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ADAPTATION TO ATHLETIC CAREER TERMINATION IN MALE PROFESSIONAL SPORT

has been approved for submission by the student's supervisory team and can therefore be forwarded to the examiners.

Signed R. M. Mullen

Director of Studies

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ADAPTATION TO ATHLETIC CAREER TERMINATION IN MALE PROFESSIONAL SPORT

CLAIRE-MARIE ROBERTS

A submission presented in partial fulfilment of the requirements of the University of South Wales/Prifysgol De Cymru for the degree of Doctor of Philosophy

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Abstract

The purpose of this thesis was to investigate the experiences of athletic career termination in male professional sport to examine: (1) the conceptualisation of the voluntariness of retirement and its impact on adaptation to athletic career termination, (2) the conceptualisation of the outcome of athletic career termination and (3) the temporal nature of patterns of adaptation in this sample in three interconnected studies. Study 1 examined the career termination experiences of professional cricketers, the findings illustrated the sport-specific nature of career termination, concluded the distinction between voluntary and involuntary retirement was, at best unclear and found no evidence to support the existence of either a healthy or a crisis transition in this sample. Study 2 was a quasi-longitudinal study that employed hierarchical multiple regression to examine predictors of life satisfaction at two time points; on or near retirement, and again 6 years later in a sample of retired professional cricketers and rugby union players. Life satisfaction alone is indicative of self-perceived adaptation (Diener, Emmons, Larsen, & Griffin, 1985) and a key measure of adaptation to athletic career termination (Stambulova, Alfermann, Statler, & Côté, 2009). This study concluded that the biggest predictor of adaptation to athletic career termination was sport type, and revealed a general increase in life satisfaction over time. Study 3 was conducted as a qualitative follow up to provide further depth and context to the sport-specific nature of retirement from sport and the changes noted in levels of life satisfaction. This study concluded that athletic career transitions occur within a specific sporting context that influences and informs the potential for adaptation. In addition, the study presented data to indicate the fluctuating nature of levels of life satisfaction *after* athletic career termination in response to the psychological legacy of an athletic career. These findings call into question the conceptual and theoretical perspectives of a linear and dichotomous transition outcome.

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CHAPTER 1

INTRODUCTION

Introduction

The focus of sport psychology research has shifted in the past three to four decades from an out and out focus on excellence in sport performance, to the investigation of factors relating to the well-being of individual athletes (Stambulova, Wrisberg, & Ryba, 2006). Placing the well-being of athletes at the centre of research has helped developed knowledge and understanding of a number of features of an athletic career, starting with the development of talent in sport (for a review see: Coutinho, Mesquita, & Fonseca, 2016), negotiating within-career transitions throughout the lifecycle of an athletic career all the way through to its end (Stambulova & Ryba, 2013). This end point is referred to as athletic career termination (e.g., Wylleman, Alfermann, & Lavallee, 2004).

The reasons for athletic career termination are understood to be multifaceted (Stambulova, Alfermann, Statler, & Côté, 2009). That is to say that there are often a number of factors that either drive, or influence the end of an athlete's sport career which include freely choosing to retire, career-ending injuries, deselection, age, and problems with coaching staff to name a few (Park, Tod, & Lavallee, 2012). The reasons for athletic career termination are often referred to as antecedents or pre-conditions of retirement (e.g., Taylor & Ogilvie, 1994). These antecedents or pre-conditions are understood to hold significant influence over the way in which the individual reacts to their retirement from sport, and ultimately their adaptation to a post sport life. Specifically, multifaceted antecedents to athletic career termination are often reduced to a voluntary-involuntary dichotomy (e.g. Webb, Nasco, Riley, & Headrick, 1998). This dichotomy has been shown to be helpful in understanding athletes' reactions to retirement whereby those who exercise control over their retirement, and actively choose to end their careers are more likely to adjust successfully to life after sport (Lavallee, Grove, & Gordon, 1997). However, whether this commonly used dichotomy

accurately captures the experiences of retired athletes remains to be seen, as the multifaceted antecedents to retirement are so often enmeshed that it is easy to lose sight of a predominant factor. For this reason, further research is needed to help uncover the reality of the relationship between the antecedents to, and ultimate result of athletic career termination.

In the context of research into athletic career termination, it is the consequences of retirement from sport that have attracted the most research attention, uncovering a great variation in the way in which athletes react when their career ends. There is no general consensus on this matter, with studies reporting a wide range of reactions from severe distress and mental health issues, through to flourishing (see Knights, Sherry, & Ruddock-Hudson, 2016 for a review). These differences in reactions to retirement from sport may in part, be influenced by the pre-conditions of retirement, but individual characteristics also have a role to play. For example, athletic identity is the most prominent psychological issue that influences the quality of career transition from sport (Park, Lavallee, & Tod, 2013). Although athletic identity positively influences athletic performance (Werthner & Orlick, 1986), high levels are associated with restricted personal development, emotional difficulties when injured, social isolation and ultimately adjustment difficulties on athletic career termination (Brewer, 1993; Kornspan & Etzel, 2001; Tasiemski, Kennedy, Gardner, & Blaikley, 2004).

Athletic career termination is far from a one off event, eliciting a variation in reactions; it is a dynamic process that occurs over time (Torregrosa, Ramis, Pallarés, Azócar, & Selva, 2015). The successful negotiation of the process of transitioning through from the end of an athletic career to a post-sport life is facilitated by resources such as active coping strategies, social support and pre-retirement planning (Taylor & Ogilvie, 1994). The facilitation of these resources helps bring about adaptation to a post-sport life resulting in what has been labelled a healthy career transition (Taylor & Ogilvie, 1994), characterised as

successful coping and success in life (Alfermann & Stambulova, 2007). Those failing to employ sufficient and effective resources during this period may experience a crisis transition, which is often followed by negative consequences that include mental health problems and maladaptive behaviours (Alfermann & Stambulova, 2007). Under these circumstances, interventions are required to assist the individual in their quest for adaptation. However, whilst conceptually, the ideas surrounding the transition and the result of the transition may appear intuitive, there is little empirical support for either a healthy career transition or indeed a crisis career transition. Furthermore, if successful adaptation to athletic career termination is marked by successful coping and success in life, an examination of how to establish if this point is reached is required.

Previous research has suggested that adaptation may be measured by a global evaluation of an individual's life (Diener, Emmons, Larsen, & Griffin, 1985) as it provides an insight into any differences between expectations and present life experiences (Diener & Lucas, 2000) and a level of adjustment. This global evaluation is often referred to as life satisfaction. Previous studies have focused on factors affecting life satisfaction both in the general population (e.g., Diener, Suh, Lucas, & Smith, 1999), and in retired athletes (e.g., Martin, Fogarty, & Albion, 2014). As a result, a number of both common demographic and sport-specific factors are known to influence life satisfaction. They include education (Kleiber & Malik, 1989), marital status (Dienar, 2000), the voluntariness of retirement (Stambulova et al., 2009), athletic identity (Webb et al.,1998), injury (Malinauskas, 2010), and pre-retirement planning (Park, et al., 2012). However, despite having an insight into such factors and their effects on life satisfaction, what remains unclear is how levels of life satisfaction are affected on retirement, how they change over time, and what factors influence that sense of adjustment in the long-term.

This thesis encapsulates a programme of research that addresses a number of outstanding questions in relation to athletic career termination. Specifically, it will investigate the voluntariness of retirement from sport, and assess the usefulness of the involuntary-voluntary dichotomy in determining adjustment to life after sport. Next, it will address the conceptualisation of a healthy career transition versus a crisis transition, to determine whether these intuitive end points to retirement from sport accurately reflect the reality of retired professional athletes' experiences. Furthermore, it will examine the temporal nature of patterns of adaptation in male professional sport in Great Britain.

Structure of the Thesis

The present thesis comprises five main chapters which include an in-depth review of the literature of athletic career termination, three large-scale studies and a general discussion. Following this introductory chapter, Chapter 2 reviews in-depth, the extant literature and relevant theoretical frameworks that relate to athletic career termination. Chapter 3 details research carried out to examine the career termination experiences of retired professional cricketers (study 1). In this chapter, the multicasual reasons for retirement are examined alongside the relevance of the distinction between voluntary and involuntary retirement in influencing the quality of the career transition process. Furthermore, a case is made for the sport-specific nature of retirement from professional sport to be considered in greater depth. This study has been published as: Roberts, C-M., Mullen, R., Evans, L., & Hall, R. J. (2015). An in-depth appraisal of career termination experiences in professional cricket. *Journal of Sport Sciences, 33*, 935-944. doi:10.1080/02640414.2014.977936.

Chapter 4 (study 2) presents a large-scale, quantitative, quasi-longitudinal study with three discrete components. The research employed the Retirement from Sport Survey (RSS; Alfermann, Stambulova, & Zemaityte, 2004) to capture data relating to athletic career

termination in a sample of 199 retired professional cricketers and retired professional rugby union players at two time points spanning 6 years. The first component of the study involved an assessment of the validity of the RSS using the Partial Least Squares (PLS) structural equation modelling (SEM) tool. Once this was completed, two separate rounds of data collection were carried out, to measure the factors predicting levels of life satisfaction on or near athletic career termination and again six years later. Finally, changes in transition-related variables were analysed over time to provide insight into the changing nature of adaptation to athletic career termination. This chapter details the key influence of sport type on adaptation to athletic career termination, and recommends a qualitative follow-up study to provide context and depth to the quantitative findings.

