost involved	3.15	"and it just took usso long (Laughs) and that was like 3 boxes for every school, which cost us a fortune"
Factors Affecting Children's Motivations		
<ul><li>13. Influence in decision making</li><li>Childrens power in decisions</li></ul>	13.23	"because when they get to 10, 11, 12, 13 the can then make their own way to places, especially when they're 1312, 13, 14, they're getting on buses and going places on their own."

	13.4	"when they get to 10, cos when they're 10 they've got an opinion, they know what they like, they know what they don't like, they know what embarrasses themand all the rest of it."
	5.52	"when they're older I do think the kids have a lot of say in it,"
- Parents Influence	13.22	"I think when the parents get on boardthat's when that age group will then become"
	13.20	"I think the biggest thing is, and I think it is changing, is the parents attitude towards activity"
	4.33	"it tends to be down to the parent what they're gonna do. I mean the kid will go 'I really like football', but we talk to parents all the time and they're like 'well we really don't want them to do whatever'"
	5.50	"I mean younger its down to the parents I think completely down to the parents."
	5.30	"football I think is dadsif dads are manic football fans, boys will automatically"
	4.53	"if you have a sporty, a very sporty parent, then you will find that the kids are automatically active."
- Pushy Parents	4.34	"down to the parent and the parent saying you need to go and do something"
<ul><li>14. Development of self within the Sport</li><li>Progress, become Competitive</li></ul>	6.14	"as they're hitting sort of 13, 14 then they are certainly looking for that elite end of what we doum"
- Progress from Tots to Tribe	4.59	"you will probably find they will join us from soccer tots when they're 4 years old, and they will probably stay. It is very rare on the football that we get a 10

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		year old or a 12 year old just join because they've never played football before and they wanna play"
	13.18	"it'll be the ones that have already done one of our tots programs and that have been with us forfor so long."
<ul><li>15. Experience of Sessions</li><li>Enjoyment level of sport</li></ul>	5.54	"after that its what the kid would like to play or if its enjoying it or whatever else."
16. External Factors	5.3	"we've got lots of kids on trampolining that aren't necessarily sporty"
- Conflicts with other sports	10.60	"usually they say for whatever reason either it clashes with a ballet lesson and we don't have a session that fits into their schedule which tends to bethe reason as well."
- Funnelling into 1 sport	13.1	"when they go to secondary school they turn into sports specific,"
<ul> <li>Access to a variety of sports at school</li> </ul>	5.11	"Plus they get exposed to different sports in secondary school"
SCHOOL	5.16	"they don't get exposed to it in primary school and when they get to senior school they get badminton, they get rugby, they get all these sport specific things which they don't necessarily have at primary schoolso all of a sudden these kids are getting exposed and coached and stuff at school and they go 'I really enjoyed badminton',"
	5.21	"Its exposure of the sports rather thanand like if they're smallfootball, swimming stuff like that, gymnasticsare all things that they do already at school or parents are interested in, so itsit does tend to be what they get exposed to."
- Workload at school	10.57	"sometimes if they get to senior school and the work load becomes too much, they will drop off, and if it is"

Darante Mativation to Attand		
Parents Motivation to Attend		
17. Perceptions of Brand, Project, STV		
- Image, Prestige	6.16	"I mean parents will have different expectations from us in that we're Team Bath so they expect 400 times better than they would at the sports centre"
	10.6	"its just the parents that comes in with a higher expectation and expect them to then become competitive straight away, and that's actually not what we're about, not by a little bit anyway"
	7.53	"but I think that elite sport angle some parents will say that they're gonna be better than Local Authority Sports Centres just because of 1. facilities, and the expertise they think that we have obviously up hereso I think those are probably the strengths that pull people towards us, um"
18. Physical Environment		
- Coaches	7.55	"the expertise they think that we have obviously up hereso I think those are probably the strengths that pull people towards us"
19. Compatible with Lifestyle		
- Routine, convenient	11.1	"we don't have a session that fits into their schedule which tends to bethe reason as well."
20. Structure of Tribe		
- Recreational	7.59	"cos there's such a big thing with parents and kids that its not competitive"
	7.58	"all the parents that I've spoken to have gone 'oh well we don't want anything competitive"
21. Interests of the child		
- Increase fitness levels	5.39	"and it is more of a, sometimes parents want them to get away from the television and computer games more than a specific sport."
	5.36	"if they're not sporty when you chat to them on the phone they are keen for their children not to sit in front of the Tele"
Structure of Tribe		
22. Offers something unique		
- Facilities	8.6	"I do think that the main pull and the main thing for us is that the facilities that

		we've got"
		we ve got
- Recreational	7.58	"there's no sort of pressure to do awardsthere's no pressure"
- Multi sport	7.51	"I would say that we've got quite a wide range of sports that we offer"
- Good Coaching	9.46	"good for us to have new people coming in all the time because that is the upside to having the students is that you have a new fresh young coaching sort of every time"
- Makes sport accessible	6.15	"I do think, I think we cater for sort of all the age groups, um I wouldn't say that we miss out on anybody."
- Lack of competition within BANES	11.53	"there are other sport companies, other sport coaching companies that will go and coach in schools and will put on say holiday camps, but I think we are unique because we've got a basewhereas those coaching companies don't really have a base, and they could be anybody"
<ul> <li>Improves child's confidence</li> </ul>	6.37	"I was getting something like 30 or 40% of those girls that were coming to my lesson, going back into their sports lessonsbecause they were starting to feel a bit fitter, a bit confident"
23. Tribe as a Unit		
- Sports self run	2.4	"I guide but they do their own thing"
<ul> <li>Difficulties in creating a Club atmosphere</li> </ul>	7.15	"that club environment takes a lot of volunteers and a lot of commitment from somebody to, to keep it going."
	7.14	"it needs somebody driving it [a club environment] other than me."
24. Roles and Responsibilities - Who takes responsibility	11.11	"I rely on [Name of M2] to ask."
	2.7	"then its down to the coacheswe put quite a lot of faith in our coaches to run the sessions, so I don't have to be at every single session all week long."

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	2.9	"I rely on my coaches to bealmost take responsibility for their sessionumthey have the registers, they have the enrolment forms, they should have all of those things that allows them to answer questions"
25. Strength of Brand	11.21	"[Name of M1] and I will drop into certain sessions to check what's happening, we keep our eye in them but we don't necessarily make a complete presence to that parents because it's the coaches session."
- Brand Image	7.51	"I think as well because Team Bath is seen"
	7.53	"I think that elite sport angle some parents will say that they're gonna be better than Local Authority Sports Centres"
	8.7	"the fact they think Team Bath is a professional brand."
- Professional Company	11.58	"here you've got almost that quality assurance that parents and schools both wantin the fact that we are a professionallike company and we've got the background to go with it,"
- Clearer Brand image	8.8	"we don't get called Team Bath Tribe, we just get called Tribeso all our parents seem to, its quite weird, they've cut off the Team Bath bit, so everybody tends to know us as Tribe, 'oh you're from Tribe' or 'we go to Tribe'which isbut yet the pull isI always find that, cos all of our stuff has Team Bath Tribebutwhether its just a mouthful to say I don't know"
Communication 26. Links with Tribe Office		
- Communication with Tribe Staff	8.43	"[Name of M1] and I work hours over what we should do, we don't get paid overtimeso that's what we expect from our guys as well."
- Targets set by Tribe Office	4.8	"we obviously have a target to reach and how we make that final target is ok, but then obviously the sports have their own individual so we can track which ones are doing well and which ones aren't. And [Name of M2] will keep a

		financial budget at the end of every month or at the end of every courseof how many kids we've had in, how much money has come in"
Implementation of Sessions 27. Program Structure		
- Consistency in coaching	9.42	"end up with a group of 15 of them that are committed, that you know are not gonna go anywhere, like we've got the guys in this afternoon and it's the same people all the time, every time you have a school visit, every time you have an eventits the same people every time"
	9.11	"I try really hard on all of our sessions for the year at least to keep the same coaches"
	9.14	"I do try and keepbut that takes a while to get, and I know when I get to September I have to start all over again (Laughs)."
	9.35	"the schools get narky because you send somebody different"
- Coaches Motivations	8.36	"some of the coaches I've found are just doing it for the money, and they will very quickly come to the surface which ones are there for the money and which ones are there because they love it"
	8.39	"wheedle them, not wheedle them out, but just don't give themthat responsibility."
	8.44	"you pick up the ones that are there for the money, very quickly"
- Organisation of Coaches	9.34	"at one point I seemed to be forever finding coaches all the time, like last minute"
<ul><li>28. Experience and ability</li><li>Unreliability of Coaches</li></ul>	9.6	"its great for them because we've just developed them into really good coaches, but then we cant keep them [students] because all of our"
	9.36	"I think that turnover and thatjust the nature of the people that we're using

		is quite difficult."
	9.47	"I would like a team of coaches that work for usregardless."
- Unreliability of Students	9.2	"The main challenges are that we have a student body of coaches, so although they are brilliantthey are still students, they are still here to have fun, go out and all the rest of it. So one we have a high turn over so every year a load will go but then we get another load back in. So its almost like you're forever training a team of coaches to get them to the way you want themand then they go."
	9.33	"so you line it all up and they go 'oh I cant do that, I've got a lecture at that point, or I'm ill, I went out last night"
Proactive and Reactive behaviour		
29. Active Promotion		
- Need to Increase Awareness	6.1	"some of the parents go 'ooh we didn't know we could come or we didn't know you were here, or we thought is was gonna be expensive"
	9.53	"I thinkone is obviously getting to the parents, so that marketing, we've always had problems with that marketing getting that message across to parents, um we can do all the sessions in the world in schools and in curriculum time, but unless the parent has actually seen us do itits notits not an easy one"
- Proactive Advertising	3.13	"[Best way to advertise?] Um…I think we're still yet to find one, in all honesty,"
- None exists	2.44	"kids come in not even knowing that Team Bath run childrens stuff, and so they'll automatically phone [Name of M2] on a Monday and say 'we came to a birthday party on Saturday/Sunday, saw that you do loads of kids stuffwhat is on offer?"
30. Reactive		
- Parents approaching Tribe for	7.46	"they'll just come to us and say 'what can you do?', and we'll just reel off a

information		whole load of stuff."
31. Feedback and Evaluation		
- Feedback, evaluation none or bad	8.46	"but we give them the opportunity in that quarterly"
- Feedback not taken seriously	11.29	"they'll get a chance to have a nag"
	11.32	"butits like 'no, go away!' (Laughs)"
	11.26	"so we only tend to get feedback if its either a narky parent (Laughing) or its just somebody, they phones and go 'look, I don't really want to complain butthis coach has been late a couple of times, or' stuff like that"
<ul> <li>No recording, pursuit of drop outs</li> </ul>	7.17	"if the need is therethen we will do it, but at the momentwe haven't had, we would get the phone call as well, being that we're the kids stuff, they would phone us automatically and say 'oh do you do this?' and we're like 'no'we get a couple but not enough to warrant doing something."
	12.17	"[Name of M2] has a database of everybody that's ever booked in with us, their ages and whatever else, and we're supposed to go through them then if they get to a certain age, phone and just say 'look are you still active, are you still with us?', you can check on our system if they're still with usum but it's a huge job to track all of those children."
- Feedback forms exist	12.39	"so we don't tend to ask them that when they leave because we've got it from their starter pack, that's if every kid gets the enrolment formwhich is not always the case! So yeah we don't necessarily ask them when they leave"
	11.15	"Um we do give them forms, um depends when it is, sometimes it'll go in if they have an enrolment letter at sort of quarterly through our year we'll pop one into their enrolment letter, if they wanna send it back to us they will do, umwe've got customer comment forms at reception so if somebody has a"

<ul> <li>Feedback Not to do with Tribe /Coaches</li> </ul>	11.30	"but when we've done it before we've hardly had anything, the things we get back are things like 'are you going to start karate?' (Laughing), so nothing to do with the session at all"
	10.58	"I think, every time that we have a drop out then we have a reason in it, so if somebody phones [Name of M2] up and says 'oh no we're not gonna come back',"
<ul> <li>Parents approaching Tribe to give feedback</li> </ul>	11.18	"to be honest if a parent has a proper concern or a proper bit of feedback, they usually ring me (Laughs), or send me an email. They're usually notif its something completely terrible then they will tell me"
	11.19	"if its something completely terrible then they will tell me and if I've spoken to that parent once and said 'look feedback is what you need"
- Feedback is a last resort	11.32	"so yeah if its really desperate then "
- Too big a job for staff	12.24	"its such a big project to take on that 3 of uswe'd need somebody to doalmost like a mini research project to track all of them, um just to see what they do"
- Drop out no fault of Tribe	10.48	"if they don't enjoy itthey wont enjoy it in the first few sessions and that tends to be down to the kid just not being ready orand if it doesn't tend to be anything to do with us or how we're running it, I do, I think its down to the kid and what they do."
	11.4	"I look more so at what the comments for leaving were and it does tend to be stuff that is outside of our control."
	11.5	"So either they've done a ballet lesson and now it clashes with football and they wanna changeor they wanna try something differentit doesn't just tend to beits only the little diddy ones, like 4 year olds, they know they're

		just not ready for it."
32. Overcoming drop outs - Responding to the demand	6.18 6.28	"yes you do get because of the facilities and some of the coaches that you get, butwe're the same, we're a sports centre the same as Bath" "we're supposed to stop everything at 14, and it was like well hang on a
		minute, we've got a group of girls that are comingnot to compete or anything else, but they're coming to have a bit of exercise and meet some friends, and so for that reason we've kept open"
- Making sure children have fun	10.43	"if they've come in for a 10 week block, and have had a great timemore than likely that they're gonna stay."
33. Pathways		
- Routes within Team Bath	6.40	"things like football, they've got opportunity to go off to Team Bath Arsenal, which is our competitive football teams, and they can go to that whenever they like"
34. Beyond Tribe - Only Competitive progression after	6.48	"[Does every sport you offer have an exit route?] Some do, some don't"
Tribe	6.57	"it does tend to be if they hit 14 and then they want to become competitivethey then have a routebut there really isn't arecreationalso ifI feel a bit bad saying that because that shouldn't really happenbutwhen they hit 14 they've either decided they're gonna be sporty, or they've decided that they're not"
Increasing Motivation & Participation		
35. Awareness of project		
- Increase awareness and numbers	10.1	"I think getting them in is harder. I think once they're in, you can bombard them you have a captive audience, you can give them stuff on other activities going on, plus they see other activities going on. Holiday camps, we've then got a captive audience for holiday camps whereas holiday camps usually go in the paper and it depends on who picks them up. I think getting them in is the hardest"

- Creating a clearer image of Tribe	10.8	"Yeah I'd say that was, just getting that message across that we do, do kids stuff, its not all elitistits not expensive"
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 Table 31: Charted Themes for Tribe Coach – Participant Code C4

Summary Title	Position in Transcript	Example Quote
	Page - Line No	
Aims & Objectives		
<ol> <li>Improvement         <ul> <li>Develop Skills</li> </ul> </li> </ol>	3.34	"And that's what we try and instil before they get to the team or really competitive kind of thing."
<ol> <li>Level of Enjoyment</li> <li>Fun, Pleasure</li> </ol>	1.36	"so its just to get them playing and enjoying football"
<ul> <li>Ability Levels and Success in Sport</li> <li>Progress through Team Bath into Elite</li> </ul>	1.49	
	2.14	"I don't expect anyone to be Tribe at the age of 11 they should be playing in a team really"
- Recreational Sport	1.35	"my Saturday morning its for children that don't necessarily play in a football team"
	3.30	"Tribe is less of the competitive, obviously we want them to play matches and things like that, but we're the thing before the team"
	10.46	"they don't come to summer camps its not because it's an elite camp, its nothing like that soin my eyes its recreational"
	3.41	"Its more than recreational here I think, for those boys, $\cos I$ know there's $458$

		quite a few they might not be very good at footballyou know they're not good enough to be in a team, if they were good enough they would have been snatched up by an academy by now, so its kind of for those that are caught in the middleit allows them to do some exercise and still enjoy football"
Population who attend		
<ul><li>4. Physically active or sporty</li><li>Physically Active</li></ul>	3.59	"most of them are pretty active and enjoy their sport"
	3.57	"I think we've got some that need to be fit, but none of them are overweight"
- Sporty	13.20	"the ones that do Tribe are quite good, so they are very good at other sports"
<ol> <li>Main Audience or Target Audience</li> <li>Tots</li> </ol>	4.3	"boys aged 7-11 that's got to be about it though"
	14.13	"Most of them have normally been since they were young, and like I said I do have the odd one, but even then itsthey're differentthey're different to the other kids"
	5.1	"Well definitely the younger they are the more we're targeting parents. Even when we were giving out leaflets actually, we were giving them to the parents not to the children"
- Families	4.10	"I'd say it was more family orientated what we do on a Saturday"
<ol> <li>Socioeconomic Status         <ul> <li>Wealthy, Private School</li> </ul> </li> </ol>	3.49	"whitemiddle class, upper class a lot of private school boysthere's a lot of them like"
- Cost of sessions	14.30	"I think it's quite cheap to be honestwell for your middle class you know"

Recruitment and Awareness of Tribe		
<ul><li>7. Organised by Tribe office</li><li>Leaflets, posters in the STV</li></ul>	4.18	"only the other day I was in town dropping leaflets off"
- Within School	4.27	"We hand out leaflets there as well to try and get some of them to come along"
	6.44	"So it islike they do leave them in schools and stuff, any school basically in the Bath and North East Somerset Area ismost of them are ours"
<ol> <li>External to Tribe within population</li> <li>Word of mouth</li> </ol>	4.31	"through word of mouth the parents as well, that's probably why its all the same kids"
	4.36	"Word of mouth I'd probably say. That's why its so important we do a good job because obviously a lot of the parents they just talk"
<ul><li>9. Difficulties promoting sessions</li><li>- Image of Sport</li></ul>	8.52	"Advertisingpossibly put ourselves on a pedestal that might be too elite, where people think its too elite"
<ul> <li>Schools, don't get real experience of sport</li> </ul>	7.11	"I go to one school, they've just got a playground there's no…its so small"
- Lack of discipline in schools	7.17	"none of them want to do it, they don't know why they've been put there, why this session is on"
- Get experience with sport	7.25	"that's where you sometimes get the more overweight kidstheir parents can see oh this is good idea certainly getting them more active, that kind of thing."
	7.12	"they haven't got one PE a week. And its like by me coming along and just doing something its offering something else, so I definitely think it works like that"
- Do it in school anyway	7.18	"they have enough PE lessons anyway normally and they've got PE

		teachers. So they've already got people who should be able to take our school sessions anyway. So that's when I'm a bitsometimes in secondary schools I'm like 'yeah what's the point you don't have the interest'"
	10.32	"you know they play it during school, but not that much interest, they don't wanna do it after."
Factors Affecting Children's Motivations 10. Influence in decision making		
- Childrens power in decisions	6.25	"when you get them like I say 12, 13, 14 they know what they want to do"
- Parents Influence	13.11	"you can just tell they don't want to be there, and actually know they're not going to come back."
	13.14	"cos it's not what they wanted, which they really don't want to do, so that's a high drop out"
- Pushy Parents	6.13	"Sports camps you have parents, parents who've pushed them in you get the 'I don't want to do this', 'I don't even like the sport', and its really hard to work with"
<ul><li>11. Influence from peers</li><li>Friends Attend</li></ul>	14.7	"Big clusters of friendsthatI can't, I can't even think of an individual that comes."
	14.7	"Definitely clusters of friends, all from schools or from somewhere else"
12. Development of celf within the Coert	5.16	"once they're in they stay in, they're with their friends they're enjoying what they're doing"
<ul><li>12. Development of self within the Sport</li><li>Progress, become Competitive</li></ul>	5.3	"yeah I suppose when you get older, like I know a lot of the boys in Tribe now are trying to push their parents into putting them into teams"
- Personal Gains	12.3	"I often say to some of the smaller ones how much they're improving"

- Progress from Tots to Tribe	4.30	"it kind of all filters through and I've got you know tots, for us that works really well from the tots upwards like this"
	13.35	"Yeah they tend to stay. Especially some of the parents that really know us, they like want it they know the next step is Tribe"
- Focussed on sport	6.25	"when you get them like I say 12, 13, 14 they know what they want to do and its normally football"
13. Experience of Sessions		
- Enjoyment level of sport	13.28	"if they just don't want to be thereyou can tell, they don't even like football"
- Recreational	6.15	"Tribe football they wanna be there, they all wanna play, you don't get anyone saying they don't want to do it""I think the younger ones its enjoyment"
- Pressure to be competitive	13.25	
	8.44	"Personallyjust getting them to playum I think if they get too competitive too early they end up like these ignorant academy boys"
	10.28	"they don't like the pressure of having to be a badminton player individual kind of thing, they'd rather I think just have the enjoyment put back in. Some kids do like it, they relish it, but other kids definitely don't, and I think those are the kids that are dropping out"
- Difficulty level of sport	13.24	"Others are normally the ones that it's out of their depthumthey don't, they don't like it."
14. External Factors		
- Conflicts with other sports	13.20	"Um sometimes they do other sports"
- Funnelling into 1 sport	6.28	"I do think that's bad that they have to, they wanna be filtered into something"

	10.22	"when they get to that age (11, 12, 13) they're filtered into sport like"
- Access to a variety of sports	6.30	"You do every single sport to allow you to have a chance of trying them"
- Reputation of STV	8.9	"the way they've built it up is with the reputation, saying that we're here in this STV, the kids have never been in a place like this, and to say they've been here training and doing that's a real benefit"
Parents Motivation to Attend		
<ul><li>15. Perceptions of Brand, Project, STV</li><li>Image, Prestige</li></ul>	14.36	"And then this place obviously, Sports Training Village, say that and it does definitely appeal to them"
16. Compatible with Lifestyle	14.33	"if you commit to a team, especially like some of the under 8's, they have tournaments every weekend, then there's the training"
- Childcare	6.12	"You find they won't want to join in or depending on how old they are they'll cry. You can tell if they've been made to come"
17. Structure of Tribe		
- Recreational	14.30	"I think we're one of the only programs that runs a recreational club, cos it is recreational that's what it isbut its structured recreational kind of thing. I think we're one of the only ones that do that and I think that attracts to parents not having to put their kid into a team."
- Cost	14.30	"I think it's quite cheap to be honest"
Structure of Tribe		
18. Offers something unique		
- Facilities	8.29	"We've got these facilities, that's why we are sport"
- Recreational	3.41	"Its more than recreational here I think, for those boys, cos I know there's quite a few they might not be very good at footballyou know they're not good enough to be in a team"
	3.43	"so its kind of for those that are caught in the middleit allows them to do

		some exercise and still enjoy football"
	13.59	"They're not forced to do anything, they're not having to play a match', you know it's once a weekit's not a lotthey can pick and choose when they come"
- Multi sport	8.30	"we are sport for all these camps, anyone can comeyou know as long as you've got a slight interest in sports obviously you've got to want to do some exercise, but its not physically like we're doing football on this day"
	8.36	"And it enabled everyone, football for you know the boys, the tennis for the girls that kind of thing you know, so everything, we did loads of sports stuff. Team building exercises which isn't even really sport but comes under the national curriculum umbrella, so loads of things like that."
- Good Coaching	10.24	"they think they're games, but their sporty games they don't know it"
	8.14	"We can always say well we've got a team of coaches who are all completely qualified, CRB checked, whereas other companies haven't"
19. Tribe as a Unit	44.54	
- Sports self run	11.51	"I think it should be done in every sport as well"
- Sports all individual	9.17	"also you don't kind of know who's who either, which is really meant to be under the same thingumI've never really met many of the tennis guys, and yet they're doing the same job as me"
	2.55	"As of the tennis and things like that, they're completely separate; I don't think they even run under that"
- Working as a Team	10.11	"I definitely think they should have staff meetings or something similar"
	10.48	"I think that the kids that are here doing tennis can play tennis and that's what they're here for. Not for fun tennis camps, not for playing games"