Chapter 5 (study 3) presents a qualitative follow-up study which explored, in-depth (1) the sport-specific nature of athletic career termination and (2) the changes noted in levels of life satisfaction following athletic career termination over time. This study presents findings that indicate that athletic career transitions occur within a specific sporting context that influences and informs the potential for adaptation. In addition, the study presents data to indicate the fluctuating nature of levels of life satisfaction after athletic career termination which calls into question the conceptual and theoretical perspectives of a linear and predictable transition outcome. To bring the thesis to a close, chapter 6 contains a general discussion, summarising the overall findings of this programme of research including practical implications, strengths and limitations with suggestions for future research directions.

CHAPTER 2

REVIEW

Introduction

The aim of this chapter is to critically review the theoretical and empirical literature that examines career termination in sport. At the outset, a background to the study of athletic career termination will be presented, followed by an examination of relevant conceptual models. Finally, an evaluation of empirical research in the athletic career termination field will be provided, highlighting where gaps in the literature exist, and finally, the focus of the current thesis will be presented.

Background to the Study of Athletic Career Termination

The first recorded research into the retirement of athletes was the sociological investigation into the "status of former sportsmen" by Mihovilovic in 1968. Mihovilovic noted that athletes experienced high levels of stress and frustration as their careers came to an end, and that they often attempted to hold onto their athletic careers for as long as possible. Three further sociologically-focused studies by Hill and Lowe (1974), Haerle (1975) and Ball (1976) relied heavily on anecdotal accounts of problems with retirement from sport. Despite the lack of empirical foundation, these studies served to whet the appetite of scholars who were intrigued by the apparent psychological trauma experienced by the retiring athlete (e.g., Allison & Meyer, 1988).

In much of the subsequent research conducted during the 1980s, scholars viewed career termination through a gerontological and thanatological lens. In an attempt to explain why disengagement from an athletic career was so problematic, researchers compared these experiences to those leaving the workforce, and even the process of dying (Lavallee, 2000). Gerontological theories such as activity theory (Havinghurst, 1961), disengagement theory (Cumming & Henry, 1961) and continuity theory (Atchley, 1992) were all posited to provide

insight into this phenomenon. Yet on further empirical examination, a lack of equivalence was found, leading to the widely held conclusion that there was no support for studying athletic career termination from a gerontological perspective (e.g., Lerch, 1984; Rosenburg, 1981). An alternative view was that athletic career termination may be akin to a social death. In this case, thanatological theories were used to attempt to provide useful insights. Indeed, Rosenburg (1984) likened retiring athletes to a dying patient moving through stages such as shock and denial, anger, bargaining, depression and acceptance (Kubler-Ross, 1969) in reaction to leaving their athletic career. The reliance on these "borrowed" social theories suggested that there was a lack of understanding of how to systematically and empirically investigate the dynamics of athletic career termination (Allison & Meyer, 1988).

Theoretical Perspectives on Athletic Career Termination

The lack of relevance of the gerontological and thanatological models led researchers to delve further into the topic of athletic career termination to understand how it impacts the athlete (Bruner, Erickson, McFadden, & Côté, 2009). It was at this point that Schlossberg's (1981) work in counselling psychology started to influence the way in which athletic career termination was viewed. Rather than viewing retirement from sport as an isolated event, Schlossberg's work raised awareness of the process-driven nature of a transition out of sport (Wylleman, Lavallee & Alfermann, 1999). Her conceptual framework focused on how individuals adapt to transitions. She claimed that the characteristics of the individual (e.g., age, life experiences, other transitions), the pre- and post-transition environments (e.g., social and institutional support) and the individual's perception of the transition (sudden or planned, positive or negative affect) would combine to determine how they adapted during this process. Regardless of the positive impact that Schlossberg has had on this field, a lack of

operational detail in her theory has led some to cite limitations with this body of work (e.g., Taylor & Ogilvie, 1994).

Regardless of its critics, Schlossberg's (1981) model was a framework for understanding athletic career transitions by researchers in the mid-eighties to the early nineties (e.g., Baillie & Danish, 1992; Ogilvie & Howe, 1986; Pearson & Petitpas, 1990; Taylor & Ogilvie, 1994; Werthner & Orlick, 1986), in an attempt to better understand how athletes transitioned out of sport. The net result of research in this period was a further shift in perspective. Findings indicated that the characteristics of the athletic career were likely to influence the athletes' experiences on retirement from their sport. This led to the adoption of a holistic view of the athlete's career in an attempt to further understand reactions on retirement (Bruner et al., 2009).

The emerging holistic view of an athlete's career led to a number of conceptual models being developed that can be broadly conceptualised into two distinct categories (Stambulova & Wylleman, 2014). The first, collectively labelled athletic career descriptive models, attempt to capture the lifecycle of an athletic career as a set of stages ranging from the preparation/initiation stage through to development/specialisation, investment and culmination, maintenance and finally, discontinuation. The second, labelled career explanatory transition models, illustrate the process of transition through an athletic career. The pertinent features of these models include: the reasons for retirement, demands faced, coping employed, outcomes, and consequences of the transition. Coping processes are central to both types of models and include methods used by athletes to adjust to the particular set of transition demands (Alfermann & Stambulova, 2012). In both instances, these conceptual models help define and further understand the athletic career, which aids practitioners

working with athletes, or researchers investigating athletic career termination. The following sections examine each of these descriptive models in more depth.

Athletic career descriptive models.

Athletic career descriptive models provide information on a sequence of stages that define an athletic career and its associated features. They identify normative (predictable) transitions between one stage and the next (Stambulova & Wylleman, 2014). Ultimately, they provide an understanding of patterns of development in athletic careers, and other significant variables that may influence the manner in which an athlete retires from, or reacts to retirement from their sport. There are six models discussed in this section, those of Bloom, 1985; Côté, 1999, Danish, Petitpas, & Hale, 1993; Salmela, 1994; Stambulova, 1994; and Wylleman & Lavallee, 2004.

The work by Bloom (1985), Salmela (1994) and Côté (1999) is firmly rooted in the talent and expertise development domain, yet provides a useful insight into the development of the body of knowledge in career transitions. The conceptual model produced in each case illustrates a series of stages that athletes must successfully negotiate in order to develop into talented or elite performers. Although Bloom's work was focused on identifying how world-class talent in general is developed, his conceptual model of talent development was influential in the development of more sport-specific research in this area. His early investigations involved interviewing 120 "talented" individuals and their family, coaches, mentors and teachers from the art, science and sport domains in order to construct a model of their development and progression. Across all domains, the same analogous patterns were identified. Bloom described these patterns in phases of development; simply, "the early years", "the middle years" and "the later years". Each phase, he suggested, is typified by particular characteristics of the talented individual and the role that their family, coaches and

mentors fulfilled. For example, in the later years Bloom describes talented people as "obsessed". Côté's (1999) work was heavily influenced by the aforementioned models conceptualising predictable stages of an athletic career. Côté however, focused his research in the sport environment and based his theory on the concepts of deliberate play and deliberate practice. Like Bloom, he claimed there were stages that consisted of sampling, specialising, investment and mastery, but he emphasised the role of parents in facilitating the individual's career development. Whilst Bloom and Côté's work still has relevance today in the world of talent development, and in particular, the significant role that others play in the development of talent, their work has been challenged for not fully encapsulating the reality of an athletic career, and the absence therefore of a fourth stage: athletic career termination (e.g., Scanlan, Ravizza & Stein, 1989).

Meanwhile, Danish, Petitpas and Hale (1993), Stambulova (1994), and Wylleman and Lavallee's (2004) work places a specific emphasis on the transition-based features of athletic career development (e.g., Bruner, Erickson, Wilson, & Côté, 2010). Stambulova (1994) conceptualised the athletic career as a series of six distinct stages and transitions which include a) the beginning of the sports specialisation, b) the transition to intensive training in the chosen sport, c) the transition to high-achievement sports and adult sports, d) the transition from amateur sports to professional sports, e) the transition from culmination to the end of the sports career, and (f) the end of the sports career. Although Danish and colleagues (1993) developed a similar approach of conceptualising athletic development as sequential and involving stages and transitions which are considered critical life events, their life development intervention (LDI) model included further detail. They suggested that there are three characteristics of critical life events that influence the effect they will have on the individual: timing, which relates to the congruence of the event with either the personal or

societal expectations of when the event should occur (Neugarten, 1968); duration, be that temporary, permanent or uncertain; and contextual purity which refers to the number of events being experienced at once. Danish et al (1993) warn that the more events being experienced simultaneously, the more difficult the adjustment. Indeed, Danish et al's work formed the basis for the more recent descriptive model developed by Wylleman and Lavallee (2004).

Wylleman and Lavallee's (2004) framework, building on Danish et al's (1993) LDI concept, adopted the approach of viewing the athlete as a "whole person" and examining the development of their sport career in relation to the stages of life development from initiation to discontinuation. They were the first researchers to differentiate between what they called normative and non-normative transitions as athletes moved through the development stages of an athletic career. Normative transitions were defined as being predictable and anticipated transitions (Schlossberg, 1981), related to biological, social, and emotional changes through aging (Baltes, 1987), and influenced by social context (Wapner & Craig-Bay, 1992). Normative transitions include a move into a sport specialisation stage of development, the step up from junior to senior level or from amateur to professional status. Conversely, non-normative transitions are difficult to predict and often involuntary. They may include injuries, overtraining, the loss of a coach, or moving from one team to another. These transitions also include events that were expected or hoped for but did not occur – these are known as non-events. Examples of non-events include being unable to participate in major tournaments, or not being selected for the national team after years of preparation (Wylleman & Lavallee, 2004).

Their model superimposes an athletic career on four layers of life span development which includes psychological, psychosocial, and academic and vocational levels. This

interplay between an athletic career and other areas of life forms the basis for important contributions to an individual's life career development. Their model illustrates how each within-career transition in the individual's sporting life may also occur in conjunction with the individual's progression elsewhere such as going through puberty, forming intimate relations with another person, and commencing higher education. The model was recently updated to include the representation of vocational and financial development and was subsequently renamed as The Holistic Athletic Career Model (Wylleman, Reints, & DeKnop, 2013; see Figure 1).