ГI		
- Aims & Objectives Different	1.37	"I dunno like the tennis guys here who might want to be producing athletes"
20. Roles and Responsibilities - Who takes responsibility	9.1	"I've had problems with coaches turning up late, and then looked to [Name of M1] and [Name of M3] to sort it out and they've not sorted it out"
	10.14	"there are coaches that are classed by [Name of M1] and [Name of M3] as higher than everyone elsebut its like, within our peers, they don't know that, so howyou don't feel like you can step, can you? or can you not step up? Which can cause a lot of problems about who's doing whatI know it sounds really silly, but it can causeinfluence"
	11.2	"Like here you don't know how far you can step really without"
- Promotion should be down to Tribe	12.41	"mean I would put it in place but its kind of not my job to do that. It sounds really bad but I don't know where I'm stepping on people's toes cos I've just been placed there"
21. Strength of Brand	12.8	"you know I'm not getting paid any extraits kind ofcatch 22"
- Brand Image	8.21	"a lot of the kids are like 'oh', you know and then they turn up in their t-shirts and they're like 'we're the same as you now in our Team Bath t-shirts!"
	8.25	"the amount of them that wear it around LOVE IT. I think it makes a huge difference"
Communication		
22. Links with Tribe Office - Communication with Tribe Staff	12.35	"we've never had a sit down meeting about it "
	9.19	"definitely more communication"
	13.1	"definitely, definitelycos there's some coaches that I'd like to get shot of

		and I cant because its not, its not me is it"
	1.29	"but we've never been told by anyone that this is what we should be doing, this is what we should be aiming for"
- Targets set by Tribe Office	7.47	"They definitely have to hit figures, because at the moment Team Bath is a franchise struggling under the credit crunch majorly"
	8.3	"So I think in terms of children, that's the biggest target area at the moment for the STV cos that's where we get the most money"
- Direction from Tribe Office	9.49	"I'm not in a, I'mI am like the runner, its not myI feel like its [Name of M1] and [Name of M3] that should be saying to them"
	9.26	"there's not enough guidance for these coaches. They get them in because they're qualified, but like I said it doesn't necessarily mean they're good or they know what they're doing and that definitely needs to be sorted out"
	8.59	"in terms of structurewe don't really get told too much"
- Lack of Interest	12.21	"[Name of M1] and [Name of M3] came and watched us once and we had to do an evaluation of our coaching sessionONCE. And I've been doing it for 3 years now, its been once"
Implementation of Sessions		
23. Program Structure		
- Lack of consistency in coaching	11.44	"I've been with them for 3 years so I've built up a kind of rapport with them"
	14.1	"We're gonna be there every week"
	2.31	"we always argue that just because you've got a coaching badge doesn't mean you're good"
- Session Plans	1.26	"but personally you go with a session plan"

	9.50	"you should come with a session plan and do this, this and this, or you know, at least with some kind of structure."
	9.51	"And its like we turned up today and some of the people don't really, don't know what they're doing"
- Coaches Motivations	11.42	"I absolutely love my boys, they're like my boyson a Saturday morning absolutely love them to pieces, they'd do anything for me"
- Organisation of Coaches	10.9	"I've never been to this school, they've just told me it's a multi-skill sessionoff I go and do it, and that's awful"
	11.19	"the organisation needs to be better, like getting a text an hour before a session's ridiculous"
	11.23	"its just SO unorganised its things like that"
- Length of Session	8.55	"in terms of our holiday camps I think they're too long what we do"
24. Experience and chility	8.58	"Long days I think they need to be broken up"
24. Experience and ability - Coach training	9.29	"Like be a list of what you can do, things like this"
	9.36	"Just to say this is what we do and this is the standard we do it atand just little helpful hints for them"
- Lack or Mixture of experience	9.14	"I think the more interaction we have with each otherI wouldn't mind them coming and watching mineif it meant they could maybe do it later onso um, I've learnt a lot from interacting with the other coaches, so I definitely think we need to be more"
- Unreliability of Coaches		
	9.2	"this girl like keeps turning up late and its likethey know she's going to do it,

		and I was like well this doesn't help me when she turns up, after the kids"
Proactive and Reactive behaviour 25. Active Promotion		
- Increase Awareness	8.51	"I think we could have more kids here personallywhen I hear about how many kids are at the other camps I definitely think so"
26. Feedback and Evaluation		
- Feedback, evaluation none or bad	12.54	"I feel if I go and tell [Name of M3] and [Name of M1] then its like I'm ratting on you, so often I'll kind of say to the parents ring up and say it. I know they don't, they just can't be bothered at that point."
	12.27	"I think they should be doing evaluations with their sessions"
- Feedback not taken seriously	12.50	"I get complaints about that but that's just, in my opinion a difference of their opinion to our coaches"
<ul><li>27. Personal Promotion of Tribe</li><li>Personal Recruitment</li></ul>	4.4	"see a boy that's particularly good at football and think oh id like you to come on Saturdays"
28. Pathways	4.12	"I'll say to them 'do you play for a club?' 'Oh no, no I just like playing football for fun' well why don't you come on a Saturday"
- Routes within Team Bath	11.50	"it does work, and definitely something I think should carry on, cos I'm a bit worried that they might stop it but I think they've got"
	5.10	"Getting them to do things beyond. Once they're in, they're normally like "in" and then they'll love it"
29. Beyond Tribe - Progression after Tribe	2.15	"they're old enough and mature enough that they wont get much just playing recreationally. They need to be in that structure kind of thing, cos that's what happens in football, you hit 11 and you should be in a team really"
	13.47	"We should have an older group, the juniorI mean I think they've got something junior here, we should have a football Junior Team, older team

		session"
	13.51	"especially those that aren't good enough to be in the team, need that, because they still love football you know, it's not going to change, so that I'd say definitely"
- Lack of Clubs	5.28	"I offer to them Bath Arsenal, but we don't have a very good link with Team Bath Arsenal, considering we're meant to be the start"
	5.30	"have took a load of my boys over, but they're already full"
	5.35	"I cant offer them anything recreational, cos there isn't anything, so they've just got to go into a team really. But like I said its all about Bath Arsenal and we don't have a very good link"
Increasing Motivation & Participation		
30. Incentives for Participation and		
Improvement		
- More Sports	6.2	"I think they've just given up on it to be honest. There was meant to be, they were trying to get a girls academy and that's not gone through"
	13.49	"They've got the facilities here, the time it's likeyou've got the coaches and the resourceswhy not do it"
- Session Aims	9.44	"I come with a session plan every week but I know for a fact that the coaches that work underneath me in the Tribe, do not, they rely on me to bring it. Often I might say to them right you so this drill, you do this drill, this is what I want you to dotots I know don't come with one"
	12.28	"I don't see the point in turning up and not knowing what you're trying to achieve"
- Beyond Tribe	5.10	"Getting them to do things beyond. Once they're in, they're normally like "in" and then they'll love it we've already got a good system with the parents"

		"And you can just imagine once they've moved on they won't do anythingexcept like a few of themmaybe a few of them will do it at school but, most of them wouldn't"
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## Table 32: Charted Themes for Tribe Coach – Participant Code C5

Summary Title	Position in Transcript	Example Quote
	Page - Line No	
Aims & Objectives		
1. Improvement - Develop Skills	8.44	"its just to get them coming and get them learning to swim"
- Improve in Sport	1.22	"get their technique better"
2. Access to Sports		
- Making Sport Accessible	9.3	"for me swimming is a perfect sport because anybody of any age can do it."
	12.21	"he's really focussed on getting children who aren't involved in sport, doing sport"
<ul> <li>Ability Levels and Success in Sport         <ul> <li>Getting kids into performance, elite programs</li> </ul> </li> </ul>	1.21	"as they further on the objective is to get them to nationals"
- Recreational Sport	8.44	"I don't, I personally don't agree with competition until they areat an age where they can deal withcompetition"
	8.53	" I personally don't think that its good for them"
<ul><li>4. Definition of success as quantity children</li><li>- Number of kids</li></ul>	7.44	"For me its money because it's so hard to keep an eye on anything elseum and that's the one thing I have to keep tabs on"
- Monetary Profit	10.46	"people enquire about like water polo and rookies and things like that, but for me to actually put something on and make it worthwhilefinanciallyI 471

		don'tI dunno maybe, its extra work and my main focus at the moment is to make this program as successful as it can be before I think about other areas"
Population who attend		
<ul><li>5. Physically active or sporty</li><li>Physically Active</li></ul>	3.2	"The majority of them are already pretty active"
	9.59	"the children that I see, they are the active children. I don't see the children that aren't necessarily active"
- Sporty 6. Main Audience or Target Audience	3.2	"you know a lot of people do swimming and they do tennis up here and they do football"
- Tots	1.28	"We getwith swimming it's a bit harder cos 10-14like I don't really havethat's not a big age group for me"
	1.37	"Yeah I either get them like really young, so parents are pushing them at sort of 2, 3 years oldor they don't come in until they're sort of 7, 8 years old"
7. Socioeconomic Status	2.38	"The main ages I get in are 4-6, that's my big bracket"
- Wealthy, Private School	1.46	"We've gotpredominantly its upper class people"
	1.47	"there's a few sort of lower class families that come from the not so nice areas of Bath, but they are a real minority, between $5 - 10$ families and that's it"
- Difficult to attract poor children	12.21	"getting children who aren't involved in sport, doing sportand, but at the same time we don't do that because we charge for our sessions"
Recruitment and Awareness of Tribe		
<ol> <li>Organised by Tribe office         <ul> <li>Leaflets, posters in the STV</li> </ul> </li> </ol>	2.43	"I've had likeI had a leaflet drop when I first started, not that I arranged it somebody before me had arranged"

- Within School	2.46	"that post card thingbut that's notthat's just gone out to schools and so farI don't know where else"
9. External to Tribe within population		
- Word of mouth	2.43	"majority of my marketing has been word of mouth so far"
	2.51	"most people come from word of mouth. Cos even if they see the marketing they'll still ask their friends where they're going"
- Team Bath brand	7.29	"I don't think that necessarily sells it, I don't think people say 'oh Team Bath wow, lets go there' but I think that's maybe helped a bit with the advertising"
10. Difficulties promoting sessions - Image of Sport	8.6	"because parents want them to learn at 4 and 5but then some parents say like when they're 6 well they can swim 25m that'll do lets get them out"
	9.50	"Swimming is so elitist anywaythateven if you don't want to be elitist you kind of have to be."
- Do it in school anyway	3.30	"a slight drop out rate if their school does start attending because the parents like them doing sport at school, so they wont have to pay for it outside school"
Factors Affecting Children's Motivations		
11. Influence in decision making		
- Childrens power in decisions	8.8	"then children start to have opinions and decide whether they want to swim themselves and that's when parents start listening to them"
- Parents Influence	1.37	"I either get them like really young, so parents are pushing them at sort of 2, 3 years old"
12. Development of self within the Sport		
- Progress, become Competitive	8.46	"the Rising Stars is aimed at getting them ready for swimming competitively, but it doesn't actually include any competition"
- Focussed on sport	1,23	"only the really focussed ones stay"
- Focussed on sport	1.23	"only the really focussed ones stay"

13. Experience of Sessions - Enjoyment level of sport	8.26	"it's really unusual to hear a child doesn't enjoy swimming."
	10.23	"they enjoy it they stay"
- Recreational	8.55	"that tends to be why a lot of people do come because, just because they are good at swimming doesn't mean that they want to be a competitive swimmer "
- Pressure to be competitive	1.31	"normally if they're not going to be good at swimming by the time they're 10 years oldthey tend to have given up"
14. External Factors		
- Conflicts with other sports	8.33	"when the children start to make their decision and they might choose to go to a different sport"
- Facilities	8.55	"I have lost customers due to thatbecause of the cleanliness of the pool and un-cleanliness of the pool"
Parents Motivation to Attend		
15. Keen for child to learn		
- Improve child's ability	1.22	"initially its just to learn to swim, and that's where parents really see it as well"
	10.22	
		"that's why the majority of people join up at that age, they need to be able to swim"
Structure of Tribe		
16. Offers something unique		
- Lack of competition within BANES	4.42	"as much as the pool isn't that great, I still think that what we do is better than most other swim schools that I know of"
	4.48	"they're competitive with me more than I am with them"
	4.50	"I've never had to worry like because we've always had good numbers here"
	4.50	"I've never had to worry like because we've always had good numbers here"

- Coach to kid ratio, small classes	6.59	"Selling points are the small classes, our classes are only maximum of 6 in the learn to swim program"
- Recreational	10.54	"a real selling point for this program here and its why we do get a lot, cos we're not, we're not actually classed as a club"
- Multi sport	12.7	"I think its good in the way it can get the message out to parents that there's a program up here for children and not just a few sports, its multiple sports"
- Good Coaching	11.3	"a lot of people come here just to get some more technical knowledge"
	7.7	"I think our teachers are a strong point as well, we have some like swimmers and ex swimmers, like ex Olympians and things like thatso we've got them they're a strong selling point"
17. Tribe as a Unit - Sports self run	11.46	"a bit weird to get shoved in under an umbrella that you're not really, got any part of and I don't know anything about Tribe"
- Sports all individual	12.36	"I think we're too individual um, but you cant help that working somewhere like this"
	10.33	"I have to admit I don't know any of the other Tribe numbers"
	11.10	"it's quite hard to feel part of a program that was already running by itself"
	11.14	"its been advertised as very singular, kind of on its own"
	12.31	"I don't actually know what they're doing everyday, I don't know how they run their programs"
	11.24	"you're totally focussed on your own area, like sometimes you forget to promote the otherthe other sports"

- Competitiveness between sports	11.26	"I'd rather take their customers from them and get them onto swimming (Laughs), than I would try and promote"
	11.55	"its not like I don't care about what anybody else's targets are if they hit them, but I have to be focussed on the one I run"
- Working as a Team	12.34	"I mean I don't see any real negative points with the Tribe, like I can see the idea and where they're trying to get toumbut I don't think we're gonna get to it doing what we're doing now. I think we're too individual um"
18. Roles and Responsibilities	11.41	"Yeah I do, I think it would definitely be goodI think it would be a good thing"
- Who takes responsibility	11.28	"although swimming is within Tribe its not really their responsibility. At the end of the day I'm the one who's going to be asked why I haven't hit my targetsnot them"
40. Oliver with a f David	12.9	"I think its [Name of M1]'s role to create better team dynamics"
19. Strength of Brand - Brand Image	7.25	"I think now the names out there a bit more I think it now has an effect"
	7.28	"that sort of branding's got it name and the children wear their Team Bath t- shirts around town and things like thatI think that's helped"
Communication		
20. Links with Tribe Office		
- Communication with Tribe Staff	11.8	"I think if things could coincide better"
- Targets set by Tribe Office	2.26	"I have targets financially; I have a yearly target that I have to hit. I havenot really on attendance"
	2.28	"other than financially there's no real targets that I have to hit"
21. Access	2.20	
- Physical Location	11.11	"And also because I'm not upstairs and down here, I think it's a little bit out

		of sight out of mind kind of thing"
Implementation of Sessions		
<ul> <li>22. Program Structure         <ul> <li>Lack of consistency between lessons</li> </ul> </li> </ul>	9.12	"that's the problem, they feed them in at the bottom and then there's a big gap and then they feed them back in at the top because they want, they want them to then feed into the age group program"
	9.14	"so then that creates like the competitive element, and so you get very young children in the Rising Stars"
- Coaches Motivations	13.16	"I know for meI do it for the sport rather than for the, anything else"
Proactive and Reactive behaviour 23. Feedback and Evaluation		
<ul> <li>Feedback not taken seriously</li> </ul>	6.1	"a lot of the feedback I take with a pinch of salt"
	4.38	"And in a way I kind of sort of filtered out the people that I didn't really want in the program in the nicest way possible as well (Laughing), cos they're often the wingers"
- No recording, pursuit of drop outs	5.4	"I have a long waiting list for a lot of the classes so I haven't been too bothered about the drop out rate at the moment"
- Drop out no fault of Tribe	5.8	"now that it's the summer holidays, some of them don't want to pay for the summer holidays so they've dropped out."
<ul><li>24. Maintaining retention</li><li>Overcoming dropouts</li></ul>	4.59	"I set the rule that they have, when they join up they're supposed to join for a minimum of 3 months and then after that point they can drop out with a months notice."
	5.11	"they also have to pay a £10 joining fee to re-join, which was to try and stop them from doing this over the summer holidays, dipping in and out"
	5.18	"The months notice thing stops a few people"

7.56	"but we cant risk letting them move upwithout them being good soin that respect its really frustrating"
9.45	"it sounds awful but when they reach like 12, 13 years oldI'm not really interested because I can't really do anything for them, there's nothing that I can provide them with"
9.4	"there is that big gap for us where we cant really do anything for them until they reach sort of 18 and they can join the adult classes"
10.39	"I think we've got a captive audience already its just getting them in and I think that's why our numbers are so high lower down the scale, and then they sort of fan out"
9.26	"No really, the only sort of way we have of marking them so to speak is by the criteria that is in place, so the levels, the badges and things like thatits notother than that we don't really keep much of a record"
9.51	"Unless you can provide, like if we could set up like a rookie's session or a water polo session or something like thatthen that would be great"
10.51	"some people have come to me since April and said 'if you do something like that then we'll definitely be interested"
7.52	"The biggest weakness is the pool itself, the fact that its old and its prone to breaking down""there's no fun element to this pool, its just go up and down"
	9.4 10.39 9.26 9.51 10.51

## Table 33: Charted Themes for Tribe Coach – Participant Code C6

Summary Title	Position in Transcript	Example Quote
	Page - Line No	
Aims & Objectives 1. Improvement		
- Give Life Skills	11.12	"getting the kids being part of something I what I'm trying to do."
- Improve in Sport	3.33	"if you wanna learn how to get better – here, cos I like, you know, so yeah"
<ul> <li>Quality of session not quantity of kids</li> </ul>	1.26	"It's not only um, just, you know, the amount of kids playing and just feeding a few balls, it's also delivering quality coaching as well"
2. Access to Sports		
- Making Sport Accessible	1.23	"To get kids playing sport"
- Try a range of sports	1.23	"to get kids, and as many kids as possible partaking in all the different activities".
<ol> <li>Ability Levels and Success in Sport         <ul> <li>Produce Quality Players</li> </ul> </li> </ol>	11.7	"numbers is great that we've got so many kids in but not until we start producing some winners"
<ul> <li>Progress through Team Bath into Elite</li> </ul>	9.20	"a place where they come and play seriously rather than just for fun which in the performance side of things is good"
<ul> <li>Getting kids into performance, elite programs</li> </ul>	4.4	"So, the one aim we do have is however many kids we have, I think we want about ten percent of them feeding in to performance tennis"
4. Definition of success as quantity children		480

- Number of kids	11.58	"there was about40, 50 kids in the programme and now we've got a 180 so in numbers I'd say yes"
Population who attend 5. Physically active or sporty - Physically Active	12.32	
- Sporty 6. Main Audience or Target Audience	12.37	"actually if I'm being honest we probably get a lot of kids who are quite sporty"
- opportunity sample	4.39	"But in terms of Tribe, I wouldn't say that we specifically target at a particular age group"
- Tots	4.36	"Um, personally, in my section it would be um, four, five year olds, six year olds, um because that's when you get them"
<ul><li>7. Socioeconomic Status</li><li>Wealthy, Private School</li></ul>	4.45	"we get quite a lot of private school kids, they tend to be the wealthier, only because I think, partly because of where we're based"
- Difficult to attract poor children	7.44	"we go in to schools in Twerton and Southdown and if I'm being honest, we've never, we'd never get kids from there, as much as I, some of them love us going in there, you almost feel, it's awful but you almost feel, I actually don't give any forms out there because I don't want to, maybe I'm being judgemental, probably but I don't wanna get their hopes up and them take forms home to mum and dad and mum and dad are thinking, 'oh, great! Thanks a lot, we can't afford that,' kind of thing"
- Cost of sessions	4.48	"I think probably it is fairly expensive compared to other sports"
<ul><li>8. Parents keen and Proactive</li><li>Get involved in session</li></ul>	5.43	"Some parents take a massive interest, are on court with their kids"
- Want child to do well	5.1	"others that are really keen and want them to be good, you know, or want

		them to enjoy it"
Recruitment and Awareness of Tribe		
9. Organised by Tribe office		
- Within School	5.1	"through schools, we'll go in to schools in the summer or sort of Easter onwards"
10. External to Tribe within population		
- Word of mouth	5.2	"apart from that we've actually just got by almost up until now just through word of mouth really"
11. Difficulties promoting sessions		
<ul> <li>Schools, don't get real experience of sport</li> </ul>	10.24	"um so of course they never really get a real tennis experience it's more just using the rackets and balls, so they're like, 'well I don't wanna play tennis' cause, I don't like tennis"
- Large group sizes	10.16	"you can't play a game of tennis in it, you can't have thirty kids in a playground which is no bigger than half a tennis court"
Factors Affecting Children's Motivations		
12. Influence in decision making		
- Childrens power in decisions	6.24	"I think most parents tend to just go with what the kid wants at that age, when they get a bit older it gets a bit different and they sort of take over a little bit more"
- Pushy Parents	6.27	"they'll sort of go through a stage maybe sort of seven to nine where it'll be parents, sort of, pushing"
13. Influence from Peers		
- Friends attend	13.7	"I've had a lot of erm, people come and then, 'oh my friend does that um, you know, I'm, erm, they come on a Monday, can we join that class?' kind of thing"
- Sociability to stay	12.54	"younger ones tend to make friends within the group umso they don't necessarily want to leave because they want to see that friend every week"
- Group Dynamics	13.42	"it depends what group they're in, some groups, you don't know how hard a child is going to gel"

14. Development of self within the Sport		
- Progression from Tots to Tribe	7.26	"I think people are beginning to realise that you can start playing tennis when you are younger more, so we're getting beginners a bit younger age um"
- Personal Gains	12.1	"as you get older less and less people play tennis and youyou'll be one of the few that plays tennis and that makes you pretty special 'I'll carry on playing it because of that'"
- Progress, become Competitive	11.53	"I'd like to think they see themselves getting better, so they progress umthey get a bit more competitive about it um"
- Difficulty level of sport	6.10	"you get the biggest up take and the biggest drop out in mini red, age four to six, seven, cos it's very hard in tennis and sport to keep them cos you're playing once a week – you don't necessarily see a massive improvement because it's quite a specific skill"
15. Experience of Sessions		
- Enjoyment level of sport	12.39	"and that is hard to keep them interested if they can't do it"
	5.9	"More often they'll drop out because they want to – the kid doesn't want to play"
16. External Factors		
<ul> <li>Conflicts with other sports</li> </ul>	13.48	"um, sometimes you get, 'oh I'm playing football"
- Schools Attitude to Sport in Curriculum	10.5	"the fact that they've even gone out, practised the thing we were doing last week, you know, it's like that's great because you're gonna get better that way"
Parents Motivation to Attend		
17. Physical Environment		
- Coaches	13.17	"I'd like to think that they think it's good coaching, I hope, umand that it's good quality coaching"
- Facilities	12.56	"I don't think the kids appreciate, I think the parents will keep going because they think the facilities very good"

18. Perceptions of Brand, Project, STV - Image, prestige	13.17	"Prestige, I think, a little bit"
<ul><li>19. Compatible with Lifestyle</li><li>- Routine, convenient</li></ul>	13.26	"probably just almost a habit I mean, I say that Tuesday's, you know, Tuesday tennis, ok we sign up for next term, you know you get in to a sort of routine"
- Childcare	5.49	"the one's who sort of, there you go, shove them down for an hour while they look after the other kids kind of thing"
	5.59	"There's the one's that are there just so they can off load their kid for an hour"
	5.49	"the ones who sort of, there you go, shove them down for an hour while they look after the other kid's kind of thing"
Structure of Tribe 20. Offers something unique - Lack of competition within BANES	7.48	
		if they were to come they would come here, if you see what I mean or erm yeah"
- Coach to kid ratio, small classes	8.13	"I have a ratio of one coach to six kidsI actually am quite proud of the fact that as soon as we have seven kids they'll be an assistant there"
21. Tribe as a Unit - Sports self run	4.21	"Yeahwe run our own programs"
	5.36	We're sort of, we're always there but yeah, no, in terms of running our programme, advertising, I do that"
- Difficulties creating a Club atmosphere	9.17	"I just think the way it is here, I just think I've got this centre where you go and play rather than where you go and hang out with your friends"
	5.13	"I almost want to be seen as our own identity and part of Team Bath tennis

<ul> <li>Individual sport wants a sidentity</li> </ul>	separate	academy rather than Tribe"
22. Roles and Responsibilities - Promotion should be dow	vn to Tribe 5.3	"I'm not an expert at going out and putting adverts here, there and everywhere"
Communication		
23. Links with Tribe Office		
- Communication with othe	ers 4.12	"If I'm being totally honest I don't really have anything to do with Tribe"
- Decision Making Respon	sibility 4.14	"we set our own prices, our timesin fact we're different form everyoneum, and that's the only time really they have anything to do with us but they know they're just advertising it for us"
- Targets set by Tribe Offic	ce 3.1	"We don't, I've not been set any targets as such"
Implementation of Sessions		
24. Program Structure		
<ul> <li>Lack of consistency betw lessons</li> </ul>	reen 11.34	"next term I'm going to keep quite a tighter rein on the programme, I think what's being taught, how it's being taught, um so we're all teaching the same things"
Proactive and Reactive behaviour		
25. Feedback and Evaluation - Feedback, evaluation not	ne or bad 6.60	"No, probably should do, I know. [laughs] I know I should um, think about that actually"
- Feedback not taken seric	ously 11.42	"I think feedback forms are hard, but like you said earlier I might try and do feedback forms, but often the parents don't know what's going on and it's quite easy just to jump on and say, 'well actually I don't like the way they do this.' And often half of them don't know what's going on 'cause they're not down there um, but they are the hardest things to do I think, but then I think it works both ways – it's very easy to, if you're very happy with someone you sort of praise, it's very easy to criticize, and then in between you're sort of 'um bothered,' kind of thing"

- No recording, pursuit of drop outs	6.46	"I won't necessarily follow them up individually"
26. Maintaining retention		
- Overcoming dropouts	11.3	"we try and keep them in by doing this house system and getting them to do their homework and if they can try, if they do homework outside the lesson they'll improve"
27. Personal Promotion of Tribe		
- Personal Recruitment	4.38	"you go to tournaments and you might sort of pick on a few players and be like, 'well actually, do you fancy coming to train at Bath?"
28. Pathways		
- Routes within Team Bath	8.41	"I started running um, well I run a box league, where they can enter if they want to play matches in their own time erm"
Increasing Motivation & Participation		
29. Incentives for Participation and		
Improvement		
- Rewards, incentives	11.22	"if they've gone to the effort to do it I'll give them a token so um"

## Table 34: Charted Themes for Tribe Coach – Participant Code C7

	Summary Title	Position in Transcript Page - Line	Example Quote
		No	
	& Objectives		
1.	Improvement		
	- Improve in Sport	2.56	"But I always aim to get improvement, for the children to improve"
2	Level of Enjoyment		
2.	- Fun, Pleasure	2.53	"but I always try to keep the kids that come, in the club, like keep them coming, make sure they enjoy themselves. I never let one get sort of neglected from the other kids, just keep them all involved and try and make it so they enjoy it, and enjoy their time"
3.	Access to Sports		
	- Making Sport Accessible	1.20	"It's just really getting all the kids involved in athletics"
		1.28	"Um, I think that in the whole Tribe project it's just to keep kids coming into sport really"
4	Ability Levels and Success in Sport		sportreally
	- Produce Quality Players	1.29	"developing athletes, and um making sure that there's sports clubs there"
	<ul> <li>Progress through Team Bath into Elite</li> </ul>	1.20	"with athletics mainlykeeping the kids within the sport and getting them onto the next level so they carry on through.
	<ul> <li>Getting kids into performance, elite programs</li> </ul>	1.21	"So developing the young one from grass roots and then all the way through to club and then they're developed to be an athlete"
5.	Definition of success as quantity children - Number of kids	6.53	"because to have a successful sports club you need the numbers"

- Retention	2.53	"but I always try to keep the kids that come, in the club, like keep them coming"
Population who attend		
<ul><li>6. Physically active or sporty</li><li>Physically Active</li></ul>	2.20	"typically you do get the ones who are really keen to just run and not stop"
7. Main Audience or Target Audience		
- opportunity sample	1.39	"I'm happy to have all ages in athletics"
- Tots	1.53	"My main age is from 7; well we get more 10 year olds than 7 year olds"
8. Parents keen and Proactive		
- Want child to do well	2.24	"yeah they're usually keen to get their kids involved in sport"
Recruitment and Awareness of Tribe		
9. Organised by Tribe office	0.40	
- Within School	6.12	"getting them into sport I don't think that's hard now because of schools are doing it"
	3.54	"Yeah you do get kids do your clubs in the school and they then come and join clubs here, but not many"
- Website	4.13	"I think its usually through the website"
	4.8	"I think it's just the Uni website, I've never done leaflet handing out until then"
10. External to Tribe within population		
- Word of mouth	4.13	"usually it's a friend who's already been is with most of them"
- Elite athletes	5.45	"sometimes the kids who are really keen who watch athletics on television"
<ul><li>11. Difficulties promoting sessions</li><li>Lack of discipline in schools</li></ul>	3.45	"When you go to schools you have the kids that don't want to be there"

<ul> <li>Focussed on sport</li> <li>2.41 "when they're older say11, 12, 13, 14 its more because they want to, they're keen on the sport and they want to take it further, and sort of start performing and competing"</li> <li>6.13 "keeping them in a sport is the biggest problem, if the coaches aren't there orI don't know, they have got a lot of opportunities, but they've got to go ou there and find a good coach and stay in the sport and the commitment. And that's probably the biggest problem."</li> </ul>		3.46	"quite often you get a peer group that are not interested in doing it and are messing about and that kind of slows things down and you don't get as much done in that hour"
12. Influence in decision making       2.39       "they've got keen parents"         Parents Influence       6.45       "either their parents, there's a lot of keen parents that encourage them in"         I.13. Influence from Peers       6.46       "it's the keen ones and the parents who encourage them I thinkwhich is the main reason why they start coming"         13. Influence from Peers       5.ibling attends       2.37         14. Development of self within the Sport       1.46       "that's the sort of age when they're trying out sports and seeing what they enjoy, that's the age when they start, well 10, 11, 12 year olds, that the age where they start deciding of this is a sport I want to train for this every week, that's the main age you've got to focus on"         Focussed on sport       2.41       "when they're older say11, 12, 13, 14 its more because they want to, they're keen on the sport and they want to take it further, and sort of start performing and competing"         15. Experience of Sessions       15. Experience of Sessions	- Large group sizes	3.45	"obviously it's a larger group, because you have the whole class"
<ul> <li>Pushy Parents</li> <li>Pushy Parents</li> <li>6.45 "either their parents, there's a lot of keen parents that encourage them in"</li> <li>6.46 "it's the keen ones and the parents who encourage them I thinkwhich is the main reason why they start coming"</li> <li>13. Influence from Peers <ul> <li>Sibling attends</li> </ul> </li> <li>14. Development of self within the Sport <ul> <li>Progress, become Competitive</li> </ul> </li> <li>1.46 "that's the sort of age when they're trying out sports and seeing what they enjoy, that's the age when they start, well 10, 11, 12 year olds, that the age where they start deciding oh this is a sport I want to drain for this every week, that's the main age you've got to focus on"</li> <li>Focussed on sport</li> </ul> <li>2.41 "when they're older say11, 12, 13, 14 its more because they want to, they're keen on the sport and they want to take it further, and sort of start performing and competing"</li> <li>6.13 "keeping them in a sport is the biggest problem, if the coaches aren't there orI don't know, they have got a lot of opportunities, but they've got to go outhere and find a good coach and stay in the sport and the commitment. And that's probably the biggest problem."</li>	12. Influence in decision making		
13. Influence from Peers       6.46       "it's the keen ones and the parents who encourage them I thinkwhich is the main reason why they start coming"         13. Influence from Peers       Sibling attends       2.37         14. Development of self within the Sport       "when they're very, very young it can be that they've got an older brother or sister who's in the sport and they want to follow in their steps"         14. Development of self within the Sport       1.46         • Progress, become Competitive       1.46         • Focussed on sport       1.46         • Focussed on sport       2.41         * When they're older say11, 12, 13, 14 its more because they want to, they're keen on the sport and they want to take it further, and sort of start performing and competing"         6.13       "keeping them in a sport is the biggest problem, if the coaches aren't there orI don't know, they have got a lot of opportunities, but they've got to go ou there and find a good coach and stay in the sport and the commitment. And that's probably the biggest problem."	- Parents Influence	2.39	"they've got keen parents"
13. Influence from Peers       -       Sibling attends       2.37         14. Development of self within the Sport       -       Progress, become Competitive       1.46         "that's the sort of age when they're trying out sports and seeing what they enjoy, that's the age when they start, well 10, 11, 12 year olds, that the age where they start deciding oh this is a sport I want to do, I want to train for this every week, that's the main age you've got to focus on"         -       Focussed on sport       2.41         "keeping them in a sport is the biggest problem, if the coaches aren't there orI don't know, they have got a lot of opportunities, but they've got to go ou there and find a good coach and stay in the sport and the commitment. And that's probably the biggest problem."	- Pushy Parents	6.45	"either their parents, there's a lot of keen parents that encourage them in"
13. Influence from Peers       -         -       Sibling attends         14. Development of self within the Sport       -         -       Progress, become Competitive         1.4.       Progress, become Competitive         1.4.       -         Progress, become Competitive       1.46         "that's the sort of age when they're trying out sports and seeing what they enjoy, that's the age when they start, well 10, 11, 12 year olds, that the age where they start deciding oh this is a sport I want to do, I want to train for this every week, that's the main age you've got to focus on"         -       Focussed on sport         2.41       "when they're older say11, 12, 13, 14 its more because they want to, they're keen on the sport and they want to take it further, and sort of start performing and competing"         6.13       "keeping them in a sport is the biggest problem, if the coaches aren't there orI don't know, they have got a lot of opportunities, but they've got to go ou there and find a good coach and stay in the sport and the commitment. And that's probably the biggest problem."		6.46	
<ul> <li>sister who's in the sport and they want to follow in their steps"</li> <li>Progress, become Competitive</li> <li>Progress, become Competitive</li> <li>1.46</li> <li>"that's the sort of age when they're trying out sports and seeing what they enjoy, that's the age when they start, well 10, 11, 12 year olds, that the age where they start deciding oh this is a sport I want to do, I want to train for this every week, that's the main age you've got to focus on"</li> <li>Focussed on sport</li> <li>2.41</li> <li>"when they're older say11, 12, 13, 14 its more because they want to, they're keen on the sport and they want to take it further, and sort of start performing and competing"</li> <li>6.13</li> <li>"keeping them in a sport is the biggest problem, if the coaches aren't there orI don't know, they have got a lot of opportunities, but they've got to go outhere and find a good coach and stay in the sport and the commitment. And that's probably the biggest problem."</li> </ul>	13. Influence from Peers		
<ul> <li>Progress, become Competitive</li> <li>Progress, become Competitive</li> <li>1.46 "that's the sort of age when they're trying out sports and seeing what they enjoy, that's the age when they start, well 10, 11, 12 year olds, that the age where they start deciding oh this is a sport I want to do, I want to train for this every week, that's the main age you've got to focus on"</li> <li>Focussed on sport</li> <li>2.41 "when they're older say11, 12, 13, 14 its more because they want to, they're keen on the sport and they want to take it further, and sort of start performing and competing"</li> <li>6.13 "keeping them in a sport is the biggest problem, if the coaches aren't there orI don't know, they have got a lot of opportunities, but they've got to go ou there and find a good coach and stay in the sport and the commitment. And that's probably the biggest problem."</li> </ul>	- Sibling attends	2.37	
<ul> <li>Focussed on sport</li> <li>2.41 "when they're older say11, 12, 13, 14 its more because they want to, they're keen on the sport and they want to take it further, and sort of start performing and competing"</li> <li>6.13 "keeping them in a sport is the biggest problem, if the coaches aren't there or I don't know, they have got a lot of opportunities, but they've got to go ou there and find a good coach and stay in the sport and the commitment. And that's probably the biggest problem."</li> </ul>			
they're keen on the sport and they want to take it further, and sort of start performing and competing"6.13"keeping them in a sport is the biggest problem, if the coaches aren't there orI don't know, they have got a lot of opportunities, but they've got to go ou there and find a good coach and stay in the sport and the commitment. And that's probably the biggest problem."15. Experience of Sessions	- Progress, become Competitive	1.46	enjoy, that's the age when they start, well 10, 11, 12 year olds, that the age where they start deciding oh this is a sport I want to do, I want to train for this
orI don't know, they have got a lot of opportunities, but they've got to go ou there and find a good coach and stay in the sport and the commitment. And that's probably the biggest problem."	- Focussed on sport	2.41	they're keen on the sport and they want to take it further, and sort of start
		6.13	orI don't know, they have got a lot of opportunities, but they've got to go out there and find a good coach and stay in the sport and the commitment. And
- Enjoyment level of sport 2.38 ("they just like to get involved in sport"			
	<ul> <li>Enjoyment level of sport</li> </ul>	2.38	"they just like to get involved in sport"

	6.53	"the ones who are there because they want to be there are getting involved and enjoying it"
	6.38	"drop out because they've just lost interest and the things of growing upits that probably really"
	1.39	"10 year olds, that's the main age where you've got to keep them in the sport, cos that's when theythey're trying out loads of different sports"
- Mixture of Childrens ages	4.33	"sometimes the age range, when you get a 12 year old and you get a 7 year old it's a bit difficult in coaching them together"
Parents Motivation to Attend		
16. Perceptions of Brand, Project, STV		
- Image, prestige	7.7	"I think Team Bath is quite a good thing, Team Bath is quite a good nameI think that encourages parents to send them to these clubs, I think we've got a good advantage there with that"
17. Keen for child to learn		
- Increase fitness	2.25	"when the kids aren't too sporty they're keen to get their kids a bit more active and help them get fitter I guess"
Structure of Tribe		
18. Offers something unique		
- Lack of competition within BANES	7.5	"I guess its just school clubs but there's not really any major competition"
- Makes Sport accessible	2.3	"it's not very expensive to come to the clubs, and its there for everyone and everyone can try it out and do it"
- Multi Sport	6.52	"I think its really good the whole different sports there"
- Coaches	4.24	"we have some really good coaches in football, we have really good coaches in athletics, we have good coaches because its people who have actually done the sport themselves"
- Facilities	8.41	"facilities for the Tribe are really good, they've got great facilities here and the

		coaches are excellent, but they just aren't working to get the numbers in and
		that needs to be done as that would make a massive difference"
19. Tribe as a Unit		
<ul> <li>Sports self run</li> </ul>	4.57	"its more like us running athletics really"
	3.10	"We tend to make all the decisions within athletics, and we do all the events"
<ul> <li>Sports all individual</li> </ul>	4.57	"I mean we don't see what going on in football, its not reallythere's not that
		much communication but"
	8.22	"I would rather it was more attached to the University"
20. Roles and Responsibilities		
<ul> <li>Promotion should be down to Tribe</li> </ul>	4.1	"it's not us who advertises it, it's the university so"
Communication		
21. Links with Tribe Office		
<ul> <li>Communication with others</li> </ul>	4.57	"there could be more communication"
	8.36	"there was very little communication with the Tribe office"
	7.17	
		said to me"
	5.50	
		that's totally connected to the Tribe, I'm not sure how it works"
	5.22	"I haven't been asked to give a register in or anything"
	0.40	"In terms of companying tion and encoded in the net that are - ("
	8.40	"In terms of communication and organisation, its not that great"
Torracto act by Triba Office	0.00	"Vou con one how it programming what targets to hit, that would be a hit
- Targets set by Tribe Office	8.22	
Implementation of Speciars		more exciting really"
Implementation of Sessions 22. Program Structure		

- Organisation of Coaches	8.37	"There's very little structure and there's often miscommunication with coaching"
	8.40	"they'll text you at the last minute to tell you that you're coaching at 6 or something"
- Length of Session	8.13	"Maybe with the hour and a half it puts the really young ones off because it's quite a long time"
Proactive and Reactive behaviour 23. Active Promotion		
- Increase Awareness	7.5	"there's not really any major competition, so it's just letting them know that the club is there"
	7.10	"We have tots clubs as well, and half of them don't know that those are on"
- Proactive Advertising	4.14	"I think likethey sent us out with leaflets last week; they should have done that in the Easter holidays for the summer, not a week or two weeks into the actual summer campbecause people have already booked on other summer camps, and they're not going to get the numbers in"
	4.14	"I think they could improve on the advertising, that's one big thing"
24. Easthack and Evaluation	4.27	"but its just that advertising and getting the numbers inthat it the main number one weakness I'd say"
<ul><li>24. Feedback and Evaluation</li><li>Feedback, evaluation none or bad</li></ul>	8.36	"no feedback for the parents or kids, and that would be good"
<ul> <li>No recording, pursuit of drop outs</li> </ul>	5.11	"We don't do anything but I don't know about the Tribe office, whether or notthey wouldn't know that they're not coming anymore"
	5.12	"I think there could be a bit more of a better register going through, so we have a register that we have every day and that we then hand it to the office or something"

4.1	"but I would mention it to people, let them know that it's on."
5.41	"UmumI don't really think its that successful, they could have something, well they have an athletics club afterwards that the kids go to"
5.43	"they could have something a bit more for older ones"
2.58	"with athletics events you time them, measure how far they throw the javelin and like help them improve, so give them their own targets, so you make sure they feel like they're achieving something"
4.45	"obviously like I try and help them improve, but they don't get a certificate or anything"
3.15	"In the actual Tribe school thing on Tuesday and Thursdays there's nothing in like that, but when you've got the regulars I try and help them improves themselves"
8.22	"get more structure from it [Tribe]."
8.23	"I don't need structure, I can do it myself, but it would be good for the university if they had more structure"
7.42	"Um just having something they can work to"
7.42	"but have they got something that they can take out of it, like I've achieved this, if they had something like the Shine Awards, or somethingmore structure to it"
	4.1 5.41 5.43 2.58 4.45 3.15 8.22 8.23 7.42 7.42

	7.47	"They can see that they're improvingyeahgives them something to take out."
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## Table 35: Charted Themes for Tribe Coach – Participant Code C8 & C9

Summary Title	Position in Transcript	Example Quote
	Page - Line No	
Aims & Objectives		
1. Access to Sports		
- Try a range of sports	7.47	"move on but encourage them in to another sport rather than just allowing them to quit."
<ol><li>Definition of success as quantity childrer</li></ol>	1	
- Number of kids	3.57	"we have quite a lot of kids come through"
- Retention	3.58	"most of them stay with it for a long time and get a lot of enjoyment out of it"
- Progression to club/competition	3.58	"quite a few have gone on to other clubs so yeah I think it's a success"
Population who attend		
3. Physically active or sporty		
- Sporty	1.9	"they'll come along and maybe do two sports while they're there , um they're usually very sporty kids anyway"
<ol><li>Parents keen and Proactive</li></ol>		
- Get involved in session	2.13	"A lot of the younger kids, their parents stay like in the session and then kind of hit with them"
- Help with running of session	2.17	"we have two parents that actually always help in one of the sessions, just 'cause they're there anyway"
- Want child to do well	2.10	"they're looking for their kids to do well"
- Pushing child into sport	1.15	"the ones without parents who are sort of not pushing them but you know, helping them get there makes a big impact I think."

	2.25	"it would be a bad thing I think, they'd be there pushing them trying to, I've seen parents like that"
Recruitment and Awareness of Tribe		
<ol><li>Difficulties promoting sessions</li></ol>		
<ul> <li>Schools, don't get real experience of sport</li> </ul>	3.21	"When they start playing up you can't really focus on getting them to do things and getting them to improve so I think that kind of erm ruins the experience of badminton a bit and may affect the participation"
- Lack of discipline in schools	3.7	"and they just run riot and you can't really focus on allowing them to enjoy the badminton"
<ul> <li>No experience with the sport</li> </ul>		
	3.57	"much harder in the schools because well generally they're a younger group anyway and they've got less of an idea of badminton to start with so they'reyou know they're gonna be harder to work with"
Factors Affecting Children's Motivations		
6. Influence in decision making		
- Childrens power in decisions	1.27	"Bath's quite an affluent area, the kids have a lot of power"
- Parents Influence	1.31	"I think parents are a massive influence on it"
	7.32	"I think parents tend to be the main sort of important ingredient in the whole process I think."
7. Influence from Peers		
- Sibling attends	1.24	"She had to come because her brother came"
- Less sporty	1.15	"Maybe the, the less sporty generally drop out"
8. Experience of Sessions		
- Enjoyment level of sport	7.42	"if a child isn't enjoying the sport at an early age then the parents shouldn't encourage them to still go"
- Impact on child's experience	5.56	"I have no idea what to do and so I think the fact that I've not been prepped

9. External Factors		and I've never don't these kind of things before could affect the kids experience of err these sessions"
- Conflicts with other commitments	1.47	"like it's a difficult time on a Tuesday for them to make it and err, moving to senior school or something like that"
- Funnelling into 1 sport	7.57	"I don't believe in this sort of funnelling kids down one, one sport at all, I think that sort of leads to the sort of drop out in a way."
- Reputation of STV	9.7	"I think partly the reputation of the university is a bit of a pull but erm yeah, knowing that it's a centre for lots of sports and you know quite an exciting place to be"
- Access to a variety of sports	7.30	"do a variety of sports, don't try and focus and do one five like times a week, do a variety"
Structure of Tribe		
10. Tribe as a Unit		
<ul> <li>Sports self run</li> </ul>	4.38	"In my experience it's self-run really"
- Sports all Individual	4.25	"the sports don't mix very well at all"
	4.33	"I don't know. I don't have any concept of how many sports they do or any of this really."
11. Roles and Responsibilities		
<ul> <li>Promotion should be down to Tribe</li> </ul>	5.47	"I think they probably need to realise that they've actually got, you know they've got some good coaches up here and it's quite a good thing, they should advertise it more and say you know, this isthis is a good service."
Communication		
12. Links with Tribe Office		
- Communication with Tribe staff	4.19	"It's very fragmented, yeah, in terms of my experience I've had a lot of erm issues with just sort of administration"
	6.23	"just some sort of link up between us and them sort of thing, it seems to be all

		like a text message here and a text message there and there's no real sort of, it's not like a real job."
	6.31	"And then you just turn up so there's not any other kind of communication."
- Feedback, contact	6.20	"I think that would be really beneficial to have some, even if it's just a fortnightly 15 minute meeting with [Name of M1] or [Name of M3] or someone just to go, if they can sort of say, 'yeah we're gonna try and do this and help promote your club"
- Direction from Tribe Staff	6.37	"There's never any sort of meeting"
	4.14	"I think it could do with a bit more direction"
	9.26	"It's never been mentioned to us at all like"
	4.38	"it's always me that goes to them and sort of says, 'can I have a register?"
	7.21	"Yeah I think you have to extrapolate any information you want from, have to drag it out"
- Communication of bigger picture	4.11	"There's not really much sort of communication about the wider picture, you just do your little err bit and err that's about it."
13. Access - Physical location	4.46	"now they're in the STV which is kind of the heart of it I suppose, it might be easier to contact people from there"
Implementation of Sessions 14. Program Structure - Timings of sessions	2.42	"with the Tribe badminton, we always struggle with numbers to come at four o'clock because it's so close to school so it's generally practicalities which get in the way of a lot of things."
15. Experience and Ability - Coach training	5.54	"I think there should be more training because I've been sent to multi-sport

		places, I have no training on how to do multi-sport so you just kind of wing it and hope for the best so"
- Lack or Mixture of experience	5.1	"they've tried to send me on them, various things as well, I've just had to say, 'sorry I'm not really qualified, I don't know what I'll be doing"
	5.12	"they just get whoever like sometimes we've had footballers taking badminton and stuff like that"
16. Structure of coaches - Organising coaches	5.22	"from what I see from my side it seems a bit sort of chaotic in organisation terms."
	5.19	"there's a lot of that last minute"
- Unreliability of students	5.17	"I think students are quite undependable and unpredictable erm to err to work for you"
Proactive and Reactive behaviour		
17. Active Promotion		
- None exists	5.40	"I don't think it's actively promoted at all."
	6.17	"We're not actively encouraged to try and recruit them, we're just sent to schools, no instructions um, just do your job, give them a little taster of badminton and then you're off again"
- Increase Awareness	6.44	"it has potential to be a lot better than it is and reach a lot more children"
18. Feedback and Evaluation		
- Feedback, evaluation none or bad	7.8	"there's no sort of procedure to go through in terms of feedback or evaluation."
19. Personal Promotion of Tribe		
- Personal Recruitment	5.29	"a good deal of the people who go on my courses, I have actually recruited them myself from the Sports Centre down in Bath. I basically go round and when I see kids playing and I give them a leaflet and that's basically where all

		the kids come from"
- Personal Motivation	6.57	"but I think within this environment if I wasn't, if like I just turn up and kind of sit there at the side and not give a monkeys and no one would know about it"
20. Pathways - Opportunities for competition	2.51	"apart from doing sort of internal competitions, playing against other people they are training with there isn't really, like I said there's not really an opportunity"
<ul> <li>Practicalities for competition</li> <li>21. Beyond Tribe</li> </ul>	2.40	"I've thought about it but you'd need a club that meets at the same time for example, to organise it, it's just a logistical thing"
- Progression after Tribe	1.55	"it's difficult to get them into clubs afterwards"
	1.57	"there are hardly any badminton clubs around and in Bath and Bristol area's it's very poor"
- Lack of Clubs	2.4	"but generally there is a shortage of good junior clubs in the area"