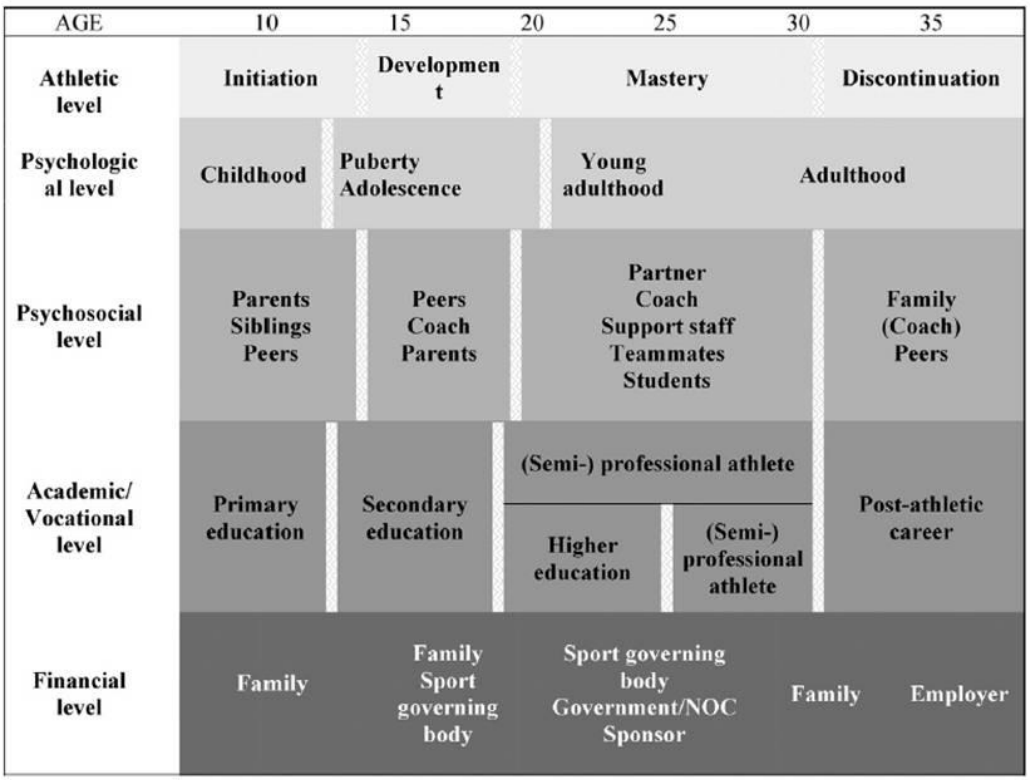


Figure 1: The Holistic Athletic Career Model (Wylleman et al., 2013)

Whilst athletic career descriptive models provide an indication of patterns of development throughout a sport career, and the factors that may influence reactions to the termination of that career, they fail to examine this end transition in detail. That said, Wylleman, Reints and DeKnop's (2013) model provides a means of understanding the

potential interaction between athletic and non-athletic transitions at various points in an individual's lifespan (Stambulova & Wylleman, 2014). However, collectively these models fail to account for a) the sport specificity of athletic careers, especially for early specialisation sports such as aquatic disciplines or gymnastics and b) the nature of the process of the final transition out of sport.

Athletic career explanatory models.

In contrast to, and building upon athletic career descriptive models, athletic career explanatory models illustrate the process of transitions through the athletic career with a main focus on coping with the demands presented by those transitions. In addition, these models depict the key roles of variables such as reasons for retirement, demands, coping, and outcomes on the consequences of the transition. In these models, transitional outcomes are categorised as either 'successful' or 'crisis transitions'. There are two main models of note, Taylor and Ogilvie's (1994) conceptual model of adaptation to retirement among athletes and Stambulova's (2003) athletic career transition model.

The first researchers to propose a conceptual model depicting the process of career termination were Taylor and Ogilvie (1994). Taylor and Ogilvie proposed that the interaction between the reasons for terminating an athletic career, factors relating to adaptation (e.g., developmental experiences, identity and perceptions of control) and available resources (e.g., coping, social support and pre-retirement planning) would determine the quality of the transition. The quality of the transition is dichotomous in this model, where the resultant effect of an athletic career termination can either be a healthy career transition or a crisis transition. Crisis transitions can be characterised by psychopathology, substance abuse, occupational problems or family and social problems, which require cognitive, emotional, behavioural or social intervention (see Figure 2).

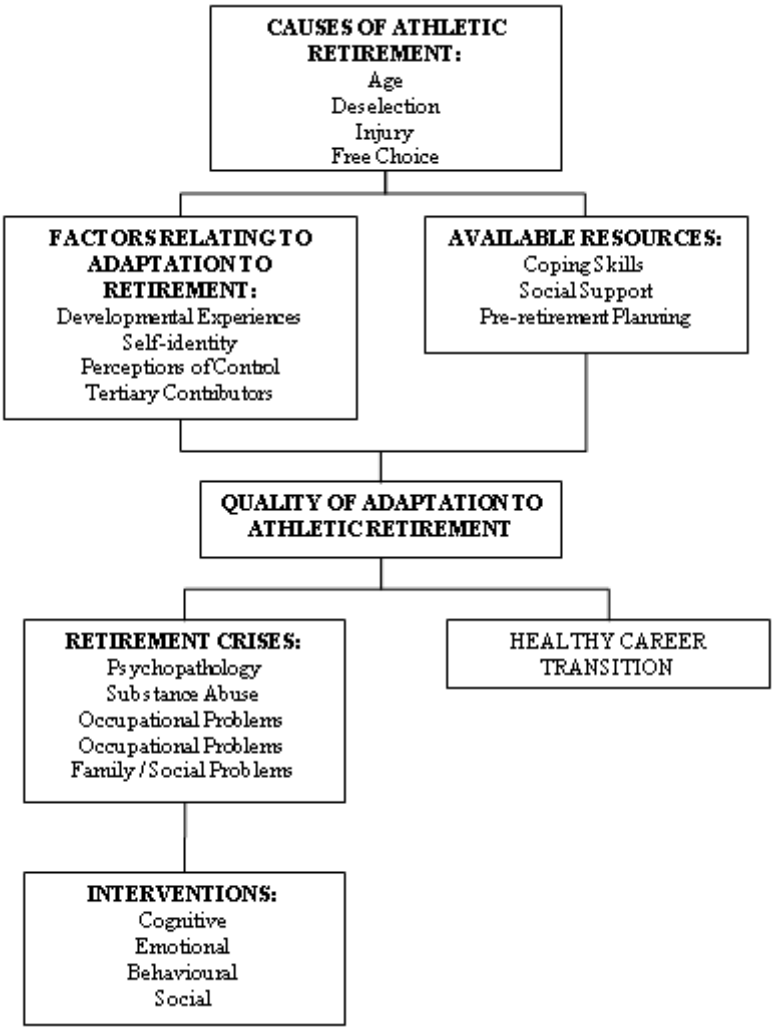


Figure 2: A conceptual model of adaptation to retirement among athletes (Taylor & Ogilvie, 1994).

Stambulova's (2003) model (see Figure 3) not only explains the final athletic career transition (e.g., retirement), but it also accounts for other transitions that occur within the context of an athletic career (within career transitions). The model sets out the critical factors in determining how successful a transition will be, driven by the presence of sufficient resources to deal with the demands presented. Resources in this context relate to both internal resources such as motivation levels, skills and personality, and external resources

such as social and financial support. These will ultimately dictate how effectively the athlete copes to bring about either a successful or crisis transition. Three interventions are included in the athletic career transition model to a) help to prevent a crisis transition, prepare the athlete for the transition and the potential barriers often associated with it; b) help the athlete achieve a balance between the demands presented, by adding resources to their skill set and c) to assist with the negative consequences of a failure to cope with educational interventions such as goal setting or clinical interventions based on various psychotherapeutic approaches (Stambulova & Wylleman, 2014).

Despite providing useful frameworks for the negotiation of athletic career termination, the aforementioned theoretical models do not involve detailed exploration of some of the key facets determining the course of this final transition. For example, there is no exploration of the decision-making process linked to retirement from sport, even though the reasons for leaving sport are linked to the quality of adaptation. Furthermore, each of the models discussed, are "culture-blind" and are certainly not sufficiently contextualised (e.g., Stambulova & Ryba, 2014, p.8). This becomes especially problematic when the assumption exists that regardless of the sport represented, the process and outcome will be comparable.