## Table 36: Charted Themes for Tribe Coach – Participant Code C10

Position in Transcript Page - Line	Example Quote
No	
5.18	"so it's about what's good for them and their development"
1.37	"Judo makes people a character and if you can do that just give that to someone in a fun way"
1.41	"kids learn a lot and Judo teaches you stuff"
1.44	"so Judo should be fun and it should give you skills for life, and that's what I hope to give"
3.12	"they all have fun and they go away they think Judo's amazing and that's my main concern"
1.44	"I'm about the kid having the quality of what we do here"
12.39	"so it becomes a part of who you are rather than a thing that you do so you can make physical activity part of the whole person"
2.19	"Judo should be accessible; it's one of the cheapest sports you can do"
1.28	"the aim of Tribe is to give back to the community, to give back to kids, to make sure that they see that sport's a positive thing, and they can get involved"
	Transcript           Page - Line No           5.18           1.37           1.41           1.44           3.12           1.44           12.39           2.19

- Try a range of sports	5.5	"I think it's really important that you keep doing as much sport as you can, you know that's key for me, it's you know, you can't say, 'oh, you can only do
<ul> <li>4. Ability Levels and Success in Sport</li> <li>Progress through Team Bath into Elite</li> </ul>	1.51	Judo" "we wanna give back at the same time as having a pathway, a player pathway, so you can go Tribe – ace – high performance"
<ol> <li>Definition of success</li> <li>level of enjoyment</li> </ol>	10.15	"because the kids are all having fun erm"
- Immeasurable	10.26	"Success is something that's kind of immeasurable"
- Improvement	10.16	"we go to tournaments and I see them progressing"
- Retention	10.15	"and I'm retaining them"
Population who attend 6. Main Audience or Target Audience	2.9	"probably starts at kind of age 7, um, but at the moment I've had those which were 7 and now are between ages of 10 and 14, the most kids I've got now kind of age 12"
Recruitment and Awareness of Tribe 7. External to Tribe within population - Word of mouth	7.10	
- Links with other bodies, schools	7.32	"he works really well with the erm, the SCO, school co-ordinating, I forget all the, but err, all the people that co-ordinate sport within the region, within BANES and stuff"
8. Difficulties promoting sessions	7.34	"we get loads of kids in and maybe we could recruit them more, I don't know um, but I think that's a massive strength of ours"
- Image of Sport	6.9	"you don't think, 'oh Judo will be great for my child!' you just don't know and also it's a fighting sport so people are like, 'ooh I don't want my kids fighting"

	12.42	"I kind of want it to be encompassed and people need to be educated into you know, it's a way of life rather than ever something that's on top of that"
<ul> <li>Schools, don't get real experience of sport</li> </ul>	3.6	"we're always going behind soccer, behind netball because that's in school and that's what kids know"
- Get experience with sport	6.57	"once they've gone 14, it's very difficult to get them to come in to a combat, contact sport if they haven't done it before"
- Schools Attitude	8.32	"the school environment, educating teachers and educating schools about how much sport they can do, the quality of what they can do, I get kids that turn up and they can't even do forward rolls"
- Access	5.52	"a kid of the age that you're looking at, 10 to 14, cannot get to the University by themselves because there's fantastic facilities"
	5.55	"we've got but society these days does not put 10 to 14 year olds on buses by themselves so someone has to drive them, and you have to think about what time your classes are, when people finish work and who can attend"
- Club atmosphere	5.24	"it's really difficult in this environment 'cause I try to run it like a Judo club rather than an initiative or a 10 week scheme or anything like that"
Factors Affecting Children's Motivations		
9. Influence in decision making		
- Childrens power in decisions	6.11	"the kids from age 10 to 14 probably has to enjoy it because of, they're coming in to their own character, you know, they're coming up to being a teenager, they won't be told what to do um"
	12.49	"10 to 14 people have already got, a lot are beginning to get their own kind of character kind of person about them, erm, they're less influenced by their parents"
		·

Derente Influence	<u> </u>	"toto definitely it's to de with nevente"
- Parents Influence	6.8	"tots definitely it's to do with parents"
- Pushy Parents	4.53	"she just told me, just bare-faced, 'I don't want to be here, my mum makes me come"
10. Influence from peers		
- Friends Attend	12.50	"they're more influenced by their peers"
	7.11	"then you've got groups of friends who are now really good friends"
- Sibling Attends	4.51	"some get brothers and sisters that come"
11. Development of self within the Sport		
- Progress, become Competitive	4.43	"lots of people have said they wanna get their black belt, lots of the kids I have at the moment wanna be Olympic champions"
- Focussed on sport	11.3	"some people are not meant to do Judo, they haven't got the mentality"
12. External Factors		
- Conflicts with other sports	4.3	"the other sports are seasonal but we go all the way through so some kids say change the dates that they train because they've got preseason for rugby or something"
- Reputation of STV	12.25	"because we have this awesome facility"
- Not to do with Tribe/Coaches	10.41	"The only reason I ever lose people is when they can't make the next class"
	5.1	"I lost a big group 'cause they err, they moved, they moved schools and they moved house, I lost about four, five and that was hard"
Parents Motivation to Attend		
13. Perceptions of Brand, Project, STV		
- Image, Prestige	6.53	"Bath is a very affluent area so maybe we're too cheap, maybe we should be costing as much as Tennis and then people would think they're getting, you know, not value for money as such but you know, if it's more expensive then

		it's better"
14. Structure of Tribe - Cost	13.16	"this society is about how much everything costs and I don't think we're expensive here"
	2.19	"if you do the maths that's really good"
- Coach rapport	5.27	"I have a very good relationship with all my parents and the parents I don't have a good relationship with, they're the ones whose kids and wanting to stay"
	13.13	"Staffing wise regarding coaches, who the coaches are, how they deal with the parents, how they deal with the kid, how much experience and expertise they've got"
15. Child's best interests	6.8	"parents what they think is best for the child"
Structure of Tribe		
<ul><li>16. Offers something unique</li><li>Facilities</li></ul>	12.24	"he's just coming 'cause we can offer him something that they can't in other clubs"
	13.14	"the facilities here are phenomenal, they are, they're wicked erm"
	7.36	"we have an amazing Judo environment here; this dojo is probably only one of a few in the country"
- Lack of competition within BANES	6.30	"nothing is on a patch with what I do"
- Multi sport	7.30	"Tribe as a whole err, we're multi-sport"
- Good Coaching	7.51	"it's because they're, they're phenomenal and I get to work with them and that's what makes our programme so good"

	9.11	"people don't come for Tribe they come for the coaches"
	9.13	"don't just come for the facilities and stuff, for Judo they come because I'm here or because one of the other coaches is here"
	12.26	"the staff here in Judo are just phenomenal, they're amazing, not just me of course, I'm talking about the others"
- Access to Sports	8.41	"you don't have people that just don't go climbing trees and going to play in the parks and enjoying being young and having fun erm, those are massive things I don't know how you go about changing them"
17. Tribe as a Unit - Sports all individual	3.18	"whenever I talk about Tribe I'm always talking about Judo, I don't care about the other sports"
- Competitiveness between sports	3.33	"I'm really competitive, I want mine to be the best"
- Working as a Team	9.18	"that you have to coach so many hours for a week with Tribe, we start working better together"
	3.48	"I think as a team we should look to develop Tribe more"
18. Roles and Responsibilities - Who takes responsibility	3.31	"we try and do that I don't know, every six weeks or something like that maybe a bit more"
	2.47	"but I can't get out there to spread the word enough, I just don't get paid enough, I don't have enough time to go and do that"
	4.32	"I would love to but I've never had the time to do it"
	9.28	"it's a problem and you know, we should go out and do assemblies and that kind of this but they're all time consuming"

	9.27	"Well because I don't do the bookings, [Name of M2] does the bookings so, the administrator so, really I don't deal with the recruitment"
- Promotion should be down to Tribe	3.55	"I think Tribe should be responsible (for recruitment)"
	3.44	"I think we should have billboards in townI'm just, I'm just completely over worked 'cause I have four line managers hereso I can't do it"
19. Strength of Brand	16.14	"I can't recruit and coach"
- Brand Image	7.30	"our brand is very strong"
	6.36	"Urm, yes it's erm, it's affected us negatively [elitness], it's taken a whileI'm from the South, so it's taken a while to build in to the Western area region. When I took the kids to tournaments people expected them to be phenomenal because Bath's this centre and it's just like, 'they're just kids,' you know"
Communication		
20. Links with Tribe Office - Targets set by Tribe Office	2.28	"I did have financial targets so I struggled with because I'm about the kid having the quality of what we do here, not about having the quantity of numbers"
	9.31	"you kind of have to make money before you can spend it and so that's not really, it's not really a kind of helpful environment to be in"
Implementation of Sessions 21 Program Structure		
- Consistency in coaching	9.14	"they, I think I will improve, erm, the same coach taking the same session each week"
- Coaches Motivations	4.13	"I know I gave them something and on their life I've had an impact, and that's really important for me as a coach"
21. Program Structure - Consistency in coaching		each week" "I know I gave them something and on their life I've had an impact, and

22. Experience and ability		
- Coach training	9.19	"that would mean that it would be part of their course so it would make them attend and it would make them better educated coaches erm"
- Unreliability of Coaches	9.15	"students, they sometimes are, 'ahh I can't really be bothered,' and, or, 'I've got this, this just popped up and,' and that makes it very difficult to manage and you know, coaching"
Proactive and Reactive behaviour		
23. Active Promotion		
- Increase Awareness	7.49	"we have an amazing environment, we have a lot to offer"
	3.17	"I don't think we're good at that, I think, I try but I don't think we're good (Tribe) at that"
	3.50	"we should be pushing to having two hundred kids in the Tribe programme"
24. Feedback and Evaluation		
- Feedback, evaluation none or bad	5.36	"I don't think as Tribe that we, that we know enough of what the kids are doing, I know, I pretty much know what my kids are doing as well as Judo here, will they come to summer camp, and I pretty much know that but I don't think, I don't think we know enough"
- No recording, pursuit of drop outs	10.34	"Err, I don't"
	10.34	"we could monitor it and that would be really helpful erm, and then we could find out why each kid drops out but to do that you have to have a ridiculous amount of time"
	11.35	"I always ask why but I don't know if it's ever noted down, and I can't remember now, but I would love to have a better system than I have at the moment"
25. Maintaining retention		
<ul> <li>Overcoming dropouts</li> </ul>	13.30	"give attendance awards at the end of every year for the last two years"

26. Pathways - Routes within Team Bath	12.5	"this is where the Judo program is different, Tribe is an all encompassing programme or us, it sits in, we go Tribe, ace, high performance"
Increasing Motivation & Participation 27. Incentives for Participation and Improvement		
- Rewards, incentives	5.39	"I also think we should be doing things like family memberships so some of the parents come to loads of stuff, you know, we should be rewarding them."
<ul><li>28. Awareness</li><li>Advertising, increasing numbers</li></ul>	1.11	"it's a good programme, what we're doing here is really good, but you know, we should be having two, three hundred kids"
	8.49	"I don't find it hard to keep the kid once I've got them erm, as I say recruitment's always been a trouble for me so the time that it's taking to recruit people, why is it so hard, is it hard to recruit people"
	2.44	"but my recruitment is appalling, my recruitment, Judo is an amazing sport but I can't get out there to tell people"
	9.37	"the disadvantages for me definitely are recruitment, I can't get enough people. Judo being Judo, people don't know what it is, getting the word out about how great we are, I don't know I mean yeah, it is hard"

## Table 37: Charted Themes for Tribe Parent – Participant Code P11

Summary Title	Position in Transcript Page - Line	Example Quote
	Ňo	
Aims & Objectives 1. Improvement - Physically active	1.21	"Their aimI think probably to encourage children to be more active"
2. Aims and Objectives Unclear - Don't know	7.54	"there's sort of a mixed messagethere's no come and try Star Track because it might put you on the path to an athleticssort of career or whatever, that's notthat wasn't sort of stated to us. And so you weren't sure whether is was a child care situation or whether it really is trying to encourage young people to be sort of interested in athleticsand potentially become athletes in the future."
	7.58	"I think the intention behind the Star Track scheme is probably to start developing future athletesbut that doesn't appear to have been translated into our experienceshere."
	3.19	"I mean I might be sort of completely naïve and (Laughing) but that's what I wouldthat's my perception and that's what I would hope."
- Not Clear	10.58	"if that is indeed what they're trying to do."
	6.26	"No I'd say it's probably recreationalwell I'd say it depends very much on the children that are there on the dayyou know if some of them are really interested then it becomes competitive."
	7.34	"Not really no, noas I say it was more of a leap of faith reallyumit 510

		wasn't clear"
	7.40	"but certainly it wasn'tit wasn't made clear what its aims were except that it was a more focussed activity than the general Tribe stuff."
<ol> <li>Access to Sports</li> <li>Making Sport Accessible</li> </ol>	10.59	"Like I say there is this confused mixed message about it, is it actuallyare things like that actually trying to help kids improve their skill sets and perhaps go on and take it further, or is it just a childcare situation."
	1.32	"I would like to think at least that the people who are involved in organising things like Tribe, have a genuine interest in encouraging people to take up sports and to take up activities."
	8.13	"its once they start school its quite tricky as well cos there's lots of things available when they're pre-school"
- Childcare and then inspire kids	1.22	"but I think probably the underlying aim for the Tribe powers that be as it were, is well if we offer this as a holiday scheme as a child care, we're still going to get children in and hopefully sort of spark them into wanting to take part in more sport and wanting to take more exercise."
4. Business		
- Financial profit	1.30	"obviously um there's the sort of financial element that they're charging for the services they provide so you know they're running it as a business as wellsoon a very sort of business operating level, its there to make money"
Population who attend		
5. Main Audience or Target Audience	10.19	"I don't think it has a target. I think itsmore reactive in that respect, it deals with whoever comesbut in my mind I don't think it'scertainly from a sort of advertising perspective or what people say to me about it, it doesn't appear to have a target."
- Tots	2.20	"but certainly the bulk of the children that I saw there were gonna be aged between 7 and 10, 11"

9.47	"I think you have to have got to them earlieryou know junior school time really to introduce them to these different types of thingsand get them to try it when they're less self-conscious I think."
2.15	"I think it's primarily aimed at probably primary school. I think it sort of tails off once they hit secondary school"
12.11	"I can see it's used by the better off parents or the working parents that can afford to do it and ideally you want it to be accessible everyone don't you."
2.37	"I suspect it's very white middle-classbut whether that's reflective of the catch-ment, the area as it is, but yeah it tends to be those sorts of children that you know go to nice schools and have parents with reasonable resources and yeah there does tend to be a"
5.40	"I mean itsits fair but its not cheap"
5.33	"Yeah I mean I'm sort of fortunate that we could afford it, but for some people it might be the critical thing, that if they feel that they're getting a better dealthat might make all the difference"
5.41	"tally that up over the week and you knowits not, its not a cheap option"
5.53	"if it's a very sort of sports focussed thing, then there are more expensive options around as well"
5.19	"I mean in some respects its good because you just get the children there that really want to be there, umbecause its not a childcare situation"
1.57	"Think I saw it on the website."
	12.11 2.37 5.40 5.33 5.41 5.53 5.19

	1.57	"On the internet and probably just surfing around one day looking for things that the children might enjoy and that's how I came across it"
- Target who aim at	1.29	"I think they're aiming at the children. Um yeahtrying to sort of get kids on the right road at an early age"
<ul> <li>9. External to Tribe within population</li> <li>Links with other bodies, schools</li> </ul>	9.6	"Perhaps if you linked it up better to schools that don't have all those provisions really, and all those opportunities, then you're plugging the gap"
- Team Bath Brand	3.21	"That because it's a sort of centre of excellence, and it has such a good reputation in terms of sporting activity"
10. Difficulties promoting sessions		
- Do it in school anyway	2.55	"the private schools tend to do their own thing to some degree because they've got resources, facilities and coaches available to them already perhaps."
- Schools Attitude	8.19	"but once they start school it gets trickier I think and you have to rely on the schools to provide exercise programs and get them interested"
Factors Affecting Children's Motivations		
11. Influence in decision making		
- Independence	9.25	"Rose I think has gone past that now and she'll go off and do it simply because she wants to do it"
- Parents Influence	9.59	"at 7 he would do it because his teachers told him to do it, because I told him to do it"
12. Influence from peers		
- Friends Attend	9.42	"No I think it would be much more difficult, once they get past sort of 10 or 11 I think, unless they're going because their friends are going, umit would be quite difficult to get them to try something they hadn't done before."
	9.20	"I think what makes a big difference is their peer groupbecause I've noticed with us, if you suggest going somewhere, and you say to them 'oh there'll be your friends from school there'they'll go, you know"

	9.27	"if you can say to him you know there's this week long cricket activity, do you want to do ithe'd hesitate unless its somewhere that he knows and has been already or if he knows he's likely to go and meet 6 or 7 friends from school there."
	9.32	"So its quite difficult I think for individual childrenunless they're particularly motivated or they have a particular passion about something, to get them to and try a new activity, its quite hard"
- Group Dynamics	10.3	"its that WHOLE dynamic of the teamplaying togetherbeing sociable togetheryou know its that sense of belonging that I think makes quite a big difference for him."
- Sociability to Stay	9.60	"he likes team sports, and I think he genuinely likes that camaraderie of being part of a team"
	9.59	"at 7 he would do it because his friends were doing it"
<ul><li>13. Development of self within the Sport</li><li>Personal Gains</li></ul>	2.47	"But I know my two wanted to do athletics because they actually wanted to improve and they're interested in that."
	6.44	"I think its one of the things that she can look at her peer group at school and say well you know, I can achieve in this"
	6.51	"for Rose it's about improving her skill level."
	6.46	"for her it's a motivation in itself that she just wants to improve, and it's "her thing"
<ul> <li>Focussed on sport</li> </ul>	11.28	"I suppose if you weren't as focussed as she is, then it would be very easy to drop out then"

14. Experience of Sessions	7.36	"I think we selected it because we felt it would be more focussed than the main Tribe activities"
- Enjoyment level of sport	1.47	"when the next holidays came along I'd say to the children do you want to do Star Track and It'd be oh yes please mumand so the balance shifted"
<ul> <li>Mixture of childrens ages</li> </ul>	2.16	"I know certainly with Rose she was very often the oldest in the classyou knowsometimes by some distanceum, it seems to be once they get past year 6 they sort of tail off and drift away."
	5.1	"the older ones, yeah the bars up and down all the time so it tends to slow everything up and then the younger ones get bored and so you've got all those sorts of challenges"
	4.59	"I think sometimes they were held back because of the ranges of ages"
<ul> <li>Impact on child's experience</li> </ul>	10.31	"And some children, particularly in younger ages, have difficulty concentratingjust will not engage and it spoils it for the rest of the group"
15. External Factors	11.24	"how could she possibly learn an awful lot in those situations"
- Conflicts with other sports	8.47	"she could do athletics on a Thursday but it clashes with ballet, and it's which one do I do? Which one don't I do"
<ul> <li>Access to a variety of sports in school</li> </ul>	8.29	"Its VERY sports orientated yeah, and you know all of a sudden you know, Rose arrived in year 4 at the Royal High and 'right you're going to netball club and you're going to hockey club', and she'd never touched a netball or a hockey stick beforebut, they got involved"
	9.12	"you take them to a different school that can offer that, and all of a sudden they go 'whoa yeah I'm gonna do all of this!', and its not because they hadn't wished to before, its just because the opportunity wasn't there."

- Workload at school	8.42	"certainly at Rose's age its competing interestsyou know they have a lot of school work to do, they've got lots of homework"
<ul> <li>Schools Attitude to sport in curriculum</li> </ul>	8.22	"They used to do PE but probably cos they had to as part of the curriculum"
	8.32	"he'd never played Rugby beforehe'd never played cricket, and suddenly he's at school, and this is what we do!"
	8.57	"as he's gone through school he's certainly become more aware of the importance of diet and health and I think they're getting all these messages, reinforced in school now"
- Amount of sport at school	8.35	"And so from that point onwards it just sort of took off, but it was more that the schools provided than that I had to go out and look for things for them to do"
	8.56	"They're very lucky our two because they can do so much at school. If they were having to do it all outside of school I think it would just be impossible really."
16. Image of Physical Activity	3.5	"Whereas at my kids schools you knowA LOT of the children will carry on doing it, so it'sits justit's taken as something completely normal really"
- Un-cool	9.45	"they get quite concerned about showing themselves up you know, 'if I go off and try this new activity and I've never done it before are people going to laugh at me if I don't do it right?'and that sort of thing"
- Lose interest	2.26	"I think you know there tends to be, you know that tendency to drop out of those activities as they get older"
- Other interests	2.30	"plus they're probably a little less interested at that age too, you know other things take over they just want to be with their friends shopping or whatever."