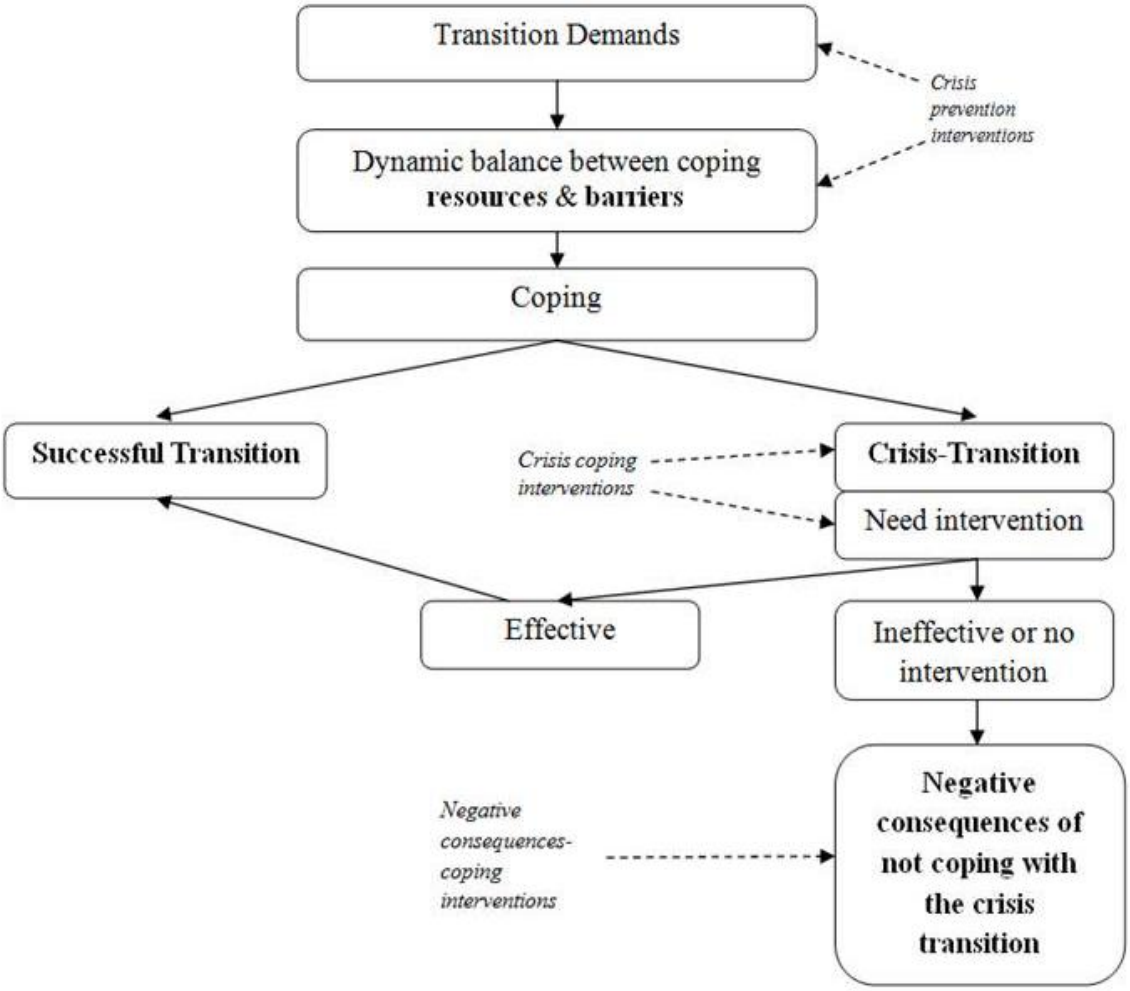


Figure 3: Athletic Career Transition Model (Stambulova, 2003)

Empirical Research on Career Termination

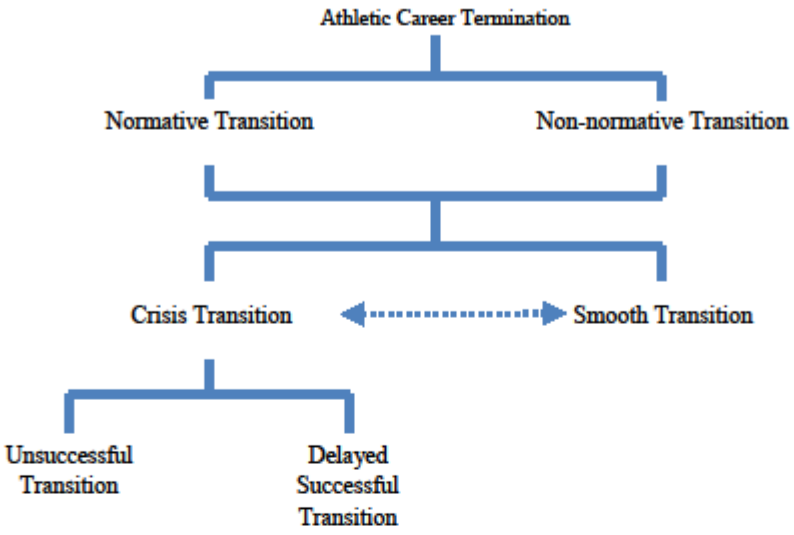


Figure 4: An illustration of athletic career termination.

In general, career transitions are defined as "an event or non-event [that] results in a change in assumptions about oneself and the world, and thus requires a corresponding change in one's behavior and relationships" (Schlossberg, 1981, p. 5). However, athletic career transitions warrant a different perspective as they are understood to be process-driven rather than a one-off event (Stambulova, 2012). Alfermann and Stambulova therefore have conceptualised athletic career transition as “a set of specific demands related to practice, competitions, communication, and lifestyle that athletes have to cope with in order to continue successfully in sport or to adjust to the post-career” (2007, p. 713). Research has identified different types of career transition within an athletic career: within career transitions and athletic career retirement which can either be a normative or a non-normative experience, and result in either a crisis transition, or a smooth, healthy transition (Stambulova, 2012). For athletes experiencing transition crises, two potential secondary

outcomes have been identified (Stambulova, 2012). These involve a delayed successful transition, which comes after the delivery of successful interventions, and an unsuccessful transition for those who are without access to effective interventions (Stambulova, 2012). The theoretical perspectives discussed have provided a foundation for the operationalisation of key transition-related variables in empirical research. The following sections will review the extant empirical research that has been conducted in career termination in sport under the following headings: psychological reactions to athletic career termination, factors affecting the outcome of transitions, available resources for coping with career termination and adaptation to athletic career termination.

Psychological reactions to athletic career termination.

Regardless of whether athletes encounter a normative or a non-normative transition, the way they cope with the demands of the athletic career termination can lead them to experience a smooth, healthy career transition, reflecting successful coping (Alfermann & Stambulova, 2012), or a crisis transition. Healthy transitions are brought about by positive reactions to athletic career termination such as a sense of freedom, relief and an opportunity for personal growth (e.g. Greendorfer & Blinde, 1985; Perna, Ahlgren, & Zaichkowsky, 1999). Crisis transitions, conversely, indicate that athletes cannot, or are not coping with the challenges presented by this critical life event (Alfermann & Stambulova, 2007; Alfermann et al., 2004). Such crises are marked by a variety of psychopathological behaviours, social difficulties (Taylor & Ogilvie, 1994), acute depression (Reardon & Factor, 2010), identity crises (Brewer, Van Raalte, & Linder, 1993), difficulties with body image (Kerr & Dacyshyn, 2000) and occupational problems (Lavallee, Grove, & Gordon, 1997). In actuality, the psychological reactions to athletic career termination vary cross-culturally (e.g., Alfermann et al., 2004; Stambulova et al., 2007), with micro-, macro- and meso-social factors all

influencing how an athlete responds and subsequently adapts to their retirement. Yet, despite the psychological reactions to retirement being so influential under these circumstances, there have been no examinations of the impact of any similar factors on the way athletes experience their transitions. For example, it is currently unclear as to whether the culture of the sport that the athlete represents may have a similar impact.

Factors affecting the outcome of athletic career termination.

Reasons for career termination.

Of the conceptual models examined, the career explanatory models (e.g., Stambulova, 2003; Taylor & Ogilvie, 1994) emphasise the role of the reasons for, or antecedents to career termination on the subsequent reaction to athletic career termination. There are a number of factors that may dictate the end to an athletic career that are broadly categorised into those that are voluntary (e.g., athletes ending their career of their own volition) and involuntary (e.g., the athlete is deselected, or experiences a career ending injury). For those athletes retiring voluntarily, career termination is often desired and planned. For example, athletes may experience a loss of their sporting goals (Park, Tod, & Lavallee, 2012), a shift in their priorities and have a desire to work towards a different career (Swain, 1991), start a family (Allison & Meyer, 1988) or to be free of sporting politics (Werthner & Orlick, 1986) and financial uncertainty (Lavallee et al., 1997).

Involuntary career termination is more complex. The lack of control over the decision to retire is negatively associated with the quality of transition for athletes (Park, Lavallee, & Tod, 2013). Athletes may be deselected, or forced to retire through injury (cf. Buβmann & Alfermann, 1994; Gardner & Moore, 2006). Additionally, athletes may retire as their advancing age prevents them from competing at the highest level (Alfermann & Stambulova,

2012). Similarly, Park et al. (2012) found that athletes' perception of the voluntariness of retirement decisions was not always consistent with previous research findings. In their study of elite Korean tennis players, they found that some retirement decisions were made on the basis of poor relationships with coaching staff, or in other cases, chronic injuries. Although these situations were outside of the control of the athletes, the athletes considered these retirement decisions as voluntary (Park et al., 2012).

Previously, it was believed that athletes retiring voluntarily experienced a healthier career transition and higher degrees of post-athletic career adaptation (Alfermann, 2000; Alfermann & Gross, 1998), yet recent studies have challenged this long-held view on a number of levels. For example, evidence exists suggesting that the reasons for retirement from sport are often multicasual (Alfermann & Stambulova, 2012) and part of a lengthy decision-making process, which may mirror the stages of change (precontemplation, contemplation, preparation, action) presented in the transtheoretical model (Prochaska & DiClemente, 1984). Furthermore, the voluntariness of the decision to retire may vary depending on the athlete's perception of control over the process (Park et al., 2012). In addition, there is an absence of data pertaining to sport-specific differences in antecedents to retirement, which may help provide an insight into the respective athlete's subsequent experience of transition.

Athletic identity.

Athletic identity first featured as a focus for sport psychology research in the early 1990s when Brewer and colleagues (1993) sought to examine it in detail. They defined athletic identity as "the degree to which an individual identifies with the athlete role" (Brewer et al., 1993, p. 237) and claimed it had a cognitive structure as well as a social function. They suggested that there were three components to athletic identity: social identity, negative

affectivity and exclusivity. Martin, Mushett and Eklund (1994) later successfully argued for an additional component to athletic identity, in the form of self-identity. In practice, therefore, athletic identity is a combination of self-referenced perceptions of oneself as an athlete, feedback from others, and the presence of a negative emotional response if the individual fails to fulfil the athletic role, and the adoption of the role of the athlete at the expense of the other roles in one's life (Ronkainen, Kavoura, & Ryba, 2016).

Athletic identity is a construct that increases with the level of involvement in sport, and alongside increases in level of representation (Good, Brewer, Petitpas, Van Raalte, & Mahar, 1993). On examination of developmental trends in athletic identity, Houle, Brewer and Kluck (2010) discovered that in general, levels of athletic identity increase up until the age of 15 and remained at a consistent level into young adulthood. Conversely therefore, athletic identity starts to decline with age (Brewer et al., 1993), also on retirement from sport (Grove, Fish, & Eklund, 2004; Shachar, Brewer, Cornelius, & Petitpas, 2004) and on investment in a career outside of sport (Shachar et al., 2004). It is also known that levels of athletic identity can fluctuate in response to situations such as team deselection (Fish, Grove, & Eklund, 1999) and injury (Brewer, Cornelius, Stephan, & Van Raalte, 2010).

Focusing specifically on career termination, it appears that adjustment to a life after sport is facilitated by decreases in athletic identity (Cecić Erpič, Wylleman, & Zupancic, 2004; Lavallee, Grove, & Gordon, 1997), which some athletes consciously engage in prior to retirement (Lally, 2007). Conversely, athletes facing retirement with high levels of athletic identity are more likely to experience crisis transitions (Brewer, 1993) and limited future career development as they consider themselves inseparable from their sport (Griffith & Johnson, 2002). In an attempt to sustain continuity in athletic identity, athletes may choose a sport-related profession to move into on athletic career termination (Cabrita, Rosado, Leite,

Serpa, & Sousa, 2014). What is unclear however is the temporal patterns of athletic identity levels after athletic career termination, and how these impact on the timing of adaptation.

Demographic characteristics.

Studies have examined a range of demographic characteristics that may determine differences in response to athletic career termination. For example, gender (Stambulova, 2009), age (e.g., Chow, 2011), race (Perna at al., 1996), marital status (Fernandez, Stephan, & Fouquereau, 2006) and competitive level (Weigand, Cohen, & Merenstein, 2013) have all been considered as variables that may influence adjustment to a post-sport life. For example, research suggests that female athletes' athletic careers tend to begin and end earlier than their male counterparts (Stambulova, 2009). Additionally, Alfermann (2000) suggests that female athletes are more likely to terminate their athletic career to start a family, or due to family obligations. Stambulova (2001) concluded that female former athletes adapted more quickly following retirement from sport than men, although the sport-specific nature of retirement was not considered in this study. Additionally, age is thought to be a mediating factor in adjustment as athletes retiring at a younger age have been found to experience more difficult transitions (Chow, 2011; Gilmore, 2008), which may be due to a premature shaping of their identity and career choice before they have sufficiently sampled a variety of interests and talents (Brown & Hartley, 1998).

In respect of other individual differences, studies that have examined racial differences in reactions to athletic career termination are inconclusive. One study by Perna et al. (1996) suggested that African American student athletes experienced more difficulties in transition compared to Caucasian student athletes; although Lewis' (1997) study concluded the opposite. Marital status appears to be a significant influence in adaptation to a post-sport life, where married athletes are subject to more support from their partners which equates to

less difficulty in transition (Fernandez et al., 2006; McKnight, 1996). Finally, research suggests that the higher the competitive level reached, the more student athletes experience problems on retirement (e.g., Weigand, Cohen, & Merenstein, 2013). However, the majority of these findings are derived from a collegiate athlete sample, and fail to address any differences between athletes representing different sports.

Developmental experiences.

A reliable indicator of athletes' adaptation difficulties on retirement is an exclusive focus on sport, often at the expense of diverse developmental experiences (Taylor & Ogilvie, 1994; Torregrosa, Ramis, Pallarés, Azócar, & Selva, 2015). Dependent on the developmental trajectory of the sport in question, this exclusive focus on sport may happen anytime from the transition out of compulsory secondary education (e.g., MacNamara & Collins, 2010), all the way through the individual's athletic career (Taylor & Ogilvie, 1994). Developmental experiences may encompass education and vocational and life skill development through peer interactions and exposure to complex environments that help develop identity, pro-social norms and social capital (Taylor & Ogilvie, 1994). Athletes passing up the opportunity to engage in developmental experiences during their career often encounter difficulties in non-sporting situations and a reduction in life choices on retirement (Stronach, & Adair, 2010; Swain, 1991).

Likewise, formal education is an essential component in successfully securing a new career direction on retirement (Stronach & Adair, 2010), although there is little consensus on the academic status of elite athletes. For example, early studies found a relationship between sport performance and low academic achievement (Adler & Adler, 1985; Purdy, Eitzen, & Hufnagel, 1982; Webb, Nasco, Riley, & Headrick, 1998); although more recently, a host of studies have concluded that for many high performance athletes, their academic work is on a

par with their sporting achievements (cf., Albion & Fogarty, 2003; Conzelmann & Nagel, 2003; González & Torregrosa, 2009). In fact, Henry (2013) suggests a positive relationship exists between educational opportunities and commitment and sporting success. However, some coaches perceive the pursuit of academic attainments alongside a sport career as constraining and distracting to sporting goals (e.g., Lopez de Subijana, Barriopedro, & Conde, 2015).

For elite athletes, balancing a high performance lifestyle with education or employment opportunities can be a challenge (Henry, 2013). In professional sport, it can be argued that the full-time training and the team duties of high performance athletes can preclude them from planning or actively seeking out education and post-sport employment opportunities. However, the governing bodies of sports such as rugby union and cricket have recently begun to emphasise the importance of players' personal development, which includes opportunities to continue education and take up employment opportunities and work experience during their sport careers (Rugby Football Union, 2015; Rugby Players' Association, 2015). However, there is no empirical data available to assess the effectiveness of these programmes in helping athletes achieve post-sport career success.

After several years of research into student athletes, the European Union (EU) Education and Culture Commission produced the EU Guidelines on Dual Careers in Athletes (Lopez de Subijana et al., 2015). The term 'dual career' refers to the combining of an athletic career with study or work, and is a topic that is receiving increased research interest among member states in Europe (Debois, Ledon, & Wylleman, 2015). The focus on dual careers includes health-, developmental- and socially-related benefits, on top of the advantages for athletes when they come to the end of their career. In addition, a dual career enhances the likelihood of an easier adaptation and more job prospects on retirement from sport (European

Union, 2012). Indeed, dual careers have been described as a "guarantee" for the athlete's well-being beyond sport (Lopez de Subijana et al., 2015).

Injuries.

One factor that can have a detrimental impact on athlete well-being are sport injuries. Injuries are common triggers of athletic career termination and their lasting effects are often responsible for transitional difficulties and adaptational problems (Gilmore, 2008; Kadlick & Flemr, 2008; Peterson, 2009). Athlete responses to career-ending injuries include a range of emotions, including grief, identity loss, loneliness, anxiety and fear, loss of confidence, depression, alcohol abuse, and even suicide (Alfermann et al., 2004; Lally, 2007; Pearson & Petitpas, 1990). Indeed, athletes suffering career-ending injuries often report lower levels of life satisfaction for a number of reasons. For example, the unexpected nature of the termination of their athletic career (Kleiber, Greendorfer, Blinde, & Samdahl, 1987), a feeling of failure because the injured athlete was unable to fulfil their athletic goals (e.g., Sinclair & Orlick, 1993) and depression associated with long-term chronic pain (Schwenk, Gorenflo, Dopp, & Hipple, 2007). The secondary impact of the consequences of career-ending injuries includes permanent disablement and the associated social, financial, and employment difficulties (Stoltenburg, Kamphoff, & Bremer, 2011). However, although injury is purported to play a significant role in determining post-sport life satisfaction, it is unclear as to how long these psychological effects linger, and whether full adaptation to a post-sport life is a possible future outcome.

Achievements in sport.

Successful athletic careers are considered to be ones involving the consistent achievement of a high level of athletic excellence in national or international competition

given the corresponding individual resources and environment (Alfermann & Stambulova, 2007; Kubiak, 2012; Wylleman, Theeboom, & Lavallee, 2004). Achievements in sport are inextricably linked to career satisfaction (Kubiak, 2012). Accordingly, studies have found a positive relationship between reaching sporting goals in an athletic career and the quality of the transition out of sport (e.g., Park et al., 2013). That is to say that the transitional process is influenced by the perceived quality of the athletic career by the athlete (Fuller, 2014; Lester, 2013). A smooth, unproblematic, successful transition often follows the perception of a full and successful career while a crisis transition often follows a critical focus on goals not achieved rather than positive aspects of the athletic career (Fuller, 2014). Indeed, athletes focusing on the latter often reflect on "unfinished or unresolved business," and at times are haunted by "thoughts of what might have been" (Blinde & Stratta, 1992, p. 6; Parker, 1994, p. 299). However, it is suggested that as the perception of achievement, career success and satisfaction are all based on a set of self referenced criteria (Kubiak, 2012), there is a need, to consider the differences in individual perceptions of career satisfaction and how these in turn, influence the transitional experience of athletes.

Financial status.