	8.43	"they get interested in other stuff cinema, shopping, boysthat sort of thingand it's trying to get the right balance for them"
Parents Motivation to Attend 17. Perceptions of Brand, Project, STV - Image, Prestige	3.28	"because of its reputation and as a sort of centre of excellence really you would hope that when you walk through the door the people there areyou know very entrusted, very enthusiastic and have a certain level of experience that perhaps you don't get in other places."
18. Compatible with Lifestyle - Childcare	2.27	"plus the fact that you physically don't need childcare for a 14 year old"
	2.30	"you know you don't have the necessity to organise childcare for them [when they're older]"
	1.21	"in terms of the holiday scheme, partly it's a sort of child care scenario"
	1.39	"Initially it was me. Me as a parent and hands up yes it was very much aI need some helpin the holidays I need some childcare organised"
	1.43	"it was providing some support for me in the holidays in terms of childcare"
- Routine, convenient	2.46	"the sort of more general Tribe activities particularly in the holidays, the sports combo thingstend to be more of a purely childcare situation."
	1.45	"It sort of ticked a lot of boxes really, so initially yes it was me saying hey kids why don't we go and try this"
	1.45	"it was convenient because it happened to be within 200yrds of where I was working"
- Timings of sessions	5.11	"if I needed childcare for longer than the Star Track hours which were 10 till 3, we'd have to book on sports combo at the beginning for sort of the first hour, and then they'd do the Star Track and then go back to the combo for

		the last hour and it just got messy (Laughing)and you know can't sort of everything run to similar times?"
	5.20	"it only becomes a childcare situation for people like me that can be flexible around hours"
	5.21	"but certainly it wouldn't cover your 9 to 5 working day (Laughs), and so you end up doing these funny sort of patches ofbut that's not offered as a package."
19. Structure of Tribe		
- Value for Money	7.37	"I think we felt for us we'd get in some ways better value for money because it would be, they'd be learning something as opposed to just being looked after for the day"
20. Interests of the child		
- Increase fitness levels	1.42	"I wanted them to do more than sort of sit in a room full of kids and watch videos and that sort of thing"
	1.44	"it was something constructive that they could do to get some exercise"
Structure of Tribe		
21. Offers something unique		
- Good Coaching	3.13	"the access to decent level coaching. Um you know that at Tribe the people that are taking the courses and instructing the children, have a degree of expertise"
	3.15	"but I think the hope is certainly with the people who ran Star Track, is that they are very interested in sport they're taking part in activities themselves and therefore they impark that sort of enthusiasm and knowledge, to the children, in a way that I wouldn't expect if they went to the local sports centre to pick up a course thereum to the same level I think"
	3.22	"you do get a sort of different level of coaching an interaction."
	5.22	you do get a soft of different level of coaching an interaction.
22. Tribe as a Unit		
<ul> <li>Distinguishing between different</li> </ul>	2.43	"I mean I don't know whether perhapsits slightly different because our

·		
aims 23. Organisation, running of Tribe		experience is more of Star Track organised by Tribe, and because that's very focussed towards athletics, whether that appeals to those who are already interested in sport, and the sort of more general Tribe activities particularly in the holidays, the sports combo thingstend to be more of a purely childcare situation"
- Weak Administration, professionalism	4.44	"certainly from a parent's perspective if you take your child to attend a course, you expect a sort of reasonably professional signing in sheet and that sort of thing, and certainly our experiences have been that sometimes the sheets just not available, so you write your contact details on the back of an old piece of paperor you know they've scribbled a couple of lines on it so it looks a bit like a formum but you know, that really doesn't instil confidence"
	4.49	"I think anybody new would think 'ooh, this isn't a very professionalum I'm entrusting my children, and you know I'm really not convinced that its organised in the way it should be'. So that could certainly be improved, umjust sort of making that sort of slicker and more professional really."
	10.43	"It needs to be runfrom an administrative perspective, perhaps more professionallyin terms of say signing in sheets, signing out sheets that sort of thing you know."
- Lack of organisation	4.43	"I think sometimes some of the organisation could be better"
	4.37	"I think perhaps bea little bit more proactive in terms of organising up front."
Communication 24. Links with Tribe Office		
- Communication with Tribe Staff	11.12	"Its not gelling. There isn't really any communication"
	11.16	"You know my kids enjoy it, but that's about as much as I can say."
- Communication with parents	3.44	"there's no sort of overt evidence that this is your coach and this is the standard to which they've been trained. It's purely through when I drop them

		off and pick them up, and chatting to them and you sort of find out what their interests are thenum, and what they're doing when they say 'oh I'm going off to a competition at the weekend', and you sort of pick up on it that way. Um, but that's it"
- Links with Tribe office	11.59	"but its more by coincidence than any formal links."
- Direction from Tribe Office	7.47	"Well I mean itsthere was no direction"
- Feedback, contact	3.55	"I think it would be nice if you had something saying you know, these are your coachesyou coaches this week will beum, and the names and a little bit about what they're doing"
	10.48	"I think better feedback to parents. Because I think when you don't get any feedback about what they've been doing, they've achieved, you come away with the perception it is purely childcare."
Implementation of Sessions		
25. Program Structure		
- Consistency between lessons	4.7	"And I had noticed particularly in some of the more obscure holidays, half- terms and things, if you did those sometimes numbers would be terribly low"
- Mixture of interests and abilities	6.29	"it can be quite difficult as well because you have a range of ages and abilities so you know that makes it quite difficult to be competitive without demoralising the younger ones"
	10.32	"You know and we've seen that beforeyou know it's a shame then, particularly if your child is there because you know they have a level of motivation and then other children are there, not because they want to be but neitheris there enough structure to keep them from being engaged throughout."
	7.24	"trying to sort of accommodate so many peoples interests, within one group of kids that range from 7-14you knowumso I think it does become

		difficult"
- Timings of Sessions, amount of		unioux
notice	4.40	"I started booking places in Februarybecause I needed to know what happening over the summer holidays. And if you don't know that the course is even going to run until a week before it does, and by that point you've lost them."
- Having aims and structure	10.55	"You know sometimes you get the feeling it's a bit too freeform you know, you know 'ok kids what do we want to do today?' whereas actuallyyou know I as a parent would prefer to see more structureI think that, that would give it a moresort of professional appearance"
	6.35	"you'd say 'well how high did you jump?' and it'll be 'well I don't really know because they didn't sort ofyou know"
Proactive and Reactive behaviour		
26. Active Promotion		
<ul> <li>Increase Awareness</li> </ul>	2.3	"Around the university yes, but not anywhere else"
	4.25	"I see less about it now than I used to, I think that's possibly the case as well. You know you used to see posters and leaflets around more, which you don't now."
- Proactive Advertising	11.12	"you know you look on the website and think ooh, ooh give that a try, but there's nothing really to persuade you to do it, its more the fact that you need it, so that's the reason you try it, then you think actually its okbut there's nothing to go outI cant go to a friend and say 'hey you've really go to do this, this is the really good stuff that they're doing'because they don't sell themselves"
	11.50	"And even Team Bath to some extent is purely reliant on you finding out about it, so yeahyou know I think with a lot of it we found that the schools provide so much for thembut if you want to do anything additional the owing ness is very much on you to go and find out about it."

- None exists	11.59	"they're lucky they probably don't really need those links to some degree because they've got very motivated kids and they've got pretty motivated parents that you know, if you need anything additional you go and find out about it."
- Don't know about advertising	1.58	"Because I hadn't realised prior to that, that they did holiday camps and things here."
	4.9	"I know about it because I'm here at the university but I don't think the publicity is out there to tell people about it."
	4.13	"all this comes through in leaflets in book bags and homework's and things like that, and there's never any mention of Tribe"
- Using athletes as role models	3.39	"Ben Rushgrove, who of course you then know from his sort of Paralympic successesso you know that sort of reinforces that, that belief that the people that are involved, you know areyou know able in their own right to demonstrate their abilities and you know"
	3.42	"I think that rubs off on the children then. Because I know certainly if the TV's on and Bens on, 'oh lets go and watch Ben on the TV, we know him!', and they really get a buzz out of that"
<ul><li>27. Feedback and Evaluation</li><li>Feedback, evaluation none or bad</li></ul>	3.54	"Yeah I mean it would be nice. Particularly I mean, not necessarily for the sort ofcombo type stuff, but certainly for things like Star Track"
	3.57	"that would be nice, that would sort of give you a sense of reassurance that you know it isn't a childcare situation that there is a little more and there's some expertise and knowledge in what the coaches can offer to your children."
28. Pathways		
<ul> <li>Opportunities for competition</li> </ul>	11.26	"for her I think it wasn't competitive enough"

29. Beyond Tribe - Responsibility of Tribe for progression	7.47	"I mean certainly in terms of what's provided and sort of overt pathways that are stated to you, you have to find that out for yourself"
30. Front Desk Experience - Slow payments and disorganised	10.45	"Umalso in terms of ease of booking, sometimes it can beyou end up sort of ringing a phone number, you get no replythat sort of thingit can, that can be a barrier I think"
Increasing Motivation & Participation 31. Incentives for Participation and Improvement		
- More Sports, wider choice	4.55	"sometimes if you only pick 2 or 3 days, you have to sort of take what's on offer on those days, and sometimes they'd like to do things that they cant do"
	5.7	"sometimes its just nice to be able to go and select exactly what you want to do, so that its more focussed rather than just being a childcare situation, and you do whatever you're given sort of thing."
	5.23	"You have to go and investigate that for yourselves and say well look, we actually only want to do the Star Track, but I need a bit more covercan we do this bit at the beginning and this bit at the end?"
- Rewards, incentives of children	6.12	"And actually what would be nice, particularly for the more focussed activities like Star Track where they're sort of working towards improvement in their abilities, is to have some sort of record of achievement for them you know"
	6.16	"not just for the parents but for the children as well so they can see the improvements that they're makingand I think that's quite motivating for a lot of kids"
	11.31	"You know I think you need that encouragement for kids, even toyeah you know they're not all going to be athletes, fair enough, but just to be able to

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		say to them 'look, this is how much progress you've made week, when you came on Monday you could do thisnow you can do this', you know justit incentivises them a bit"
- Discounts	5.27	"there's a staff rate, so members of staff can book their children on at a lower rate, but the child of a student doesn'twhich I thought was odd"
	5.50	"you can make concessionary rates available for people that can't afford that, those sorts of levelsum, you know particularly if you're trying to offer it as something that encourages exercise"
- Session Aims	10.50	"And if you went in and they said well today we're going to be working on this, then at the end of the day you get a report or you know, your child has a little sticker or something to say this is what I did today, you'd feel more reassured that there was a plan behind it, you know its almost likeumthem going to school and spending a day in the classroom and there being no lesson plan"
- Beyond Tribe	7.60	"You know they were encouraged, they were coached, they were given instructionbut there wasn't the underlying message of 'you could go on and do' you know"
- Target groups of friends	9.22	"I think it's about not necessarily trying to target individual children, but if you can target groups of children that already know each otherI think that seems to be the key because they go to a lot of these things, perhaps in the early stages, because they simply want to be with their mates"
	9.34	"however confident they seem on the surface actually underneath there's quite a lot of them do need their hand holding really. So as I say if you could get a whole group and say 'right, next week we're all gonna go off and try this'then they're probably more likely to do it."
32. Structure	10.00	
<ul> <li>Targets and Aims</li> </ul>	10.29	"My personal belief is I think they need structured activity, I think they get

		more from itI think unstructured activity there's too much scope for them for them to chose whether to engage or not"
<ul> <li>Suitable for different motives of children</li> </ul>	6.31	"and I understand all that, um so almost what would be better is for it to be for each child have their own record so they can make their ownyou know keep a log of their own abilities really, rather than being competitive within the group."
22 Automation of anniant	11.22	"Rose would have preferred to have umthe sort of coaching that's either more age oriented or level oriented or something"
<ul><li>33. Awareness of project</li><li>Advertising, increasing numbers</li></ul>	4.36	"I mean certainly I think advertising is something they could do better. Umin terms of improving the program"
	4.15	"that's an avenue they might want to explore in terms of advertising a little bit. Because there are some very enthusiastic kids out there but if they're not knowing that these things are happeningthenhow are they going to find out really?"
	12.2	"But I'm sure there are a number of schools that don't have those sorts of opportunities and you know its crying out for somebody like Tribe to go out and you know, run some holiday schemes at these schoolsrather than expecting them all to come up here."
	7.25	"whether it might be if they had enough children going, then you could split the age groupsand I think that would be hugely beneficial, but you know they simply in our experience haven't had enough children to be able to do that"
- Promotion	6.1	"and perhaps that's something that Tribe need to look at, is if they make it clearer the level of training and qualifications that their coaches have got, then perhaps people would view it in a different light"

	11.3	"if you go onto a lot of websites for clubs and things, like cricket clubs, and you look up the youth section and you can say 'here are your youth coaches, this is what they've done in the past'and again it gives you that reassurance that these people really do know what they're doing, and that they can add value"
- Creating a clearer image of Tribe	10.42	"Um yeahas I say firstly I think it needs to be better marketed, it needs to be made clearer what its about, why its there, what its intended to achieve."
	10.21	"I could be wrong but I haven't seen any evidence of that. They're not stated, its almostit's a pick list, this is what you can choose from, but there's no where, where it says 'this is more appropriate for children of this age who are interested in X', you know there's no guidance really."
	6.3	"particularly with the Star Track, you know what level of qualification have the coaches got there, as opposed to is it just Undergrads filling in their time in the school holidays?"
	6.10	"Yeah because you don't really know until you book on with a bit of a leap of faith reallybecause you don't know what the, how the day is structured, what they doand you know you rely on the children to tell you that."

## Table 38: Charted Themes for Tribe Parent – Participant Code P12

Summary Title	Position in Transcript	Example Quote
	Page - Line No	
Aims & Objectives		
1. Aims and Objectives Unclear		
- Not Clear	2.14	"with the sports combo I guess"
	2.9	"with the futsall I suppose"
2. Access to Sports		
- Making Sport Accessible	1.25	"to give children the chance to do sports that they might not normally get a chance to do, and to experience the fantastic facilities down there."
- Try a Range of Sports	2.10	"to get children to experience this type of football, than they normally get the chance to do."
	2.14	"the sports combo I guess is to have a flavour, the objective was to get a flavour of different things."
Population who attend		
3. Physically active or sporty		
<ul> <li>Physically Active</li> </ul>	1.45	"they are very active"
Recruitment and Awareness of Tribe		
<ol><li>Organised by Tribe office</li></ol>		
- Website	1.31	"I think I saw it on the website."
- Target who aim at	5.35	"Probably me as parents for childcare"
5. External to Tribe within population		527
- Word of mouth	1.36	"friends have used it say for tennis club and things like"

	1	
- Links with other bodies, schools	6.10	"But you know, they do a lotbut you know, the more links the better really"
- Team Bath Brand	4.22	"he sort of went 'ooh, does that mean I'm on Team Bath team!', he was very excited, so the team brand, the Team Bath brand seems to have an impact on them, its as if its something they want to be part of,"
	8.6	"they really respond to that 'oh we're going to Team Bath', so they really feel it""I think its good, children like that, children like being part of something that's important and recognised."
Factors Affecting Children's Motivations		
6. Influence from peers		
- Group Dynamics	2.56	"I think more what she's put off with is maybe that the boys would be rougher orI think that's what she was worried about yesterday, whether there were girls going to be there"
<ol><li>Development of self within the Sport</li></ol>		
- Personal Gains	2.16	"I think she really enjoyed it as she found that she was really good at it, so that boosted her confidence"
8. Experience of Sessions		
- Enjoyment level of sport	2.33	"they really enjoyed them, and I think were keen to keep doing those sports"
	2.31	"They really enjoyed itthey really liked it"
- Pressure to be competitive	7.28	"And to be told you're under target all the time in a sport…is not very motivating."
	2.56	"I don't think it's the competitiveness"
- Structure	3.33	"they were less impressed with the sports combo, I think they like, like a dedicated activity"
	2.40	"[they kind of preferred the structure?]Yeah I think so, yeahyeah."

0.40	"they [acceled] cheyred her that also could do that _ also probably hadn't triad
2.18	"they [coaches] showed her that she could do thatshe probably hadn't tried it before."
	it before.
21	"he's very keen on doing that, but again that clashes with the football he's
2.1	already involved in."
1.57	
	been quite keen to do that on a regular basis, but it clashes with horse
	riding."
8.6	"I suppose I've sold it to them about the Training Village and the
010	Paralympians will be going there and so I suppose I have raised it in their
	minds and you know to be part of that is really good."
6.43	"I think particularly for the age group you're talking about its peer pressure"
646	"she said her an another girl just wanted to run around the playground in their
0.40	new secondary school, and she said the other girls were 'oh, look at the boys
	they just run around they're so childish', and it actually stopped her being
	active"
7 45	"There's so many other thingsthere's homework, there's TV, there's
1.10	Playstation, there's all this sort of stuff that's fun and easy"
8.2	"I expected it to be high standard, and I think it is"
1.25	"UmI guess its childcarefrom my point of view"
1.51	"It was childcare really."
1.25	"it's really handy"
	8.6 6.43 6.46 7.45 8.2

	7.47	"I suppose if its easier for them to just sit and watch TV."
- Timings of sessions	3.18	"it's the timings of the classes like are 4-5 and unless you live and work in Bath and your kids go to school in Bath its very hardif school finishes at 3.30 its very hard to get to there for 4 o'clock."
	7.50	"I cant I mean I'd have to somehow get to school, to Chippenham, for 4.15 or 4.30 to pick up"
13. Structure of Tribe - Multi sport	6.19	"she doesn't enjoy PE particularly, so I would be looking for other things that would interest her outside of school."
Structure of Tribe		
14. Offers something unique		
- Facilities	8.16	"I think the facilities (at Bath) are fantastic, probably the best I've seen."
- Good Coaching	2.22	"I think the coaches are really good."
15. Tribe as a Unit		
- Aims & Objectives Different	3.7	"I think its very broadit doesn't seem to be very targeted actually"
Difficultion in creating o Club	2.9	"with the futsall I suppose I was clear that it waswith the sports combo I guess"
<ul> <li>Difficulties in creating a Club atmosphere</li> </ul>	3.27	"its not kind of the thing you mix really, you know it tends to be just drop off and pick up."
16. Organisation, running of Tribe - Weak Administration,	4.49	"This is very differentjust droppedso I haven't experienced having met with the other parents like you would over an hour session, probably be all hanging around together, maybe get a coffee or"
- vveak Administration, professionalism	3.42	"I didn't think that wasvery professional."

4.4	"its not as smooth as it should be I don't think."
4.44	"we're on that field you just turn up'. And I'm thinkingno, I'm sure you have to register, or pay, or I'm sure there's more to it than just turning upumso it would probably be much better."
2.34	"I think they felt the sports combo wasn't as organised, I dunno not as organised, the kids don't use words like that, but I just got feeling from them that it was a bit like that"
3.35	"[are you aware of the structure of Tribe?] No"
3.41	"I didn't feel it was joined upso its kind of presented as joined up, but actually when you got thereit wasn't"
2.14	"But with the others I don't know"
4.42	"it just shows a level of commitmentor even, you know if they say the coach has invited Adam to the things, here are the details, this is"
4.51	"so its very difficult, its reallyit's really up toyour only contact with them is like the receptionist and the coach."
5.20	"butI think the contact would help"
5.24	"say we'll get somebody to contact you by the end of next week, rather than promise it sooner and not deliver."
4.14	"I do get the impressionthere's not a huge welcome when you arriveand there's no welcoming the children"
	4.44 2.34 3.35 3.41 2.14 4.42 4.51 5.20 5.24

	3.8	"I think it misses the boat a bit actually, cos I mean I have been interested in tennis for quite a while and its not, you know I've asked a couple of times at the desk, and they say oh you have to look at the chart on the notice boardyou know there isn'tif I justcould've been handed a leaflet that would have been helpful. But having to, for me to then have to go in and then find the tennis corridor and the notice board, have a look, see what there was on offerthat's kind of asking a lot of people"
Implementation of Sessions		
<ul><li>19. Program Structure</li><li>Consistency in coaching</li></ul>	2.40	"with a dedicated coach that's going to teach them skills I think and they seem to get more out of that."
	2.24	"with the tennis and the futsall, they're proper coaches and they're teaching technique. Whereas sports comboumI wouldn't say unqualified people but probably not coach level"
- Consistency between lessons	2.22	"UmI've noticed a big difference between the events where you've got coaches and the events whereI suppose it might be its more childcare you've got "
- Length of Session	2.31	"I think probably the shorted days suit them, yesterday was 10-3, whereas the other ones they did were 9-5quite a long day really"
<ul> <li>Timings of Sessions, amount of notice</li> </ul>	3.49	"I didn't think it was that much notice to be honest cos people, you've got to plan your childcare quite far in advance, and I didn't think the February one came out that far in advance of the events."
	5.6	"I suppose the early notification and things that are happeningmaybe even a newsletter"
<ul> <li>Programs inconsistent between sports</li> </ul>	2.26	"so they don't cost as much, which is fair enough so you don't expect that, but the kids notice as well."

Proactive and Reactive behaviour		
20. Active Promotion		
- Increase Awareness	4.46	"I think you've got to make things easy for people and make them feel welcome."
	5.42	"from that point of view, not many young people showed up"
- Proactive Advertising	4.7	"I got an email yesterday saying that on the track event today there's going to be a Silver Olympic medallistwhich is fantastic, and maybe they only found out yesterday, but you kind of think'well, you should be shouting that from the rooftops!?"
	4.11	"I thought well you know, if you're gonna do itto have that experience would be fantastic. Um but I think that's something they should be shouting from the rooftops".
	3.9	"you know I've asked a couple of times at the desk, and they say oh you have to look at the chart on the notice board"
	4.17	"I've even had like a free trial session for an hour on something, and nobody's then followed up and said 'do you want to join?"
- Don't know about advertising	1.20	"I only started working here this year so, only really found out about it"
- Using athletes as role models	2.11	"It was marketed as being the type of thing that famous footballer have done in their time and it improves techniqueum and that kind of sold it to them, as kids, you know that it was sort of something a bit different and it would add to theirbecause they both do football training, so it would add to that."
21. Feedback and Evaluation		
- Feedback, evaluation none or bad	4.39	"Yeah I think it would be useful and its good customer service you know, if they followed up and said you know your kids were at futsall this week, did they enjoy it, what were the good points, what were the bad points"

- Feedback not taken seriously	4.41	"it just shows that they're interested and its not that they take your money
		and"
- No recording, pursuit of drop outs	4.35	"No, there's no feedback form or anything."
	4.30	"No follow up no."
22. Pathways		
- Opportunities for competition	2.60	"I don'tI mean I thinkI don't think they're out off by the competitiveness, probably my son would thrive more"
Increasing Motivation & Participation		
23. Incentives for Participation and Improvement		
- Made to feel welcome	4.47	"I don't feel welcome, I don't feel part of that and I suppose um"
	8.21	"its not as welcoming, I think more could be done."
	4.18	"you know there's justI just get the impression they're really busy with their athletes and theirand they don't, theysort of pay lip service to the public and kids andyeah. I don't feel it's, I don't think the kids are made to feelyou know they're part of Team Bath."
	5.26	"yeah its just being made to feel welcome or shown around"
- Rewards, incentives	8.41	"What would be nice is if they did want to do something there, I'd probably join the gym and I'd probably do something while they're doing their club."
24. Structure		
<ul> <li>Suitable for different motives of children</li> </ul>	7.4	"Well I think it'sworking out what motivates a child, and what interests them."
25 Awareness of project		
- Advertising, increasing numbers	5.13	"even to say like if you had a regular newsletter of up coming events or reminder of what regular events there are or when's a good time to join or"
25. Awareness of project - Advertising, increasing numbers	5.13	

- Promotion	5.27	"I think what they could do is when they have the children there, to say look these are the facilities we have"
	5.28	"cos it's the kids usually that have to pester parents, they go 'oh no do we have to do tennis here (Lansdown), I'd really like to do it(STV)', and I don't think that, I'm not actually getting that from the kids particularly"
<ul> <li>Using other sports, summer schools</li> </ul>	1.59	"And my son he was very keen, the coach actually asked to come along to their Saturday football training"

## Table 39: Charted Themes for Tribe Parent – Participant Code P13 & P14

Summary Title	Position in Transcript	Example Quote
	Page - Line No	
Aims & Objectives		
<ol> <li>Improvement         <ul> <li>Develop Skills</li> </ul> </li> </ol>	1.21	"basic football skills, teamyou know how to play as a team"
	1.24	"techniques, skills"
<ol> <li>Level of Enjoyment         <ul> <li>Positive experience and ethos</li> </ul> </li> </ol>	3.16	"you know they're very quick to make sure that it's a very positive experience and they're getting good sportsmanship kind of rules and ethos"
<ol> <li>Aims and Objectives Unclear</li> <li>Don't know</li> </ol>	6.32	"what is the objectives of it, what are we, where are we trying to get to, how does it move through what have you"
	11.3	"And its very frustrating sat there as a parent thinking wellwhy are you saying that, why are you doing this, why are you allowing that to happen?"
- Not Clear	1.21	"I assume form watching them its kind of "
<ul><li>4. Definition of Success</li><li>- Level of Enjoyment</li></ul>	6.55	"Cos the point Jake enjoys it."
- Improvement	7.2	"I've definitely seen progress, so that makes it a success because I can see the development I can see the progress."
	7.4	"so seeing some progression is important for me, to decide whether it's successful or not. So if he was still running around like a dog off a lead, then I

		would think well what is the point"
Population who attend           5. Physically active or sporty		
- Sporty	2.59	"I think its geared forits very sporty its very outdoors and that suits his personality"
<ol> <li>Socioeconomic Status         <ul> <li>Wealthy, Private School</li> </ul> </li> </ol>	2.24	"There is a price attached to it of course, so that's gonna naturally exclude you know"
Recruitment and Awareness of Tribe 7. Organised by Tribe office		
- Aim at parents	8.54	"my snap answer was yeah obviously it's aimed at the kids, its not aimed at me, he's the one running around right now, I'm not. Umbutif there wasn't some attraction for me if I didn't get the kind ofI dunno, if there wasn't a café if there wasn't other stuff for me to do in there I wouldn'twell I'd be less inclined to bring him here"
<ol> <li>External to Tribe within population</li> <li>Word of mouth</li> </ol>	1.33	"It was word of mouth for me, lots of Jakes friendsumcome here from school"
9. Difficulties promoting sessions		
- Access	8.50	"But I think any kind of activity in Bath, parentsyou have to take them unless you're going to go to the leisure centre, but at this ageyou know parents will accompany the child"
Factors Affecting Children's Motivations		
10. Influence in decision making		
- Parents Influence	10.49	"I might be giving him that, you know you need to goand I have articulated why I think its good for him to go here than to go somewhere else, and he'll have probably picked up on thatbound to I suppose"
11. Influence from peers		
- Group Dynamics	1.16	"My daughter used to do it as well but then she realised she was the only girlso she stopped"
	2.10	"she was more than happy before that and then she just said well I'm the only girl. And it was pretty much about the time she was going from tots to Tribe"