Research suggests a positive relationship between career transition quality and financial status (e.g., Park et al., 2013). To elaborate, there are a multitude of anecdotal reports, mostly featuring high-earning professional sports in the U.S.A., claiming a high percentage of bankruptcies among retired athletes (e.g., Flynn, 2014; Lester, 2013). These reports attribute poor financial literacy, hiring the wrong advisors and legal action, including divorce, as key drivers behind financial problems (e.g., Wiles, 2012). Ultimately, financial problems in the retired athletic community have been shown to cause difficulties in transition, limiting post-sport career choices (e.g., Lotysz & Short, 2004; Menkenhorst & Van Den

Berg, 1997). However, the empirical research in this area is inconclusive and needs extending to incorporate athletes from a wide range of sports and cultures and countries.

Self-perception.

Athletes' self-perceptions include self-confidence, body image and self-worth. Predictably, a positive relationship between athlete self-perception and the quality of their career transition exists (e.g., Park et al., 2013). Athletes with higher levels of self-confidence tend to have a more positive approach to the termination of their athletic career and their ability to achieve new career goals (Newell, 2005). Problems in transition arise when the athlete's perception of their body is negative (e.g., Stephan, Torregrosa, & Sanchez, 2007), and the perceptions of control over their bodies is lost (Sparkes, 1998). Additionally, research suggests that the athlete's self-esteem is more likely to be negatively affected on retirement, the more invested they are in their sport (Kleiber & Brock, 1992). That is to say that the higher the level represented, the greater impact retirement has on self-esteem. Given the significance of the potential for self-perception to disrupt adaptation to athletic career termination, the research in this particular area needs extending to examine potential variation in reactions between athletes representing different sports.

In summary, there are many factors that research suggests influence the psychological responses to athletic career termination. These range from the reasons for retirement, levels of athletic identity, individual differences, developmental experiences, injury, achievements in sport, the individual's financial status and self-perceptions. There has been a great deal of high quality research on the role of athletic identity as an influencing factor in responses to athletic career termination. However, research investigating the influence of the aforementioned factors has typically relied on a collegiate athlete sample from North America, and has not, to date, considered any variation in reaction to retirement from in

athletes representing different sports. Furthermore, although the factors outlined provide a good indication as to why some athletes struggle with the process of athletic career termination, there is no data to reveal the temporal patterns of the impact of these factors within the context of sport retirement.

Available resources for coping with career termination.

The next section of the review focuses upon the resources available to athletes coping with career termination.. These resources are broadly summarised into coping strategies, pre-retirement planning, social support, athlete support programmes and interventions.

Coping strategies.

Coping is part of a complex cycle of stress and adaptation (Nicholls, 2010). Effective coping in any domain of life is determined by the balance between perceived resources and barriers (Stambulova, 2003). Therefore, if an individual lacks the necessary resources and faces too many or insurmountable barriers, a crisis may ensue. The ability to cope with uncertainty and a wide range of new demands is central to the outcome of all athletic career termination (Stambulova, 2003). Popular coping strategies that athletes in transition use are acceptance, positive reinterpretation and growth, planning, active coping, mental disengagement, and seeking of social support for emotional reasons (Grove, Lavallee & Gordon, 1997). However, in a systematic review of career transition literature, Park et al. (2013) found no clear evidence of the effectiveness of one strategy over another for athletes retiring from sport. Not all coping strategies are helpful, yet research shows that retired athletes have the propensity to engage in maladaptive behaviours, such as the excessive use of alcohol, drugs, or tobacco smoking in a bid to cope with their current circumstances (Douglas & Carless, 2009; Koukouris, 1991; Wippert & Wippert, 2008). Given the central

role of coping in determining the quality of the experience of athletic career termination and subsequent adjustment (Gordon, 1995; Murphy, 1995; Taylor & Ogilvie, 1994), this area warrants a thorough review. In particular, those strategies that have been determined to promote adjustment, such as pre-retirement planning, social support and athlete support programmes.

Pre-retirement planning.

A planned retirement from sport is of fundamental importance to increasing the likelihood of a successful transition (Lagimodiere & Strachan, 2015), although professional athletes are often hampered in planning for their future careers by the intense demands of training, travel and performance and the ever-present prospect of physical injury. Planning retirement may lead to an identified vocational direction at the end of an athletic career, and an enhanced perception of control over the process of retirement (Alfermann, Stambulova, & Zemaityte, 2004). In addition, planning may help increase the likelihood of a readiness to retire that incorporates decision-making and adjustment to a post-sport life (Alfermann et al., 2004). Pre-retirement planning often involves vocational, psychological and financial planning for the end of a sport career (Park et al., 2012) and is more beneficial the longer its engaged with throughout the sport career. Despite the apparent benefits of engaging in planning for a second career, athletes regularly display low levels of awareness of the need for this activity while engaged in their athletic career (Park et al., 2012). Furthermore, it is often the case that coaching staff perceive such planning to detract from sports performance and thus they avoid broaching the subject of retirement with their athletes (Lavallee & Robinson, 2007). If the engagement with a fundamental resource such as pre-retirement planning all centres on the promotion of that resource by coaching staff, then a detailed examination of the effects of the sport culture on pre-retirement planning is required. The

impact of a lack of engagement in pre-retirement planning often leaves athletes reliant on alternative forms of coping, such as social support.

Social support.

Social support is defined as the "verbal and non-verbal communication between recipients and providers that reduces uncertainty about the situation, the self, the other or the relationship and functions to enhance the perception of control in one's life experience" (Albrecht & Adelman, 1987, p.19). Schaefer, Coyne and Lazarus (1981) defined five different types of social support: emotional, esteem, network, information and tangible. Emotional support refers to communication that meets an individual's affective needs and esteem support is communication that bolsters an individual's self-esteem (Mattson & Hall, 2011). These are the types of support most commonly associated with the concept of social support. Network support affirms individuals' belonging to a network and informational support is communication that provides required information (Mattson & Hall, 2011). Finally tangible support is the physical assistance provided by others (Mattson & Hall, 2011). Research examining social support in retiring athletes has not explicitly sought to assess the impact of the different types of social support on the quality of adaptation to a life post-athletic career; however it has examined the impact of the providers of support. In general, research has concluded that support from others can have a positive impact on the quality of the athlete's retirement experiences (Park et al., 2013). Family, friends, consultants, teammates, coaches, agents, trainers, and even the media (Cosh, Crabb & LeCouter, 2013) can all function as forms of social support. According to Stambulova, Alfermann, Statler and Côté, “athletes perceive social support from significant others as the most important resource at the beginning and at the end of the career” (2009, p. 408), however, it is important to keep in mind that support is not always positive. Negative support can include doubt, scepticism,

pigeonholing, fixating on the athlete's athletic identity and achievements or problematizing their transition within or out of their sport (Beamon, 2012; Cosh et al., 2013; Ibarra, 2003). Athletes also must be mindful of whether the support they receive is real or perceived (Goodwin, Cost, & Adonu, 2004). Perceived support refers to the belief that one's network can or will offer effective support in times of need. While perceptions of support have been shown to be beneficial in predicting adjustment to stressful life events (Wethington & Kessler, 1986), athletes must be aware that they do not always translate into receiving actual support. It is not uncommon for athletes to experience positive social support from their coaches and organization while they are playing, only to find that once they have exited sport, the support has diminished (McKnight, Bernes, Gunn, Chorney, Orr & Bardick, 2009). Social support helps develop and solidify self-concept and thus negative responses from social support systems or incorrect perceptions of support can significantly and negatively impact an athlete's self-view, approach to transition and ability to embrace new roles and identities (e.g., Croezen, Picavet, Haveman-Nies, Verschuren, de Groot, & Veer, 2012). One source of social support that has been isolated and examined for its role in assisting athletes at the end of their athletic careers is athlete support programmes, most commonly provided by the governing bodies of sport.

Athlete support programmes.

When athletes embark on the transition out of their sport, the tension between current and future identities has the potential to be considerable (Kenny, 2015). Moving from a place of certainty in employment (Dunlap, 1994), in status and in profile to a high degree of uncertainty can cause periods of stress and tension (Turner & Avison, 2003). During this time, athletes may benefit from assistance in considering and planning for post-athletic career development (Grove, Lavallee, & Gordon, 1997). The career transition and development

literature argues for a refocus to include non-athletic transitions and move towards a life skills perspective where academic and vocational training are key components (Kenny, 2015). Ultimately, the quality of the career transition can be enhanced by engaging in a support programme and life skills development (Park et al., 2013).

There are a number of support programmes available for athletes with different versions offered in different countries. In the United Kingdom, the Athlete Career and Education (ACE) programme was offered through individual sport teams or by publically-funded organisations such as the English Institute of Sport (EIS) or Sport Wales. These programmes aimed to engage athletes throughout their career by enhancing both personal development and sport performance (Park, Lavallee, & Tod, 2013). Generally they consist of athlete assessment to determine a needs analysis, life skill learning, and the identification of career opportunities as well as assistance with planning their transitions. However, despite the apparent utility of the ACE programme, the take up rate amongst athletes is relatively low, with only a third of eligible athletes accessing it, and 75% of those rating it as 'positive' (UK Sport, 2001).

Since 2004, the ACE programme has transformed into what is currently known as the Performance Lifestyle programme. Although the objectives are still the same as the ACE programme, the focus has shifted onto performance (Gilmore, 2008). This programme supports athletes in achieving a balance in their sporting and personal lives, it provides educational guidance, career planning, transition support and training and development (Park et al., 2013). Among professional sports, there are a multitude of athlete support programmes available that mirror the ACE or Performance Lifestyle content (Gilmore, 2008). For example, the England and Wales Cricket Board (ECB) offers an athlete support programme that combines education, career and lifestyle support. Likewise, the Professional Rugby

Players' Association (RPA) and Welsh Rugby Union (WRU) operate a player development programmes with a focus on personal development, lifestyle balance, education and life after rugby. However, despite the widespread availability of these programmes, their use, effectiveness and athlete perceptions of their benefits have not been systematically examined (Park et al, 2013). As such, it is currently unclear as to whether or not this form of support is actually of benefit to athletes in transition, and if so, the longevity of the effects.