<ul> <li>Less Sporty</li> <li>12. Development of self within the Sport</li> <li>Personal Gains</li> </ul>	2.60 10.49	quite reluctant to do a lot of the activities"
- Progress from Tots to Tribe	1.16	"he started of in tots and moved up to Tribe"
13. Experience of Sessions - Structure	8.33	"You can't just open the front or back door and let them go like I used to you knowso it has to be more structured and I have to bring them here"
<ul><li>14. External Factors</li><li>Commitments at school</li></ul>	8.28	"I imagine there's more distractions, there's more pressures so they've got you know they start to get exam pressures and what have you and more academic pressures if you like, but they get more independence too"
- Amount of sport at school	4.31	"in 3 years he's going on to senior school, that is now, that is coming into ou think set about which school he's going to go to, and I would want a school that has a lot of physical activity or sporting opportunities"
	8.19	"I mean PE and physical activity is less important and time given in secondary school, what is it one or 2 hours a week? That's got to be the biggest most significant element"
	8.18	"I think if they're doing it in school you know everyday, or every other daythen even if they're not interested they're getting the actual exercise"
15. Image of Physical Activity - Un-cool	9.33	"it would be un-cool, the external influences would be that its un-cool to cycl later on, so will she want to do it I don't knowI hope so."
- Lose interest	9.16	"followed through and nipped in the bud and enhanced sooner rather than later, otherwise they're going to lose that interest and that motivation"

- Other interests	8.34	"when they get to 12, 13 you knowthey'll be able to go off with their friends and do different things, and you know they'll both begin to discover the opposite sex etc, etc so there'll be plenty more sort ofthere's much more attractions"
Parents Motivation to Attend 16. Perceptions of Brand, Project, STV - Image, Prestige	4.10	"I like the thought that it's Team Bath because of the excellent facilities and that's all that really comes into it"
- No relevance	4.9	"whether it's Team Bath ornot coming from a sporty background, it doesn't rank particularly high on my, my list of priorities"
	4.6	"personally if I thought it was right for Joshuaand I doand that's why I bring him hereirrespective of any of that stuff (elite-ness)"
17. Physical Environment - Facilities	8.56	"if there wasn't a café if there wasn't other stuff for me to do in there I wouldn'twell I'd be less inclined to bring him here"
	9.1	"Yeah and if the facilities were rubbish and there were no viewing areas and it smelt or something, then I wouldn't want to expose my son to that"
	4.13	"in terms of the facilities, umand I think that does sway it for me"
18. Compatible with Lifestyle - Routine, convenient	11.46	"when you look at the rest of the building over in the main blockit'sit's almost like they are worlds apart, and two separate identities"
	1.35	"and Saturday morning fits in with me and my kind of lifestyle so we just came through word of mouth."
	7.7	"giving us routine you know, he knows what's going to happen you know all that kind of good stuff."
	9.53	"its also what fits in socially"

19. Structure of Tribe - Not competitive	9.53 1.24 1.26	a Monday, well that's the worst possible night for me then I would look somewhere else, so umwhich fitted in better" "also I'm very keen that they don't, it's not competitive"
	1.38	"I was generally looking for a non competitive scenario"
- Value for money	2.28	"I think its good value or I wouldn't be here."
	2.28	"I don't think its massively expensive"
	2.60	"I think it was money well spent (Summer Camp)"
- Timings of sessions	9.57	"I think the timingthe timing of the sessions is important you know, 9.30 on a Saturday morning worksso obviously that's a reason for us"
	10.4	"know one of the inhibitors for him going into Team Bath Arsenal for me is that he'd be out till 7.30 at night, and that's a lot for a 7 year old because bed times gonna be getting on 8 o'clock"
- Relaxed Atmosphere	1.28	"it's a good atmosphere."
	8.6	"they both feel very at home here"
20. Interests of the child	1.28	"And it gets him out the house, and its good fresh air"
- Mix with other children	6.9	"they all get along as kids and its good that he gets exposed to kids you knowfrom other schools"

Structure of Tribe		
<ul><li>21. Offers something unique</li><li>Lack of competition within BANES</li></ul>	3.11	"And I've looked into other facilities like the leisure centre, you know the leisure centre is not really a comparison really"
- Captured both markets	8.48	"I think they've probably captured both markets haven't theyum you know they know the pester power of kids and if kids want to do it then for an easy life parents will say yeah that's fine"
22. Tribe as a Unit	8.52	"they're vying on both clients really"
- Sports all individual	10.56	"Now that you've said the swimming element is also under Tribe, see I find that a very different provision"
	10.15	"Because there's no continuity, you wouldn't know that
	10.17	"you can put a prefix on it but that's it"
	10.19	"No you wouldn't know that they are operating all under the same umbrella"
	10.21	"They might all wear the same t-shirts but I think that's it."
23. Concept of the 'Tribe Project' or other	11.34	"I don't even know why we haven't tried it, whether its because we go, we think of them separately as individuals"
sports - No concept of it as a Unit	2.50	"I'm not aware of other Tribe stuff, I'm not aware of the overall, I don't have a concept of Tribe as an overall, as athingjust individual bits which we delve in and out of"
	11.13	"Yeah it's totally different. They're almost likethat's why I don't see it as a unit"

	11.29	"Yeah you're right cos if it's the same company, you expect the same kind of approach and same standardsbut I thinkI dunnoI still feel as though we consume them as individuals"
- Awareness of other sports	2.57	"Yeah cos if you say Tribe to me I would just assume its Tribe footballand that's it."
	3.2	"But then I don't know is that Tribe?"
	5.51	"Jake does do swimming as well does that come under Tribe?"
	7.36	"she goes trampoliningI don't know if that's Tribe or not"
- Awareness of Tribe in general	2.46	"Well I don't know enough about Tribe generally, my exposure to Tribe has been primarily thisand I know this is where I could show some ignorance because I know they do other stuff in the sports centrebut I don't know if its Tribe or not so"
24. Strength of Brand - Brand Image	9.50	"I don't think we're wedded, personally I don't think we're wedded to the brand, so its just"
	2.52	"I think if we hadn't had a Tribe prefixI'm not sort of loyal to Tribe its not a brand or something that has any meaning to me."
	11.50	"sometimes the whole Tribal branding thing is more to do with the organisation rather than the consumers of it"
Communication 25. Links with Tribe Office - Communication with Tribe Staff	6.34	
- Lack of Interest	6.10	"it does feel as though we're a bit sort ofwe'll slot in wherever"

	6.19	"seems as though we're kind of peripheral to everything"
Implementation of Sessions 26. Program Structure		
- Consistency in coaching	3.13	"you know the relationship with the kids; they are very good at what they dothey get the skills across"
	5.29	"I think that's going to be a significant part of it because they [coaches] know what they've done on a week by week basis, and they know perhaps this certain area is still a bit weak"
	3.20	"What has improved, from my perspective is the continuity of coaches"
	11.2	"we've gone through 2 or 3 and it had been almost a waste of time. In my eyes."
- Consistency between lessons	5.13	"It's got a lot better, the continuitywith the continuity came more structure"
	5.32	"they definitely know their kind of audience and they know what they're good at. But then they also know their temperaments you know"
- Session Plans	7.3	"Even though there isn't a program"
- Having aims and structure	5.11	"what are the objectives of each session and how does it work, and do they know what the objectives are of each sessionit feels a little bit unstructured"
	5.19	"some structure and set of objectives like that and giving it some more structure. I think it would benefit from a bit of structure"
	1.58	"so this gave him some structure"
	2.1	"So this would give him some structure and some techniques and enhance

		the coaching I was giving him"
	5.14	"as a parent I'm going ok so whatwhat are we trying to achieve in this 12 week session. What are the objectives, what are we trying to achieve? Kind of very basic stuff"
- Organisation of Coaches	3.21	"it felt like as a consumer for want of a better expression, that whoever happened to be aroundthere was no continuity I mean we didn't even get to know their names"
<ul> <li>Programs inconsistent between sports</li> </ul>	10.56	"I find that a very different provision, and it very sort of pot luck and I mean Jakes had I think 3 different swimming instructors"
	11.27	"Well if it's all gonna be under Tribe then essentially they should have the same format"
27. Experience and ability - Lack or Mixture of experience	10.58	"I think their ability to teach a wide individual who likes towho isn't very good at listening, who likes to be under the water and splashingI think it takes a certain type of person to be able to sort of manage that"
- Unreliability of Coaches	5.8	"we were standing around for half an hour, but all that prompted me to thinking ok what are we doing, what's happening with this"
Proactive and Reactive behaviour 28. Active Promotion		
- Increase Awareness	3.53	"I'd had the opportunity to view what was going on in Tribe before he started upbut I don't know how you'd do that if you were just coming in cold of the street."
- Don't know about advertising	4.54	"The fact we don't know is the problem "
- None exists	1.47	"Yeah iv got some not for Tribe specificallyI cant remember seeing one for Tribe"

	4.51	"I wouldn't know. But the others in their publicity its not flagged up as Team Bath"
- Using athletes as role models	9.13	"think the general is you have to sort of look at the way its kind of advertised inand sold to them and how those positive role models you know again, things like the Olympics and what have you"
29. Feedback and Evaluation		
- Feedback response	5.41	"what was good was that they responded by email within days"
- No recording, pursuit of drop outs	10.13	"No. it was never followed up or anythingnobody from the Tribe tried to find out why she dropped out."
	10.15	"as a sort of marketing you knowif I had a client that dropped out I'd want to know why they dropped out"
- Parents ability to give feedback	5.48	"Personally I don't care, if I want to give feedback I will give feedback"
	5.50	"But I know that if I needed tothere are procedures in place that you can, because they do email you so you have that email contact so if I have a concern"
30. Maintaining Retention		
- Overcoming drop outs	10.18	"perhaps one of these guys (females football coaches) might have liked to speak to your daughter and say sort of 'come on, you're really good', and that might have just swayed it, it doesn't take much but, well"
- Taster Sessions	10.22	"she says 'oh can I play again', but she has these kinds of moments where she wants to play but I don't think she wants to commit to a full 12 week session"
- Forward Planning from Tribe staff	10.32	"I would like to be thinking at least the kind of administration are aware of that and are thinking about how to either feed in another trainerrather than it just being she's gone, we need to fill the slot"
31. Pathway		

9.27	"that competitive element in boys means that kind ofthat team stuff and winning is important to them so you know, that will be a motivating factor"
9.29	"but that's another winch which would act positively in keeping him playing sport and doing it. Whereas Katy is less competitive, and they fit the gender stereotypes if you like, so you know that aspect isn't going to drive her to keep going"
9.50	"if they can see the progression"
9.46	"Joshua's already harrowing me about Team Bath, Team Bath Arsenal saying can he join"
9.49	"how do you get from Tribe into Team Bath Arsenal you knowso if they can see the progression"
9.42	"when they're at soccer tots isn't it and they then see the bigger boys doing it, its thatsort of continuity and progression they can see. If they can see it then they're more likely to sort of go to that, or go down that avenue."
9.40	"if Jakes sees there's 14, 15 year olds doing it then he will aspire to be like them"
6.1	"Sometimes the financial aspects of it are very slow and you've got to keep haranguing them for it"
5.15	"think I suggested that they get certificates or awards or something like that"
3.27	"that rapport, it's invaluable"
	9.29 9.50 9.46 9.49 9.42 9.40 6.1 5.15

3.37	"they know who they are, what their qualities are, what their limitations areand they canalmostits not individual tuition but they can cater for their individual needs"
10.44	"they don't like change"

## Table 40: Charted Themes for Tribe Parent – Participant Code P15 & P16

Summary Title	Position in Transcript	Example Quote
	Page - Line No	
Aims & Objectives		
<ol> <li>Access to Sports         <ul> <li>Making Sport Accessible</li> </ul> </li> </ol>	1.25	"To encourage fitnessin sportsto promote sports for children"
	1.27	"In the local community, yeah the universitybeing involved with the local community to encourage youngsters to do sport""making it accessible I suppose"
Population who attend		
<ol><li>Physically active or sporty</li></ol>		
- Sporty	6.51	"Jack's quite sporty anyway and he just, he likes sport so wants to play more sports."
Recruitment and Awareness of Tribe		
<ol><li>Organised by Tribe office</li></ol>		
<ul> <li>Leaflets, posters in the STV</li> </ul>	1.39	"we have had loads of leaflets delivered about the holiday stuff."
- Through other sports	1.42	"he used to do the really tiny swimming lessons for the tiny babies, so yeah I would have seen the leaflets through that."
4. External to Tribe within population		
- Word of mouth	1.38	"I think it was by a friend when Jack first startedand people that we knew at school"
Factors Affecting Children's Motivations		
5. Influence in decision making		
- Parents Influence	7.8	you're not sort of like that you know you've got other things, you know it is hard."
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6. Influence from peers	6.50	"he has made friends with some kids from other schools and that, so he does
- Friends Attend		sort of say I like seeing so and so…"
7. Development of self within the Sport		
- Progress, become Competitive	7.1	"I think there's a lot of peer pressure, so I don't knowum so if you're in with a group that's sporty you're more likely to be sporty"
<ol> <li>8. External Factors</li> <li>- Schools Attitude to sport in</li> </ol>	6.2	"they would carry on doing it then wouldn't they, because the after school when they're sort of 10 or whatever, they don't want to do these things at school cos you've only got limited resources"
curriculum	7.1	"I think its quite good if the schools, if the schools promote inter school competitionsI think that's a very good idea"
	7.42	"But I think it is important for the schools to take a keen interest in sport, and as much else in the community as possible. Because they definitely, they definitely do impact"
- Amount of sport at school	7.2	"So I mean Tom's school is a sporty school so that's helped"
	7.47	"for some kids the school is the only place sport is accessible so if they're playing lots of activities at school"
- Tots to Tribe	1.8	"he's been doing it for 2 years, he was in tots as wellsoccer tots for about a year and this for a year."
	1.10	"he's been doing it for a bout 4 years, he started when he was about 4 just as he started school, so he's been doing it a long time."
Parents Motivation to Attend 9. Perceptions of Brand, Project, STV		
- No relevance	2.38	"you know its only 3.50, £3 a session soI sort of expected it to be what it is."
10. Physical Environment		

- Coaches	2.16	"I think the people who run it are very good and very enthusiastic, and they're very fairand very inclusive"
	2.21	"Yeah the coaches, yeahthey are the main point I would imagine"
- Facilities	2.28	"And also the locationit's the facilities generally"
11. Compatible with Lifestyle		
- Routine, convenient	3.33	"So its nice cos this fits in with our life as well"
- Timings of sessions	3.32	"This is a great timing, Saturday morning is a really good time for children to come and do something, and the fact that it's going into the holidays is great"
	5.16	"we could get a bus but it's a right old palaver after school"
	5.9	"If they're going to be up here atyou know 5.30 at night or something, we just can't get here so."
12. Structure of Tribe - Recreational	3.15	"it also teachers them, like you know my son isn't particularly good at losing, but he needs to learn you knowthat he's got to lose and be able to cope with thatso"
- Relaxed Atmosphere	6.40	"I just like the fact its quite relaxed and laid back"
13. Interests of the child	6.54	"Yeah football in a relaxed environment"
- Mix with other children	5.54	"I'm all for mixing in with other kids and not sticking with kids from your own school, I think it's nice for them"
Structure of Tribe		
<ul><li>14. Offers something unique</li><li>Recreational</li></ul>	3.14	"generally I quite like itits not overly competitive but at least they do have a good little game at the end"

6.41	"I quite like the competitive match at the end but you know, you get enough of blooming structure at school"
2.30	"and the opportunities as well, to do different things"
7.51	"And also the variety I think, because obviously there's lots of kids who aren't overly sporty, but if they can find that sport that they like, they could become more sporty"
7.56	"its having a variety out there"
5.46	"also you've got the professional teaching here"
4.55	"I think the main strengths are the actual people who are running it"
4.55	"But I think you know if you get to that ageyou know about 11 or 12 and they're not in sport and there's not any provision then they can go on a right downward sort of spiral."
8.12	[Do you have a concept of Tribe or the other sports?] "I'm not sure about that."
8.8	"I'm not sure what Team Bath means compared with Tribewhether or not it's the same thing."
2.51	"whereas the girls have always sort of seen it through, so they get familiar with the boys so that's good."
3.1	"Yeah I think continuity is good for kids, cos they get to know the kids and visa versa"
	2.30 7.51 7.56 5.46 4.55 4.55 8.12 8.8 2.51

	2.54	"I think that's one of the main things I feel is that the coaches do tend to change"
- Consistency between lessons	7.25	"I think they respect these ladies because they've been here longer, they've got, they know the expectations there's no prating around or misbehaving."
Proactive and Reactive behaviour		
18. Active Promotion		
- Increase Awareness	5.60	"maybe more promotion or something to get older kids involved or something"
- Don't know about advertising	2.10	"I've never noticed that."
19. Feedback and Evaluation		
- Feedback, evaluation none or bad	3.29	"[Do you have to be proactive about?] Yes, yesyes you don't get asked"
- Parents ability to give feedback	3.22	"I mean you could go and talk to one of the coaches they're very approachable"
20. Maintaining Retention		
- Taster Sessions	5.10	"Cos he would have quite liked to have done that and I think it's good to have drop-in things for teenagers, where they can just go if they want to."
21. Pathways		
- Routes within Team Bath	3.46	"There might be a follow on from this because it's a shame, when they come to the end of this, I think that's it."
- Opportunities for competition	3.8	"they do seem to have a little bit of a match at the end normally which is competitive, I'm not against competitiveness, but it's quite nice for kids at this age to"
	5.28	"at this age, if you've got a kid that's reasonable they like to be quite competitive."
	3.35	"as well at the end now and again if they had a match with somebody else, but it would be nice."

I		
<ul> <li>Opportunities for recreation and competition</li> </ul>	3.12	"It would be nice if they could generate a team maybe and play against other teams"
22. Beyond Tribe	5.29	"I'm all for encouraging everybody to join in and non competitive, but at the end of the day there's a certain amount of kids that thrive on that competitiveness and they want to be in a team and they want to play matches and stuff"
- Progression after Tribe	3.39	"both of our kids are trying to join Bath Arsenal and they've been on the waiting list for a couple of years, and there's no dad to teach them so they're not given that opportunity"
	3.41	"And seeing as its sort of appears to be linked to the University, which technically it is, it's a shame that a coach couldn't go from this to help them outyou knowcos that's more competitive"
	4.4	"Cos I don't think there's anything after this is there"
	6.42	"But maybe a little bit more as they get, if you were doing something after they were 10, then maybe that ought to be more structuredmaybebut I don't want it to be too much like school"
- Lack of Clubs	4.46	"that's one of his main things he wants to do, play for one of the Bath teamsit is frustrating"
	5.33	"I think it would be quite nice if they had an evening session like this"
ncreasing Motivation & Participation 23. Incentives for Participation and Improvement		
- Nothing beyond Tribe	3.56	"This goes on till 10 I think is the oldest and I really don't know what happens after that, whether you sort of drift away."

	5.51	"so it would be GREAT if they could do some sort of after school kick around."
	4.49	"It's a real worry that if he gets too old for this, and he still cant get in there's no enough places, he could end up giving up"
- Team after Tribe	4.13	"it's almost like the kids are expected to join one of these Bath Arsenal or Larkhall or whatever but at the moment we can't get our kids into it because there's not anyone there to coach them."
	5.23	"It would be good if they could move on from this age and there was something for them afterwards, after the age of 10 or 9whenever this one finishes, that would be great if we'd know that they could carry on doing somethingand I think they're going to be quite competitive, so I think it would need to involve a team, a team they need to be playing in."
24. Awareness of project	5.38	"we use quite a lot of the after school clubs at school, of sport, so you know if there was more provided in the University."
- Advertising, increasing numbers	1.53	"they used to have a pile of leaflets out by the reception, advertising all the camps over the holidays, and they don't have those anymore because they want you to look onlinewhich is a bit of a shame"
- Promotion	1.50	"Yeah they have stopped doing leaflets just recently and they want you to go online which I think is quite hard, because the format that they've got online I cant read on my computerthe timetables"
	1.55	"Because I do think people pick it up, find out about it through that. They have put it on the pin board down there but they haven't got a pile of leaflets you can just take home and then look through"

## Table 41: Charted Themes for Tribe Parent – Participant Code P17

Summary Title	Position in Transcript Page - Line	Example Quote
	Ňo	
Aims & Objectives 1. Improvement		
- Improve in Sport	5.48	"learn to swim and then to improvebadminton to learn his badminton and to sort of improve"
<ol> <li>Aims and Objectives Unclear</li> <li>Don't know</li> </ol>	1.15	"That's a reallyactually that's one of the things I would have wanted to talk
		about, is that I don't know."
	2.40	"just in terms of not really knowing a. what are they trying to achieve with this"
	4.39	"its difficult to know whether its aboutits about sort of participation and it really doesn't matter how well they do, so its shear healthiness or whether they are also trying to bring people thoughlike I say sometimes I think the way they've got it set up they potentially could lose people along the way with that."
- Not Clear	2.17	"And I think if they were CLEARER aboutabout their goals, is it participation as in healthy livingor is it about being competitive and bringing them on to being competitive"
	2.28	"so that's why you get very unclear"
	3.13	"I think it would be nice to know what they're trying to achieve, so I think there's that one, so its clear whether its participation or whether they're bringing them on or anything" 555

3. Definition of Success	4.37	"No and I still to a certain extent, I didn't have any expectations and I'm still unclear as to whatwhat the major focus of Tribe is."
- Having made sport accessible	5.4	"I think its successful from the point that they make the great sports facilities up here accessible for children"
Population who attend		
4. Socioeconomic Status	4.40	
- Wealthy, Private School	4.16	"So I think an awful lot of it would be cost"
	7.25	"I think an awful lot of them come round from the more sort of local to this area sort of schools, which by definition they're quite nice schools a lot of them, so I think there's a bit of a trend of that"
- Difficult to Attract Poor Children	4.10	"I think an awful lot of those parentsthe reason a lot of those kids don't get involved in things is cost"
- Cost of sessions	7.41	"I think potentially its cost prohibited, I mean even when they try and out something on within the schoolthere's often a problem with the cost"
	4.15	"I think there are sort of local ones that maybe be aren't so sports based but they're probably cheaper."
	12.32	"I think a lot of parents struggle with that"
	12.16	"but as I say for some parents that might be cost prohibited"
Recruitment and Awareness of Tribe 5. External to Tribe within population		
- Word of mouth	3.42	"I mean the swimming I think it was probably word of mouth"
	13.8	"I know of it up here because its word of mouth, and because I work with the sports department"
- Team Bath Brand	12.52	"I'm pretty sure in a funny sort of way that's why my son went 'ooh I want that

6 Difficultion promoting appoint		t-shirt'"
<ol> <li>Difficulties promoting sessions</li> <li>Access</li> </ol>	12.34	"I think a lot of the parents in those brackets don't actually, or maybe don't even access umtransport to be able to get up here"
- Lack of Club Atmosphere	6.37	"Well again I'm wondering about the kind of 'club' notion because I think what Solly does at the moment is he attends almost like a training session I suppose"
	6.48	"you literally kind of show up and you do that activity"
Factors Affecting Children's Motivations		
7. Influence from peers		
- Amount of Sociability	11.57	"I think kids need it around, I've said either a social thing or there's some reason for doing it"
- Less Sporty	12.2	"but what about the kids who aren't sporty, who aren't this and aren't that but you still want to hit that agenda then you find different ways of doing that."
8. Development of self within the Sport		
- Personal Gains	2.3	"he wanted to know how to play badmintonhe wants to know how to play it better"
- Focussed on sport	1.58	"that I then think that the time commitment became too much too quickly, so then I just think he thought I don't want to do this"
	1.20	"as he got to the sort of higher grades, and suddenly it had to be 2 nights a week or 3 nights a week and it was very stressed at the competitive at that point, and that became where he dropped it, which meant effectively that he kind of dropped swimmingwhich wasn't about that."
<ul><li>9. Experience of Sessions</li><li>- Enjoyment level of sport</li></ul>	12.13	"Kids its about its fun, you knowisn't itI mean its got nothing to do with kids about being physically fit"
- Pressure to be competitive	11.50	"ok they're not competitive, but so? You know, you're still hitting the

		physically fit agenda and you're not losing them."
	9.45	"but with the swimming I just think it was a shame actually because I think had he stuck at it so many hours, I think he would have continued."
	9.17	"It didn't appear to be, there didn't seem to be anything like thatbecause its all about achieving the next level, and achieving the next levelthere didn't seem to be that, and so therefore you kind of think well are they losing people too early"
	11.37	"Well it weeds out the kids, in a way, I mean the whole government initiative is about trying to keep kids healthy, so in that respect it's a bad thing because obviously you only get x amount of the kids who would do swimming at a competitive level, um but what happens to those kids that actually would like to improve and would like to you know, because there's a mid-range of kids that actually they would probably still be happy to go for say 2 hours a week improve their strokes, improve their swimming technique, and go up and down and have somebody to do things withand ok they may never reach competitive, but because they've got that kind of arbitrary barrier there, or it seems that there is, you're losing them and they're probably not then swimming"
	1.48	"he dropped the swimming, and it was purely because it was getting so sort of time intensive, and you couldn't seem to do it unless it became really time intensive"
- Structure	1.60	"they were going for a sort of 2 hour session, one hour was running track and running things, and one hourwhich becameits just too much, unless you're going to be competitivethen why do that to a certain extent."
- Coaching Staff	11.46	"its not like adults where they suddenly go 'ooh I think I need to be physically fit, lets go and run up and down the lane'kids aren't gonna do that you almost have to that in a structured way"

- Impact on child's experience	4.51	"I think they use a lot of young coaches, and I think that is really good, because I think he has a bit of a camaraderie with Ben and he really enjoys that, so I think that's really good"
10. External Factors	8.4	"there seemed to be some difficulty with them handling that [messing around], which by definition meant that your child didn't really get a look in half the time"
- Funnelling into 1 sport	4.22	"from about 5 or 6 until about 11 which he is now, he's been able to chose to do a variety of sports, but of course gradually as you get better at those sports I think then you kind of end up almost homed down into maybe one of them"
	4.25	"this is one of the things I think happens up here a little bit because it has that kind of competitive bend sometimes, hence why he dropped the swimming"
- Workload at school	4.27	"I think teenage wise I think a. the school work will suddenly start kicking in big time which means that an activity that they pull back"
- Tots to Tribe	1.7	"my son has been linked with swimming, through Tribe since he was probably about 4, he's not doing swimming anymore but he did, he went all the way up to almost the highest sort of levels of that, and he's also been doing badminton for about 2 years with Tribe"
Parents Motivation to Attend		
11. Perceptions of Brand, Project, STV		
- Image, Prestige	12.40	"I think it's perceived potentially a little bit that wayat times yeah[elite]"
	7.38	"a lot of those parents will go "University, eurgh not for us", and I think there's some of that breaking down barriers and sport's a great one for doing that"
12. Physical Environment		
- Facilities	2.14	"I think it's a great environment for the sport, I think the ability for them to

		come up here, use the facilities"
13. Compatible with Lifestyle		
<ul> <li>Timings of sessions</li> </ul>	10.56	
		at quarter to 9, 9 o'clock is when they've got to be at work generally, so you
		know you can only do ityou can only do, drop them there, you really don't
		want to be queuing."
	11.9	
		them that extra half an hour to kind of get somewhere else. Its quite a narrow
		time slot cos it tends to be 15 minutes, and its quarter to and if you're running
14 Structure of Tribe		latethey've suddenly vanished."
14. Structure of Tribe	7 40	"I find it vonv regeonable – for me"
- Value for Money	7.48	"I find it very reasonablefor me"
15. Interests of the child		
- Mix with other children	4.48	"one of the aspects it does do is because it brings kid together form a number
		of different areas and schools and things, its great for the sociability things
		and I think its good for the age group mix, so I think that is very good, and so
		I think he enjoys that really."
Structure of Tribe		
16. Offers something unique		
- Facilities	5.8	
		splendid as this facility, so that's good"
- Multi sport	12.14	"you have an opportunity to kind of take part in different sports"
	0.40	We are not the task We to block of a sufficient start of the block its and for the tW
	2.16	"they get that ability to kind of participate etc I think its good for that"
	2.14	"The overall strength I think a. they getthey get to do sport"
	2.14	The overall strength fulling at they get they get to do sport
	4.57	"there are a wide variety of sports that are offered so I think that you know
		they can link in and out of things, and I thinkyeah I think it is successful, I
		think it works well"

- Good Coaching	2.15	"and they do get coaches who kind of know what they're doing"
- Makes sport accessible	5.4	"I think its successful from the point that they make the great sports facilities up here accessible for children"
- Lack of competition within BANES	5.53	"he has tried an array of different things in Bathhe loves this one bestif you give him the choice of any of them he would come to this one."
- Captured both markets	12.11	"I think its probably a bit of both really. Because I think you hit the parents on theprobably on the physically fit agendayou probably hit them a lot on that, in terms of you know its really good that your kids do all these things, kids its about its fun"
<ul><li>17. Organisation, running of Tribe</li><li>Weak Administration</li></ul>	5.42	"I think administratively sometimes I, you can kind of see that scope for improving the administration, so I think those types of things you want to kind of say those things."
<ul><li>18. Tribe as a Unit</li><li>Competitiveness between sports</li></ul>	10.36	"they don't have to be too precious about it you know"
- Competitiveness between sports	10.30	they don't have to be too precious about it you know
<ul> <li>Aims &amp; Objectives Different</li> </ul>	2.18	"Is it participation as in healthy livingor is it about being competitive and bringing them on to being competitiveI presume it could be both but if its going to be both then you wonder whether certain strands need to change, like I say with the swimming it could be about participation and being healthy, but then you don't necessarily have to do"
	1.25	"Badminton on the other hand is doingthat's an odd one as well, because badminton is about improving in badminton"
	3.18	"did you know it was a badminton club, or did you know that its competitive"
	5.28	"so in a way they would have missed why that was the caseso you wonder whetherat that point my feelings on it were that they were very definitely, it almost felt like a weeding out process of people who had that kind of

		competitive mentality, so that you knowif you weren't prepared to do 2 sort of 2 hour sessions a week, or eventually 3, 2 hour sessions a week, well then really obviously you weren't very into thethere was no potential for just sticking at the 2 hours a week"
<ul> <li>Distinguishing between different aims</li> </ul>	8.56	"maybe it differs for different sports, I mean it might be that with swimming they're very keen to you know, build into the competitive edge and they're not about recreational sportand that would just be nice to know, you know maybethe summer schools are about recreational sport, and maybe something like swimming is about teaching them"
	11.33	"it would be nice to know what the focus was here, cos you could do both."
19. Concept of the 'Tribe Project' or other	8.43	"I was really interested in what Tribe isI'm very, you know its really I don't think clearor I don't even know if they've got a kind of mission statement about what they're trying to achieve or whatever."
sports		
- No concept of it as a unit	8.45	"The other thing is, its not clear sometimes what comes under Tribeyou know I'm not 100%, if you sort of said to me is there something where id go under Tribe, that's hockey, badminton, der, der, der, der, derI don't actually know that"
- Awareness of other sports	8.49	"So summer schools some of them I was like is that Tribe? I DON'T know what comes under the whole notion of it, and I DON'T know if they do external workI DON'T know if they link with schools, I don't know all of those things."
- Awareness of Tribe in general	9.57	"the only thing I would probably say there is that I think somebody probably needs to be in the changing room when the kids are changingthe only reason being is that I think that's where kids run a muck."
20. Roles and Responsibilities		
<ul> <li>Who takes responsibility</li> </ul>	10.6	"I mean I don't know what theywhether, whether they just expect parents to

		cover that aspect"
	10.8	"if I took him, I'm not going to take him in the women's changing room, and I cant go in the men's changing room. So its that aspect they possibly might want to have a little think about."
21. Brand Image	8.55	"just a clearer sort of brand, but a clearer what's under that brand, and a clearer maybe mission of what they're trying to achieve"
- Clearer Brand Image	12.46	"I think generally the Team Bath logo it's the same thing, what is it?"
	12.49	"And you kind of go well yeah but what is Team Bath, what does that mean? Because it was associated with top athletes, the top athletes might have been really delighted that that was their logo, and now to kind of spread it out amongst everybodyis it diluting it? Isn't it? What is it doing?"
	12.53	"But even that's not clear, I mean if you're talking merchandise for the kidsthat is so not clear"
Communication		
22. Links with Tribe Office		
- Communication with Tribe Staff	2.59	"You don'tI mean as I say, I don't think communication kind of exists betweenapart from the payment; you don't get anything other than that."
- Communication of bigger picture	3.59	"the only thing is, it did differ enormously because the other club you did actually find out a lot more about what they were doing and how they were doing things etc. So this one you're notjust not getting that same feel really."
- Communication with parents	10.24	"And that might be maybe they're not at that ability levelbut I don't know that!"
	2.60	"I remember with swimming that used to be quite frustrating because you neveryou were never sure whether your child was say moving up to

		another level or weren't, or until the kind of last minute, real last minutes and you also never knew whatif you were somebody who wanted them to move up to the next level, you potentially could have gone to a local pool and done things with them"
- Lack of Interest	3.60	"the trouble is you don't know that because they're not saying they need to improve this, or they need to improve that, and that would have helped a bit probably"
- Feedback, contact	11.28	"you're left with this 'ooh I don't really know what's going on?"
	10.40	"I wonder whether they ever want the feedback on what parents are wanting from it"
	11.33	"it would be nice to know what it was really [sports combo]"
Implementation of Sessions		
23. Program Structure		
<ul> <li>Programs inconsistent between sports</li> </ul>	12.56	"for some of the sports they do seem to do them, for some of the sports they don't seem to do them"
24. Experience and ability		
- Lack or Mixture of experience	8.7	"sometimes because the coaches are quite youngI think they struggled sometimes to deal with those issues."
Proactive and Reactive behaviour		
25. Active Promotion		
- Increase Awareness	13.9	"I do know a lot of people, and it makes you kind of feel that a lot of people do work up here or whatever that can be well aware of it"
	10.39	"you might have the parents who chose to find out, are they good at that, or whatever"
	12.59	"I think relating almost everything to the website all the timeis people frequently a. its not the best website to navigate and secondly I don't think

		people always read thatyou know there are lots of peopleagainwho don't actually do that"
	12.59	"cos you can get them with the kind of 'Team Bath' and then 'Badminton' or something or whateverbut its just so not clearyou know what can they buy what cant they buy"
- Proactive Advertising	12.54	"there's a very limited amount on displayobviously, and when you go to the website and I mean trying to find you know"
	3.20	"if you were in the mode you probably could go and surf and fiddle around and stuff, but I don't necessarily think people do and you could make it easier for people."
- None exists	4.13	"I mean anything like that they don't, they're not even aware that it exists"
	13.6	"I don't think I've ever seen any"
<ul> <li>Don't know about advertising</li> </ul>	3.36	"I do however think there needs to be some promotion within those schools, if they're not already hitting them. But there could be promotion and then parents can access how they want to access things really"
- Using athletes as role models	5.5	"I think kids often sort of see the possibly less interesting sports areas within the town or whatever, and I think the ability for them to use this from a young age means that they're sort of seeing athletes, they're seeing people"
- Awareness of Coaches abilities	6.3	"I have no idea if he's an expert in the field"
26. Feedback and Evaluation - Feedback, evaluation none or bad	3.14	"I think it would be nice if at some point, even if it was just at the end of the year they maybe do a very mini written type report or somethingjust you know it can even be done by email or something, but something that goes they've achieved this, this and this"

	2.31	"I often think they miss a trick there with promoting, cos you might find a child who is particularly good at one of the areas of sports comboif you then fed that back and gave parents say here's a club, or here's a thingythere's a big promotional thing that potentially you could miss there."
	2.41	"if you are there for somebody wants to know if you're improving or somethingyou don't, don't actually know that, and certainly I don't think he does and I do question him on it, and I don't think I know, so you've got no kind of idea where he is or anything"
	9.4	"I'd rather kind of know what they're teaching them."
	2.5	"is he getting better, and I think in both cases the feedback you don't get. Yeah so you don't, to be honest haven't got a clueyou know how well he's doing, how he isn't doing or anything like that and a lot of that obviously goes via the child I suspect, IF they get the feedback and kids are notorious for not actually feeding back to peopleyou don't know"
- No recording, pursuit of drop outs	5.28	"Nono, not at all. There was no, I mean we literally kind of left and that was it"
27. Maintaining Retention - Taster Sessions	12.15	"I think um taster session would be greatI think the notion of, summer school does it to a certain extent"
	5.9	"I think they have a good array of sports on offer, so I think kids can kind of dip in and out of those potentially. I think the summer schools are ideal, they're great because they do give a mix again of different sports and things"
<ul><li>28. Pathways</li><li>Opportunities for competition</li></ul>	1.26	"yet there doesn't seem to be the competitive side of badminton which actually you do want"
	10.17	"except that something like badmintonI'm perhaps thinking but why aren't

		they therefore being more competitive"
<ul> <li>Opportunities for recreation and comp.</li> </ul>	1.31	"definitely isn't a kind of link to a club where maybe if he wanted to be competitive he could be"
	6.58	"balancing the social aspect and having a competitive strand but not one or the other."
	9.19	"maybe if he'd been allowed to kind of go and, maybe it might have taken him longer to do it because he was only going for x period a week, but maybe he could have got to that and then he would have got over that hump"
29. Beyond Tribe - Progression after Tribe	9.30	"people are really driven and they go right through, but there MUST be people in that mid-range who actually, they may not appear as driven, but if you get them over the hump then they might have been driven."
	11.30	"there must be a place for getting them to continue doing the line swimming and getting them to improve strokes anyway, even if they're not being competitive."
	3.17	"I do think the link with something else you see, even if you don't take it up, that link"
	2.26	"with the badminton I mean it literally is only staying at the sort of one evening a week and that isn't then linked into any sort of competitive routesif you wanted to go that way"
- Lack of Clubs	10.21	"there's not anything where they're kind of putting them in matches in a more formal way, and they certainly don't appear to be linking it, or using it as a way of siphoning them, encouraging them to join the badminton club."
	1.30	"but you don't get this feeling that he's ever in a match or something and there definitely isn't a kind of link to a club"

- Visual Progression for children	10.30	"if they've taken the trouble to go to learn the badminton skills, they could go add an item of learning how to improve their badmintonbut actually the biggest improvement of badminton would probably be trying to siphon them through a clubwhere they maybe play a bit competitively"
- Responsibility of Tribe for	1.27	"so sometimes there doesn't seem to be the links withsay a club"
progression	10.33	"I mean I haven't got that, I haven't got the time to do it"
30. Front Desk Experience		
- Slow payments and disorganised	10.58	"Generally with any other walk of life, I mean take the cinema nowif you've taken the trouble to book, put it on a credit card and all the rest of it, you kind of expect not to gowander through"
	10.60	"You don't expect to have to wander through where they go, 'so what sport was it again?'let me look it up on a system again for half an hour, and then oh yesand it just takes ages sometimes"
	2.44	"The other things with Tribe arethings like the checking I used to be a bit of a nightmare, if you want to go to the administration side of it"
- Queuing	2.48	"so you're stood there in a line half the time, trying desperately to get into work, and yet actually they've already done all this"
	2.51	"I'm sure they could be doing the register this side which would be really quickand then they could give it to the people behind the desk who could then check it offI don't see why that cant be done"
Increasing Motivation & Participation 31. Incentives for Participation and Improvement		
- More Sports, wider choice	8.22	"I've noticed is the summer schoolthe choices are a lot less, they're a lot more limited"

	5.11	"sometimes with the summer schools their choices aren't very wide"
- Creating a social, club atmosphere	6.39	"he doesn't really get to know the other kids around him if you see what I mean. You think well in a way, why don't they base it around something more social as well, so you can build in other things around it."
	6.42	"Because the minute you do something that's more sociable as well as thatthey'd make that link with mates, they'd make that link with other things, and you think well that would probably do it."
	6.54	"and there's possibly a bit of a missed opportunity sometimes to get themI mean maybe they just need a bit of a rest, but even if you just got them in a group and had quiet chats or something, there's maybe something missing there"
	7.5	"I think there was that kind of social aspect to it again so maybe that kind of was working"
- Making it fun 32. Structure	7.13	"there's a part of me that thinks if you can harness them outside the school and make it fun, so it isn't within a school when you get half the class who really don't wanna do ityou know I think there is that link some how"
- Suitable for different motives of children	10.42	"some will be doing it because its great physical exercise, some will be doing it, they have kids who are really keen on doing it"
33. Awareness of project		
- Advertising, increasing numbers	12.17	"but I think having sort of maybe some events where they show case Tribe, they show case um thesummer school type notionbut they literally do it when they maybe invite kids up from various places and they do 'taster sports' but they use thatmaybe with parentsbecause I think that would work really well"

- Promotion	12.21	"oh your kid really enjoyed badminton, here's a leaflet on badmintonhere's this, here's that'and it gives kids that opportunity to try some of the stuff out."
- Using other sports, summer	12.54	"there's a very limited amount on display"
schools	5.10	"I think the summer schools would be a good feeder into quite a lot of these activities."
- Creating a clearer image of Tribe	8.48	"I think that might be something that would be really good as a kind of marketing thing at some stage"

 Table 42: Charted Themes for Tribe Parent – Participant Code P18, P19 & P20

Summary Title	Position in Transcript Page - Line No	Example Quote
Aims & Objectives		
1. Definition of Success		
<ul> <li>Level of Enjoyment</li> </ul>	4.45	"Because they enjoy it so much."
Population who attend 2. Parents Keen and Proactive - Want child to do well	6.35	"to get better instruction on a Saturdayso we're sacrificing Saturdayswhich to my husbands disgust, to try and get better coaching for her"
Recruitment and Awareness of Tribe		
<ol> <li>Organised by Tribe office</li> <li>Website</li> </ol>	2.4	"I got on the internet and was searching around looking for something which would give more than an hour"
<ul> <li>Factors Affecting Children's Motivations</li> <li>4. Influence in decision making <ul> <li>Childrens power in decisions</li> </ul> </li> </ul>	2.19	"it was definitely her decision, she thoroughly enjoyed trampolining and she wanted to do it"
	2.23	"it was here decision to start, to have a little bounce"
- Independence	2.33	"she doesn't need a friend to go and do anything, she's very independent."
	2.36	"just making friends on her way through; it doesn't matter to her coming somewhere new and doing something different"
<ul><li>5. Influence from peers</li><li>- Sibling Attends</li></ul>	4.45	571 "then the other two just followed on because they liked it."

6. Development of self within the Sport		
- Progress, become Competitive	2.18	"she changed over to here just because they would develop her quicker"
	2.20	"over time its gone from 1 hour to 2 hours, to 4 hours to 6 hours, and its always been her choice."
	2.24	"she just progressed, more and more time each week."
- Too Focussed on sport	9.2	"at the time Hannah just wanted to jack it all in [gymnastics] because she was so fed up"
	9.33	"the competitions in gymnastics were very, very focussed and all on one child"
<ul><li>7. Experience of Sessions</li><li>- Enjoyment level of sport</li></ul>	1.58	"the team was coming here to Bath Uni to have extra practice before competition, school competition, and Katie liked it so much that I asked do you have any hours here"
	9.26	"As long as Katie wants to do it and she enjoys it, that's the whole thing, as long as she's enjoying it"
- Recreational	9.27	"she's not being forced to do anything"
- Pressure to be competitive	9.34	"it was one of the reasons she wanted to pack it in [at another club] because it was too pushythey pushed and pushed and pushed and pushed until the point of like, I cant do this anymore"
- Mixture of childrens ages		
	5.15	"I think they need to have you know, tots should be with tots, the older ones should be with the slightly olderdevelopment squad should be development squad, and um evolutionor whatever they are, should be evolution. I really don't think that they should have mixed people on the same bed. And age groups, I mean they range from about 4 years old anything up to 17, 18, so it's a complete mix"

- Impact on child's experience	5.7	"she was covering for someone, and she had 17, 18 children on the trampoline, and it was likehow can that benefit any child?"
	5.10	"I mean she thinks it should be ALL the littlies on the trampoline. Well I don't think that benefits a child, I think they should be at the same level, or round about, to get any benefit"
	8.33	"Or to have different levels on the same trampoline as I was saying isn't very good for them."
	8.28	"You know some weeks I think is it really worth ityou the drive, the petrol, the parking, cos our three's just you know, competition now, they needyou knowgood practice. To have such little time on the trampoline is no good"
- Length of attendance	1.13	"A good couple of years"
Parents Motivation to Attend		
<ol> <li>8. Physical Environment</li> <li>Coaches</li> </ol>	6.33	"One of the reasons I wanted to change Hannah to a Saturday is I wanted to get better instruction than she's getting in the week"
- Facilities	3.4	"The facilities are very good"
	10.50	"the facilities were a bit shabby [swimming]"
9. Structure of Tribe - Cost	6.34	"I'm seriously thinking of dropping a session in the week to…financially I can't do all of it"
	2.43	"The other, I couldn't afford to keep them going, but mind you this is getting a bit steep."
- Value for Money	2.56	"It's cheaper than gymnasticsit makes a difference to me if I balance it out."

	2.54	"I think it's very good [value for money]"
<ul> <li>Relaxed Atmosphere</li> <li>10. Interests of the child</li> </ul>	9.32	"This is more relaxed, the competitions are more relaxed than the ones we used to do in gymnastics"
- Improve child's ability	6.51	"I'm happy in that I don't think thatthat she's gettingyou know she's progressing"
Structure of Tribe		
11. Offers something unique		
- Facilities	3.2	"The facilities are excellent. (Group agreement)"
- Recreational	9.47	"it doesn't matter what position you come, you're always praised, well done, well done, good team effortdid you enjoy it"
	9.43	"it was all the ones that could do it that were all really stuck up on a pedestal and the others didn't really matter, whereas here it is different, they justit is different, its much more relaxed"
- Good Coaching	8.56	"you see that they are so good, they really know what they're talking about, they really know how to do it because they do it themselves"
	4.51	"so progression is better here"
- Lack of competition within BANES	6.50	"If there was somewhere closer to home I would try somewhere else"
	4.54	"There's not many other clubs around as well"
12. Tribe as a Unit	4.56	"Where I live there's only one the other side of Bristol"
- Distinguishing between different aims	1.32	"Well I don't really know because I'm still confused about 'Tribe', 'Evolution', and the other things they do, you its all different age groups and stuff like that. So I don't really know"

13. Organisation, running of Tribe - Weak Administration	4.9	"There's a lot of discontent amongst the instructors as well, you know they say the management isn't very good, we know the management isn't very goodI think occasionally its ok."
14. Concept of the 'Tribe Project' or other sports	3.30	"You don't know the level of the teaching they're gonna get, until you get here"
- No concept of it as a unit	6.9	"I thought they were all the same [coaching level]"
15 Deles and Desnensibilities		
15. Roles and Responsibilities - Who takes responsibility	4.13	"I think it's just not knowing who's in charge, who's in charge and who's not."
	4.15	"Its not clear who's in charge and if there is a problem"
	7.6	"I think the staff should do that, I think its dangerous the kids put their own trampolines outhealth and safety."
	7.37	"You know should we, or even the staff as small as what they are, should they be doing it on their own? That's what the ground staff are for"
	11.20	"It would be nice if the coaches were a bit more disciplined. I can see there being an accident one day you know, and the parents are going to be in a pickle."
	11.12	"and if anything happenedwho's gonna get the blame?"
Communication		
16. Links with Tribe Office		
- Communication with Tribe Staff	3.56	"We know their names, but we wouldn't know to see them"
	3.59	"I didn't know who [Name of M1] wasI thought [Name of M2] and [Name of M3] run it whoever they are"

	3.58	"We wouldn't know would we if we'd seen them"
	11.50	"We don't know who they are, who we speak to"
	1.43	"All you get is the bill (Laughing)no all you get is a phone callit didn't make sense to me at all"
	4.15	"there's never no one here who's in charge to come down and talk to us about it, or if we've got any upsets about anything you know"
	4.33	"said we're gonna have to cancel all the drop-ins because there's not enough staffso, its very frustrating when you know, you come and it doesn't seem to be any different members of staff, or any less staff I don't know"
- Communication with parents	4.23	"Wherever they are, they just stay wherever they are and you never see them"
	3.53	"but no, you never see anybody from the office who runs it, they never come down"
	3.38	"After the first hour there was no instructor againbut we wasn't told thisso you know I come all the way from Chilcomptonand Keynshamand you know its not very good communication that."
	4.17	"I've turned up, but why didn't you tell me you know"
- Links with Tribe office	3.30	"And that was my own gripe was about the other week, because like theythey cancelled one, they didn't say that it was cancelled"
	11.2	"it is a lot of money and you just hand your card in and there is goes, and you just hope it all goes well for the next 3 months and there's no hiccups along the way"

	1	
- Lack of Interest	8.49	"but it was [other club] justit was organised, it was structured. The others had direct debits every month, and you pay it very month and it just comes out your bank you didn't have to think about what I owed and when in owed it, you knew who was in charge; you knew who your coach was"
	1.46	"You show an interest, you want to enrol your child into trampolining, they'll say if they've got space and you pay the bill and that's it."
	10.57	"You know I think considering we pay so much, to bring our children here, we don't even know who they areif they could come down"
- Feedback, contact difficult	4.22	"there isn't no instructor, no one come down and explain why, you know I'm so sorry we'll give you a refund for the hournothing like that at all"
	6.54	"Cos the kids sometimes they don't know whether they're coming or goingthey (Tribe) don't care really."
	6.38	"It's awfulits awkward"
	6.44	"cos I'm not a very sort of outspoken person and say alright you know"
	9.6	"and of course that's why its awkward for me, it's a difficult position"
Implementation of Sessions 17. Program Structure		
- Consistency in coaching	10.31	"And coaches just focused on what they're doing"
	10.32	"its just hopeless you're there to teach, get with it, and show them what they're doing"
	6.24	"The good ones they are full on, they are 100%"
	6.60	"Because it doesn't matter on their grading of the coaches, because they don't get paid per level they're on, they get paid the same, if they get paid at

		all. This is the difference, some do it voluntary, I think Pete does it voluntary, he doesn't get paid."
<ul> <li>Consistency between lessons</li> </ul>	6.60	"You know they are a separate class because they are being developed, and yet Lauren doesn't tend to agree with that she'll just shove anybody on any bed to make up the numbers you know, but you can't do thatyou can't keep doing that."
- Coaches Motivations	7.47	"he don't get paidso that's like he does it because he wants to do it and wants to teach trampolining, and he's very good at teaching trampolining"
	3.5	"you know some of them aremoreits their life you know, they LOVE teaching trampoliningand you get the feeling other people are here, because they work here"
	3.9	"Find them just sat there texting instead off watching the child"
	6.30	"Whether the others are here for pay I don't know."
- Organisation of Coaches	6.1	"I think it should be instructor that's suited to the ability of the child, of whatever group they're in. The best instructor with the best lot, and the next one down, the next one down"
	3.28	"You know the children are keen to come, we're keen for them to come, you just don't know."
	3.32	"they just said that there was no instructor for 2 hours, if you wanna turn up you can turn upso it's a bit like a free for all really with no instructors"
	3.23	"I think its very disorganised, its not straight forward, you don't know what you're going to get"
	3.26	"or who you're going to get."