Interventions.

Interventions for athletic career termination generally relate to periods of crisis. Crisis transitions tend to result when the athlete fails to meet the challenges of adaptation to a post-sport life (Alfermann & Stambulova, 2012; Alfermann et al., 2004). Interventions may serve to prevent crisis transitions, help athletes cope with this experience or deal with the negative consequences of a failure to cope (Alfermann & Stambulova, 2012). Assistance during periods of crisis are often associated with clinical interventions, however educational strategies may also be appropriate in these circumstances (Stambulova, 2011). Despite being a key element of support for athletes preparing to approach the end of their athletic career or indeed struggling to cope, there is a dearth of literature presenting and examining bespoke counselling approaches. There are a number of suggestions of appropriate interventions proposed as part of the theoretical models in the athletic career transitions domain. These include stress management (Meichenbaum, 1977), cognitive restructuring (Beck, 1979), and emotional expression (Yalom, 1980), which are based on research with non-athlete populations. However, Lavallee, Nesti, Borkoles, Cockerill and Edge (2000) detailed further interventions for working with athletes in transition that include information processing and mentoring. Information processing interventions relate to the process of account-making, which involves explaining, describing and emotionally reacting to problematic life events

(Harvey, Orbuch, Weber, Merbach, & Alt, 1992). Mentoring involves a close relationship in which a mentor can assist a mentee (in this case) overcome the challenge of the career transition experience (Perna, Zaichkowsky, & Bocknek, 1996).

In 2011, Stambulova presented her six step mobilization model for counselling athletes experiencing a crisis transition. The model that she proposed is designed to provide a practitioner with a framework for dialogue with the client and involves in summary (1) collecting and sorting client information; (2) identifying, prioritising and articulating the problem issues; (3) analysing the athlete's current status of coping resources and barriers; (4) discussing alternatives in coping and stimulating the athlete to make a strategic decision; (5) offer advice on goal setting and planning in regard to the strategic decision made; and (6) conclusion and provide follow ups. Regardless of the number of suggestions for interventions to use with athletes in preventing or experiencing crisis transitions, the application of these interventions has largely been supported with a broad range of populations outside of sport, and there has been a failure to examine the utility of these treatment strategies with individual athletes (Wolff & Lester, 1989).

In summary, the ability to cope with uncertainty is central to the outcome of athletic career termination. There are a number of coping approaches that have the potential to assist athletes at this time. They include pre-retirement planning, various different types of social support, athlete support programmes and interventions. Despite the critical role of coping in securing a smooth, healthy adaptation to life after sport, there is a general lack of research examining the effectiveness of the different approaches in bringing about adaptation to athletic career termination.

Adaptation to athletic career termination.

Adaptation to athletic career termination is said to occur when a healthy career transition is experienced. Stambulova, Alfermann, Statler and Côté (2009) suggest that healthy career transitions are characterised by a general feeling of adjustment and an increase in levels of satisfaction with one's career, and with life. Life satisfaction alone is indicative of self-perceived adaptation (Diener, Emmons, Larsen, & Griffin, 1985) and a key measure of adaptation to athletic career termination (Stambulova et al., 2009). Life satisfaction is a subjective evaluation of overall quality of life (Diener & Diener, 1995), providing insight into differences between expectations and present life experiences (Diener & Lucas, 2000). It maintains an inverse relationship with emotional distress (Kuppens et al. 2008; Schimmack, Oishi, Furr, & Funder, 2004) and a direct one with positive emotions (Kuppens et al. 2008) and the use of positive adjustment strategies (Dubey & Agarwal, 2007). Research shows that life satisfaction is a relatively stable and pervasive (Diener & Seligman, 2002), although major life events have substantial but often temporary effects on it (e.g., Lucas, 2007). However, the precise nature of these effects appears to vary across different events. For instance, research shows that individuals typically do react to major life events (like marriage, divorce, disability, childbirth, widowhood, and unemployment), but the length of time that these reactions last varies (Lucas, 2007). Past research suggests that people adapt relatively quickly to marriage and childbirth, more slowly to widowhood, and that adaptation is not complete for unemployment and the onset of disability (Lucas, 2007; Lucas, Clark, Georgellis, & Diener, 2003; 2004; Dyrdal & Lucas, 2013). Although research indicates that any difficulties that may have existed in the termination of an athletic career diminish as time passes (Douglas & Carless, 2009; Wippert & Wippert, 2008), there is some debate about the length of time it takes to adjust. For example, research in the 1980s and 1990s concluded that

subjective well-being increased 8–12 months after retirement from sport. Adaptation corresponded with an increase in athletes' sense of personal control grew as they began to make decisions concerning their lives (Taylor & Ogilvie, 1994; Werthner & Orlick, 1986). However, Wippert and Wippert (2008) identified reduced stress levels in athletes three months after retirement, whereas McKenna and Thomas (2007) and Douglas and Carless (2009) concluded that adaptation typically took 18 months after the end of an athletic career. More recent research by the Professional Cricketers' Association (2014) reported that 34% of former cricketers reported not feeling in control of their lives 2 years after retirement and a programme of research led by Gouttebarge and colleagues claimed that adaptation can take as long as 8 years in retired professional footballers (Gouttebarge, Frings-Dresen, & Sluiter, 2015) and retired rugby union players (Gouttebarge, Kerkhoffs, & Lambert, 2015).

Research has linked certain factors with life satisfaction on athletic career termination. Namely, career-ending injuries (e.g., Kleiber & Brock, 1992), athletic identity (e.g., Webb et al., 1998), pre-retirement planning (e.g., Park et al., 2012), satisfaction with career (Allison & Meyer, 1988) and social support (Gülaçti, 2010). However, many studies featuring characteristics of career transitions and their influence on life satisfaction have relied on a North American collegiate athletic population, and as such it is unclear as to whether the findings are generalisable to professional athletes. In addition, the lack of consensus over the time it takes to adjust to life after athletic career termination, combined with the sport-specific data discussed suggests that this is an area that requires further investigation.

Statement of Research Question

In summary, the growth of interest in studying the process and reactions to athletic career termination has been borne out of an interest of the anecdotal accounts of the difficulties faced by retiring athletes. In an attempt to try to explain why disengagement from

sport was so problematic for some, psychologists and sociologists employed borrowed theories from gerontology and thanatology which were ultimately criticised for a lack of relevance and equivalence (e.g., Lavallee, 2000). In the 1990s, a shift in perspective led to the proposal of frameworks of athletic career termination, which are broadly conceptualised into two different categories (Stambulova & Wylleman, 2014): athletic career descriptive models, capturing the lifecycle of an athletic career and career explanatory models that seek to illustrate the process of transition through an athletic career. Yet, despite guiding practitioners and researchers through the multifaceted experience of athletic career termination, both categories of model have been criticised for being "culture-blind" and insufficiently contextualised (e.g., Stambulova & Ryba, 2014, p.8). In addition, the validity of the voluntariness of retirement as a factor influencing adaptation to life after sport and the conceptualisation of the outcome of athletic career transitions requires further investigation.

Empirically, research into athletic career termination features investigations of the psychological reactions to retirement from sport, the factors influencing the outcome of the transition (healthy versus crisis), the available resources for coping and adaptation to a life after sport. Although research into this domain has grown exponentially in the last 30 years or so, there has been a high reliance on collegiate athletic populations from North America, making the findings difficult to generalise to professional sport in other countries. Furthermore, gaps in knowledge still exist as to the sport-specificity of athletic career termination and the temporal patterns of adaptation to a life after competitive sport. The purpose of this thesis therefore, is to investigate the experiences of athletic career termination in male professional sport to examine: (1) the conceptualisation of the voluntariness of retirement and its impact on adaptation to athletic career termination, (2) the conceptualisation of the outcome of athletic career termination, and (3) the temporal nature of patterns of adaptation in this sample.

CHAPTER 3

AN IN-DEPTH APPRAISAL OF CAREER TERMINATION EXPERIENCES IN PROFESSIONAL CRICKET

Abstract

This qualitative study explored the career termination experiences of 9 male, retired professional cricketers between the ages of 28 and 40 (mean value 34, *s* = 4.65 m). The participants took part in retrospective, semi-structured interviews. Data from the interviews were inductively content analysed within three transition phases of the retirement process: reasons for retirement, factors affecting adaptation and reactions to retirement. The reasons for retirement were multicausal with the majority of the participants highlighting contractual pressures and a lack of communication as important precursors to retirement. Three main themes accounted for the factors affecting adaptation: a limited pursuit of other interests, developmental experiences and coping strategies. In terms of reactions to retirement, all of the participants reflected negatively on the termination of their career, with a sense of loss and resentment characterising the post-retirement period. The findings illustrated the sport-specific nature of career termination in professional cricket and added further support to the emerging consensus that the distinction between voluntary and involuntary retirement is, at best, unclear.

Career termination is an inevitable feature of a professional athlete's sporting lifecycle, and is often associated with negative consequences such as identity crises (Brewer, Van Raalte, & Linder, 1993) and decreased general life satisfaction (Taylor & Ogilivie, 1994). In the most extreme cases this may lead retired athletes to experience dysfunctional psychopathological reactions such as depression, addictive disorders and the contemplation of suicide (Walker, Thatcher, & Lavallee, 2007). As such, it is perhaps not surprising that career termination has been afforded increased attention in the sport psychology literature.