- Mixture of interests and abilities	5.35	"Age and ability, you know you could have like a 4 year old who's as good as any of ours are, but you know my daughter is far behind these two, but she gives it 100%, some of them just come to bounce and play around."
	5.41	"Some are here to take it seriously, like ours and actually want to go further with it, so you know they're keen they're eagerthat's why they do it so many hoursand others are here to just mess about, have a little bounce and then go home"
	6.58	"like little ones or whatever, or even older ones you know but the ability isn't quite what theirs is and they get frustratedits like we're in development why aren't we being developed for, why are these on with us when we're doing development?"
- Having aims and structure	8.41	"I suppose it's a complete shock coming to this cos it wasthis is what the place is for [STV], just get onand its not because it's a different sport, but it was justit was organised, it was structured [at other club]."
<ul><li>18. Experience and ability</li><li>Lack or Mixture of experience</li></ul>	6.37	"I think they are better on a Saturday, that may be personal but I think you'd probably agree"
	3.4	"some of the instructors are excellentsome of them not so excellent"
	6.4	"They're different grades as well you see, the instructors some of them are level 1, having said that we've got one in there now who's level 4, but I wouldn't rate her as a level 4 personally"
	8.8	"I just think some of them are good, some not"
- Unreliability of Students	10.37	"They're 21possiblythey don't have that commitment to children, I don't know."

	3.18	"Well this last term it's been difficult because a lot of the instructors have gone home because they work here, they're students you see, and um, because we come so many times a week, some of the lessons have been cancelled, we turn up and for the first hour there's no instructor at alland the children are just like left on the bed."
Proactive and Reactive behaviour		
19. Active Promotion - Personal Recruitment	F 40	"I think they and them, if they've get notential, they will ack them to do
- Personal Recruitment	5.49	"I think they spot them, if they've got potentialthey will ask them to do more"
20. Feedback and Evaluation	9.3	"Lauren said often gymnasts are very good a trampolining so why not bring her along and we'll try it out"
- Parents ability to give feedback	6.46	"I also don't agree with pay up and shut upyou know if we've paid for this, surely we are entitled to a sayand that is something we are not getting until now"
21. Maintaining Retention		
- Forward planning from Tribe staff	3.50	"[is there the ability to give feedback?] No, no"
22. Pathways	<b>E E C</b>	"Mall the set a good cooch for Katia annual and laves har, then that's it
- Routes within Team Bath	5.56	"Well I've got a good coach for Katie anyway, she loves herthen that's it she leaves for good, and I said well what's going to happen thenwe don't know?"
- Opportunities for recreation and		
competition	4.40	"If I was just bringing Alice along then obviously I would have leftyou know if I was a mum of a child like that we just wouldn't have come"
23. Front Desk, admin Experience		
<ul> <li>Slow payments and disorganised</li> </ul>	9.29	"If she wants to she does it, if she doesn't she wont. It's available but if she doesn't want to do it she won't."
	11.52	"Sometimes when we get here, and we've paid, they say oh, no you haven't paid and you have to show them your receipt, and it takes so long to get from A to B with the money. I always have them on me now just in case. It just

	10.15	"That to a child is a huge thing"
	10.9	"I don't know why, but it gives all the children something to do, to focus on, something to work to at the end of the day"
	10.8	"Well I thought they did that here and I was really shocked to find they didn't"
Increasing Motivation & Participation 24. Incentives for Participation and Improvement - Rewards, incentives	10.1	"it would be nice for the younger ones like Alice and Isabelle, that are not obviously developed that much to have a badge system, they do it in other places, like you have a badge that you can work tooa badge system for the younger ones"
- Lack of knowledge or awareness	11.47	"And another thing, when we come to reception they don't even know anything, who they are, I mean we come every week, you'd think they'd just sort of know."
	10.46	"I had a bit of a dispute about money cos they kept saying my direct debit was set up and I wanted to cancel itand they kept asking for money so I write them a letter to say I wasn't prepared to pay, its sorted I think I haven't heard anything from them since, so it wasn't a very good experience"
	12.4	"Yeah when you see people in the queues and listen, and then you think oh so it's not just me then, its other people."
	11.57	"And they'll say she's not on the list, she's not on the computerdo you want to phone the office? So I'm stood on the phone to [Name of M2] at the front desk!"
		seems to take very long to get from [Name of M3] and [Name of M2] to the desk."

	9.50	"Apart from they didn't get the certificates after the last one (Laughing), that was something Hannah said was she never got anything, she didn't come anywhere, but she didn't get anything to say that she'd done it, and that to her is a huge psychological thing"
	9.54	"A certificate, or just a piece of paper to say"
25. Structure - Structure and organisation	10.29	"Just more structureI really would like more structure"
	5.31	"Have a bit more structureorganisation"
	6.52	"I just think if it was a lot more structured and straight forward it would be betterfor everybodyfor the kids, for the coaches, for us, for everybody"
26. Awareness of project		
- Advertising, increasing numbers	8.14	"No but I don't want them to advertise itcos you'd get more people wouldn't you."
- Using other sports, summer		
schools	1.51	"Rosie first came as a drop in sessionshe kind of spotted Rosie's talent and suggested she come a bit more and join Evolution"
- Creating a clearer image of Tribe	1.32	"Well I don't really know because I'm still confused about 'Tribe', 'Evolution', and the other things they do"

#### **Appendix S: Direct Observation Field Notes**

# 23/04/09: Observation following first meeting with M1 10.30 am Sports Training Village

Children who attend are aged between 4-18 yrs, and the project runs all year, but 6 weeks off at the end of summer. There's no recording of "stats" of children who attend, i.e. whether they are typically active since tots, or whether new to physical activity. Ethnic minorities are very small. Tribe ranges all around BANES, and in places like Trowbridge, ethnic minorities are almost non-existent. Some sports are more popular than others, athletics for example does ok each year, but doesn't have a massive turnover and they don't know why. Also, sports such as trampolining are popular with children who have tried all other sports and did not like them. Although STV has excellent facilities, the fact it's associated with "Team Bath" can have quite elite associations, so in that respect it can/could put people off.

The project is linked with every school in Bath and the coaches liaise with school PE teachers. Most schools linked to Tribe are supportive; every school in Bath is linked. Some are more supportive than others in uptake. Tribe is linked to local clubs, so idea is Tribe is used as a "taster" for sports, which children can then take further and join a local club through Tribe. The aim of Tribe is not to recruit physically inactive children; it's to provide facilities for children who want to play sport. Some parents stay around (socialise), others leave. Often the age group 12-14yrs is more difficult because that's when they can opt to leave and join clubs. Interestingly the age group 12-14yrs is often when they drop out, (could be because of puberty, or because it is when you join a club).

They don't know why some sports are less successful than others (i.e. Athletics), when they are linked to an athletic club etc, so the set-up is there for the children to progress. It may be that coaches are primarily doing it for the money, and that may be the case.

[Name of Manager 1] is interested in this case study as nothing has been done before on it, no evaluation, and they would be interested to what I find.

#### 15/07/2009: My own observations about understanding the Tribe Project

I myself struggled to fully understand the concept of the Tribe Project and took some time to become fully clear on the concept and branding of it. The organisation within the Project is confusing, and the branding and promotion of the Project does not provide a clear picture of its structure, content, and ethos.

### 10/09/2009: C5 Reluctant to take part in an interview – (Via Emails) 2.30pm

Interestingly, when [Name of Coach 5] was approached for an interview, she was the only person reluctant to consent. It took several emails, detailing what I was doing, why I was doing it and what [Name of Coach 5] would need to do to take part. [Name of Coach 5] made it clear to me that she was reluctant to take part because she didn't feel she knew much about Tribe, and could therefore contribute to the research. In talking to her, she made it clear she hadn't been part of Tribe long, and didn't want to talk about the Project, as she didn't feel part of it. This I think is important as an overall impression of the structure of the Project. It merely goes to confirm additional evidence that the Project is fragmented and certain domains and individuals do not feel included. Feeling unable to contribute information to research about a project she was a fundamental and quite large part of, emphasises the incongruence in the program and lack of unity, knowledge and communication within it.

### 31/10/2009: Observation from M2's interview Sports Training Village 11.15am

[Name of Manger 2] is quite contradictory as she says how they have routes after Tribe, however when speaking to coaches and parents there is little evidence to support this. [Name of Manager 2] reported that it was the more 'sports minded ones' that are passionate about their sport that tend to stay, but that could be because there isn't the opportunities to remain and play sport recreationally. You're almost siphoned into competing, so those who aren't interested in competitions...drop out. Tribe seem very reactive to feedback, as opposed to proactive. [Name of Manager 2] said about how if they don't get enough people asking about something, then they wont put it on, as the implication is not enough people want to do it. [Name of Manager 2] assumes that if they don't get the numbers, it's down to lack of interest. As a project, they don't allow for feedback from parents, and advertising is limited, so how can they possibly make this assumption.

### 31/10/2009: Observation from M1's interview Tennis Audio Visual Room 1pm

[Name of M1] mentions that when children drop out they go to another sport or into a team, however they don't record or pursue drop outs, so how can they make that assumption. [Name of Manager 1] also tends to make the excuse that feedback and

promotion doesn't get done because the time restraints and costs involved are too stringent.

#### 31/10/2009: Observation from M3's interview Sports Training Village 12pm

[Name of Manager 3] remarked how it you type in "children's physical activity" in search engines, they automatically come up, yet that isn't true for generic search engines, and if it were true for the Team Bath search engine, then you would have needed to have gone and looked there in the first place, again needing to be proactive.

[Name of Manager 3] mentions how the objective of Tribe is for it to be a positive experience of sport, so the primary aim is really at tots, to condition them that sport is a positive thing. [Name of Manager 3] says how they keep trampolining open for girls over 14 because the demand was there, and it's all recreational, yet why can't they do that for other sports? Perhaps they don't think there's a demand, but it may be that people just haven't made them selves heard, or been proactive enough to so something about it.

A contradiction with [Name of Manager 3] is that she says the STV is better than others places, great facilities and coaches etc, yet also goes on to state how parents therefore have really high expectations of the STV and Tribe, and in response to this says that in the STV they are the same as any sports centre. Therefore, in this sense she's rejecting the parent's exceptionally high standards of what they expect regarding the STV and Tribe when Tribe is under criticism, yet still believes the prestige of Team Bath is renowned and the STV better than local sports centres when it comes to promoting who is best.

# 05/11/2009: Observations from Tribe Managers interviews in general. Bath University Library 10.00 – 12.00pm

There seems to be a real lack of knowledge about the other sports included in the Tribe Project. [Names of Managers 1, 2 and 3] really only refer to football and trampolining when they talk, which shows their lack of awareness of the other sports in Tribe. The omission of a reference to any other sport within the Tribe Project suggests that they may not have equal awareness of every sport delivered.

They acknowledge that for tots the decision to attend Tribe is completely down to the parents, and once they're 10+yrs, it's more the child's choice, so Tribe need to decide

whom they're aiming at. Is it tots or children over 10yrs, or both? This would affect the marketing of the project.

[Names of Managers 1, 2 and 3] all talk quite negatively about parents using Tribe as childcare, when really that should be an opportunity to inspire them. If they want Tribe to provide sports opportunities for all children, this is a perfect chance to target those children who don't have proactive parents, keen on getting them active. Those types of parents would already have been in contact, and these children are in fact more vulnerable, or possibly in need of a program like Tribe, as they don't have the parents to sort it out for them. These children however attend for different reasons (childcare), but potentially a market to convert. This highlights the reactive as opposed to proactive nature of Tribe. They want and support the parents that approach them, but are less keen on the parents who use Tribe for reasons other than for the love of sport, and don't wish to welcome them. Basically, they assume those parents who approach Tribe fit the criteria they want.

The ethos of tribe is supposedly to inspire children, making sport accessible and a positive experience. They are however unenthusiastic about children that come to Tribe that aren't keen on sport (holiday camps typically). So essentially, they want to give children a positive experience of sport, but are un-receptive to children who may have already had negative experiences. They seem to cater only for children who have had no experiences of sport, or are already keen on sport. This doesn't really accommodate their aim fully, and is completely contradictory. This is probably why there is no clarity with the aims and objectives for parents.

Because [Names of Managers 1, 2 and 3] are quite removed from the actual implementation of the sessions, it is clear there is a definite mismatch of what they think exists and what actually exists. [Name of Manager 2] seems to have the most contradictory understanding of the Tribe project in comparison to [Name of Manager 1], [Name of Manager 2] and the other coaches. This has lots of implications for the implementation of the project, as essentially the administrators are detached from the implementation of it so this affects the effectiveness of it.

# 31/10/2009: Observations from Tribe coaches interviews in general Sports Training Village 9.00-11.15am

Tribe coaches attributed the reasons for dropouts of the Project as a result of external influences out of their control.

[Name of Coach 5] also suggested this, as if enough people didn't complain or get in touch with them, then they assume there's no problems, or any interest there. This is a gross underestimation of parents, as only a very small proportion of the population will be motivated to contact Tribe, when in actual fact could quite likely have the feedback there, but just chose leave instead.

The reasons parents leave is also considered as external to Tribe, which they can't be in control of or take responsibility for.

A lot of the coaches made the point that although the project is supposed to make the sport accessible for 'all' children, the fact it charges immediately will exclude some children. Even though Tribe is being used as a childcare situation, and it seems like a negative thing, it can certainly lead to uptake, and doesn't necessarily need to be a bad thing. Tribe should recognise the advantages of parents using it for their childcare, and try to make it work in their favour.

Aims of the project can seem contradictory. There is no consistent, mutual aim between all 10 sports, and their objectives, definition of success and opportunity for pathways are different. Doesn't make the Tribe Project feel united as one complete program, but a series of small programs, with somewhat conflicting methods. They say the aim is to make it accessible to all children, when by definition they charge for sessions, they don't advertise in all available places, they dissuade children from poorer locations (tennis), and only link with certain schools. So inevitably, they can't be making it all accessible for all children. In addition, times of sessions mean that parents who live outside of Bath couldn't get there anyway.

# 15/10/2009: Observation following interview with Tribe parent P17, 1 West University of Bath campus 3.15pm

What is apparent is that parents have said in order to improve Tribe they should do things like 'taster days'. Ironically, this is in fact something Tribe already do, however the fact the parent suggested it as an idea, shows the strength of awareness of Tribe.

# 05/11/2009: Observation following interview with 2 x Badminton coaches, C8 and C9, University of Bath Library 2.45pm

The Tribe Project sessions were arranged to commence shortly after the closing time of most schools. Although the Tribe Project is described as being available to all children and adolescents within BANES, the timings of the sessions appear to restrict children who may not live in close proximity to the University of Bath. This is a major barrier to the potential reach of the Project as the timing of the Tribe sports sessions may prevent participation from individuals living in further away from the University of Bath.

# 26/11/2009: General observation from interviews with Tribe parents University of Bath Library 3.00pm

No clear concept, brand of what the Tribe Project is. I myself took some time to fully understand the structure of it, so as an outsider you have no clue. Of the 10 parents, 5 of them I approached and 5 approached me, and yet they all gave consistent feedback about the Tribe Project. Some were doing sports within Tribe, yet had not awareness they were part of Tribe. Very much relies on the parent seeking out to do the activity/holiday camp. This invariably attracts proactive parents because advertising doesn't attract all types of children and parents, so only the keen parents pick up on it.

The parents I spoke to had all left a sport, had had no follow up, and it wasn't an external reason it was in act due to the session.

During the interviews, it was apparent that many of the Tribe parents didn't know what was meant by the word 'Tribe' during the questioning. The Tribe parents understood what the question when it referred to a specific Tribe sport, however importantly the use of the word 'Tribe' was unclear to certain individuals. Secondly, it was noted that although many of the Tribe parents' children were in fact attending more than one Tribe sports session, they were unaware that all the sports were delivered as part of the same Project. Despite their participation in the Tribe Project, it was apparent that several parents had no awareness they were part of "Tribe". During interviews, the Tribe parents often referred to participating in the specific sport, without making a connection to the Tribe Project. Many Tribe parents admitted following the interviews that they didn't know there were other children's activities at the University until they took part in that interview.

A lot of the parents made the point that although the project is supposed to make the sport accessible for 'all' children, the fact it charges immediately will exclude some children.

# 08/12/2009: Conversation with 3 boys and 2 girls following a Tribe swimming session. 50m Swimming Pool on campus 6.30pm

Several of the children didn't know what the "Tribe Project" was, and did not refer to their activity using this prefix. Several children actually asked, "What's the Tribe Project?" despite the fact they may have been attending for a year or more.

### 15/01/2010: General Observation about Advertising of the Tribe Project Sports Training Village 10.25am

The Tribe Project is heavily advertised within the main building of the STV on University of Bath campus. Although widespread, it does appear to be solely advised within this location. There is a Tribe Project display table at the entrance to the STV with adverts, leaflets and pricing information for the Tribe sessions. The stand is bold, colourful, informative and helpful. Although effective at generating awareness of the Tribe Project the display is situated beyond the entrance barriers into the STV, therefore not accessible to the general public. It would only be seen by parents and children already attending a course within the STV who had access to pass through the entrance barriers. A similar weakness was noted with relation to the promotional postcards that advertised the Tribe sports. These postcards were positioned within the main foyer of the STV, and although not situated behind the electronic barriers, they were displayed at the entrance to the building. It was noted on several visits to the STV that the postcards were not always available for every sport, nor were they positioned in a visible place. On a series of occasions, it was witnessed that parents who were enquiring about the Tribe Project at the STV reception desk, were not directed to the postcard stand.

Potentially the Tribe Project promotion material may not necessarily been seen by individuals unfamiliar with the University, STV, or Tribe Project. This supports evidence from the Tribe coaches and parents that promotion of the Tribe Project is poor, and is predominantly in and around the University. Although promotional materials are well designed, the locations that they are situated means individuals who do not have prior access to the STV would fail to be reached.

### 09/02/2010: Conversation with a parent whose children attend trampolining and I interviewed last year. 50m Swimming Pool on campus 7pm

She said that the trampolining had improved greatly since I interviewed the mothers last year. Despite the fact that I haven't told anyone the outcomes, or reported anything back to the administrators or coaches, apparently there have been changes, which have made it much better. This could be due to a 'reactive effect' of my presence, as opposed to anything that I've actually done.

# 09/02/2010: Conversation with father whose child was swimming in Merit sessions. 50m Swimming Pool 6pm

Swimming dad said that they have in fact tried many other swimming centres in the area, and there are in fact ones that are nearer and cheaper than the university; however, the predominant reason why he brings his child to the University is because of the flexibility of the sessions. There are several sessions on each night within the swim school, and on a Saturday, and as a parent, he said this is great for him, as he can just switch around which session he attends based on what day off he has free. The University swim school is the only organisation that has this set up, so for him as a father it's invaluable and the only one that he can attend.

# 15/02/2010: 3 mothers waiting to collect their children from the February half term hockey camp. 5.30pm

The parents repeatedly said that there is nothing for 'just learning and enjoying', beyond a very young age. It's either elite, competitive sport and there's nothing recreational during the child's teens, as it's not supported anywhere. Apparently, the local clubs don't like Bath University sports clubs, because when the go to the University, the coaches often pinch them, so camaraderie between the University and local sports clubs is poor. The tribe project administrators 'appear' keen to link to the local clubs, so siphon children into them once they are too old for Tribe, however it appears the competition between the local clubs and the university means this isn't a reality.

# 30/01/2010: Conversation with parent and son playing tennis in a Tribe Tennis session Sports Training Village 10.45am

The boy's parent was asking me about my research and said that her son took part in several sports at the university. I asked the boy which sports he participated in and

which did he like the most. The boy commented how each of the Tribe sport sessions was implemented very differently. He also described having had very different experiences with each of them respectively. He said that his motivation to attend the Tribe Project was different across the different Tribe sports, and this was related to the different positive and negative aspects each sports session. The mother agreed to this.

# 17/02/2010: General Observation during the February Half-term holiday camp. Sports Training Village 5pm

Seems to be very little organisation with the coaches and registering the children into the sessions. There were children appearing here there and everywhere, no communication between coaches as to whether there was a table booked for lunch, where the children where who were missing, and who was taking over during the lunch break. There didn't seem to be one standard meeting place, which explains why if a child is late, how they could easily become lost. There wasn't always control over the children during lunch, and they seemed to be disruptive, yet the coaches took no responsibility in controlling them.

Great rapport between the children and the coaches, this seemed invaluable, however there was no effort on the coaches part to make sure children were included and not left out. Several children were sat eating lunch on their own, and were seemingly left out. A straightforward attempt to chat to the children, or get them communicating would have alleviated this problem. Some children did seem as though they didn't want to be there, and only a few of the coaches appeared to care enough to do anything about it.

No one seemed to know which coach was taking over after lunch; it seemed to be a case of whoever turned up basically. This gave the impression of slight chaos, and I don't think it gave a good impression to the parents. I think it would be extremely easy to get the kids having more fun, getting them to integrate more and feel included, yet it did appear as though children were just left isolated, and excluded from the group.

#### 01/03/2010: My own observation in general Sports Training village

It's particularly confusing how the Tribe sports are all connected. Despite all the Tribe sports being advocated as operating under the same 'umbrella', certain Tribe sports function by their own rules, delivery methods, and targets and don't seem to see themselves as even part of the Tribe Project (in particular tennis and swimming). This makes Tribe seem really disjointed. Its very difficult trying to fully understand the Tribe

Project as a united program run by one main governing body, I don't think that it is particularly.

### 15/09/2010: Changes to the Project over the course of this research:

Rookies and water polo has been introduced since Dec 2009.

The website has been updated, the layout and links to each sport is much more user friendly and organised. Now have Team Bath Tribe Speed Schools.