In an attempt to enhance our understanding of the career termination process a number of models have been proposed in the literature; some describing the variables influencing the quality of the adaptation (e.g., Stambulova, 2003; Taylor & Ogilivie, 1994) and others the lifecycle of an athletic career (e.g., Wylleman & Lavallee, 2004). Stambulova (2003) and Taylor and Ogilvie's (1994) models suggest that causal factors or antecedents play a key role in subsequent post-retirement adjustment, with the quality of the transition dependent upon whether the antecedents were voluntary or involuntary (e.g., Webb, Nasco, Riley, & Headrick, 1998). To elaborate, athletes may decide to end their career of their own volition due to a change in priorities such as a desire to start a family (Alison & Meyer, 1988), to escape financial difficulties (Lavallee, Grove, & Gordon, 1997) or the politics of the sporting organisation (Werthner & Orlick, 1986), for work or study commitments (Swain, 1991), the loss of sporting goals (Park, Tod, & Lavallee, 2012) or decreased enjoyment, motivation and level of competitive performance (Lavallee et al., 1997). Conversely, involuntary causes of retirement include deselection, injury and age (Alfermann, 2000; Taylor & Ogilvie, 1994). While deselection and injury are clearly involuntary and, as such, may have negative repercussions for adaptation (cf. Buβman & Alfermann, 1994; Gardner & Moore, 2006), age is more complex. As Alfermann and Stambulova (2007) noted, the ageing athlete soon

recognises when they cannot operate at the requisite level and are faced with the decision to end their athletic career. From the athlete's perspective, because this decision to retire may to some extent be freely chosen it does not necessarily reflect an involuntary antecedent.

While the distinction between voluntary and involuntary retirement remains key to understanding the athlete's response, there is also a growing recognition that the reasons for retirement are often multicausal and part of an extended and dynamic decision-making process (Alfermann & Stambulova, 2007). Indeed, Park et al. (2012) proposed that athletes experience a series of stages (precontemplation, contemplation, preparation, action), similar to the stages of change in the transtheoretical model (Prochaska & DiClemente, 1984) when preparing to retire, with readiness to retire key to successful adaptation.

Of the factors that influence adaptation to retirement, an athlete's perception of control over the process appears critical (Alfermann, Stambulova, & Zemaityte, 2004). Specifically, athletes who retire on a voluntary basis often report a more healthy transition, for example, exhibiting more positive and less negative emotions (Alfermann, 2000; Alfermann & Gross, 1998). Other factors affecting adaptation include individual characteristics such as personal and social developmental experiences obtained through peer interactions and exposure to complex environments that help form identity, develop pro-social norms and social capital, which may later impact on the nature of the adjustment to career termination (Taylor & Ogilvie, 1994). Restricted personal advancement through an all-encompassing pursuit of athletic goals and the concomitant development of an exclusively athletic identity presents additional adaptational challenges (Lavallee & Robinson, 2007). Crucially, those with high levels of athletic identity may experience decreased perceptions of control (Webb et al., 1998) and an increased vulnerability to emotional distress (Alfermann & Gross, 1998), particularly when they have been publicly recognised for their role in sport and define

themselves based on their popularity (Ungerleider, 1997). In addition, socioeconomic status, financial dependency on the sport, gender, health, and marital status are also thought to affect the adjustment process (Taylor & Ogilvie, 1994). Other factors influencing the adaptation process, categorised as resource-related, include coping skills, social support and practical resources, such as pre-retirement planning (e.g., Alfermann, et al., 2004; Park et al., 2012). Taken together, although these different categories of resources are purported to enhance the ability to cope with career termination, we understand less about the availability and effectiveness of some more than others (Alfermann & Stambulova, 2007). For example, research examining the effectiveness of practical resources, such as planning for retirement and personal development programmes, is sparse. However, where evidence does exist, it suggests that athletes who do plan for retirement are able to adapt to the transition more quickly and report greater life satisfaction (Torregrosa, Boixados, Valiente, & Cruz, 2004).

In terms of the quality of the transition, the most desirable consequence, labelled a "healthy career transition" (Taylor & Ogilvie, 1994), reflects "successful coping in life" and "success in life" (Alfermann & Stambulova, 2007). The evidence suggests that healthy transitions are facilitated by the presence of positive reactions such as a sense of freedom, relief and an opportunity for personal growth (e.g., Greendorfer & Blinde, 1985; Perna, Ahlgren & Zaichkowsky, 1999) or the absence of difficulties on retirement (e.g., Sinclair & Orlick, 1993). In contrast, moderate or extreme repercussions that result in negative consequences, labelled "crisis transitions", reflect the individual's inability to meet the challenges of adaptation to a life post sport (Alfermann et al., 2004; Alfermann & Stambulova, 2007). These crises may manifest in psychopathological behaviour and social difficulties (Taylor & Ogilvie, 1994), acute depression (Reardon & Factor, 2010), identity

crises (Brewer et al., 1993), difficulties with body image (Kerr & Dacyshyn, 2000), and occupational problems such as zeteophobia (Lavallee et al., 1997).

In the UK, cricket is a sport that has been similarly associated with some of the extreme psychological reactions outlined above. Cricket is a fully professional, international bat and ball sport, contested by two teams of eleven players. Professionally, cricket is played in various formats, ranging from 20 overs per side (Twenty20 cricket), to 50 overs per side (limited overs, or One Day cricket), to a game that can last up to 5 days (first class, or test cricket). In the UK, the sport traditionally involves a 6-month competitive season during the spring and summer months. The remaining 6 months over the autumn and winter comprise the off-season when selected players may travel to the southern hemisphere on tour, while others remain domiciled at home. For elite, international cricketers, the game involves longer spells touring or travelling, with extended periods of time spent in the company of teammates. Due in part to this competitive structure, cricket attracts regular debate over the scale of the demands placed on professional players. Indeed, in recent years, several English cricketers have reported suffering from mental health problems during their career (e.g., Trescothick, 2009). Notwithstanding the pressures of the sport, retirement from cricket can also be problematic, with 34% of retired players admitting that they did not feel in control of their lives two years after terminating their career (Professional Cricketers' Association, 2014). Furthermore, those individuals reporting on-going problems with their lives after retirement rated their transition out of professional cricket as “poor”. Such problems are purported to lead to further issues of concern, with cricket anecdotally reported to have a high suicide rate amongst its ex-athletes compared to other sports (Frith, 2001). Indeed, according to Frith, cricket is a stressful sport that is compulsive in nature with an inherent uncertainty that has the potential to “damage the soul”. Despite this suggestion, there is no empirical data

to clarify Frith's claims. Indeed, professional cricket is a sport in which empirical research is scarce. Consequently, the purpose of the present study was to explore the career termination experiences of former professional cricketers in the UK. This focus adds to the existing body of research on multi-sport samples that has failed to address the idiosyncratic nature of career termination in sport. It also addresses criticisms of the quantitative career termination research for being too generic to be practically useful (Greendorfer & Blinde, 1985), and ineffectual at describing individual's experiences (Blinde & Strata, 1992; Parker, 1994).

Method

Participants

A purposive sample of 9 individuals who met the following criteria were invited to participate in the study: (a) participants were male, (b) had represented a county cricket club in England or Wales, and / or the England and Wales national cricket team (at any level), and (c) had retired from professional cricket within a period of 1-5 years prior to their involvement in the study. Participants' ages ranged from 28 to 40 years (M = 34, SD = 4.65), and the mean time elapsed since retirement was 2.3 years (SD = 1.41). The participants represented all of the cricketing disciplines (bowler $n = 3$, batsman $n = 2$, wicketkeeper $n = 2$, all-rounder $n = 2$). Career duration, defined as the date of commencement through to date of termination of the individual's professional cricketing contract, ranged from 3 to 19 years (M = 9, SD = 5.24). Five of the participants had played international cricket for England, and the remaining four played the highest level of domestic professional cricket.

Interviews

Semi-structured interviews were conducted using an interview guide designed specifically for this study, based on a review of the research and methodological literature.

The guide was organised into five sections. Section 1 outlined the purpose of the study and contained demographic questions about the participant's cricketing career. The first section also reminded participants of their right to withdraw at any time and that information that identified individuals would not be disclosed at any stage of the research process (cf. British Psychological Society, 2010). Based upon a review of the major theoretical models of athletic career transitions (e.g., Stambulova, 2003; Taylor & Ogilvie, 1994; Wylleman & Lavallee, 2004), the next three sections related to three different phases of the career termination process. Section 2 explored the reasons for retirement. The third section addressed the factors that affected the individual's adaptation to life after sport. The penultimate section focused on the participant's reactions to retirement, and the fifth and final section offered participants the opportunity to provide any further information they felt relevant. Probes were used to increase the depth and complexity of participants' responses (Patton, 2002). Questions included: "Can you explain the circumstances behind your retirement from cricket?" and "Can you describe how you felt when your professional cricketing career came to an end?" Feedback from two pilot interviews enabled the interviewer to refine her interviewing skills and also resulted in a number of minor revisions to the wording and sequencing of questions (Patton, 2002) and the addition of further clarification and elaboration probes to obtain a fuller understanding of the participants' perceptions of their experiences.

Procedure

Following university ethical approval, participants eligible to take part in this study were identified through the first author's contacts at the Professional Cricketer's Association (PCA) and the England and Wales Cricket Board (ECB). Prior to the interview, participants were contacted by telephone and provided with information about the focus of the study and the interviews. Once participants had provided informed consent, a mutually convenient time and

location for the interview was arranged (Patton, 2002). The interviews were conducted by the first author, and lasted between 45 and 120 minutes. On completion of each interview, participants were fully debriefed about the purpose of the study. The interviews were recorded in their entirety, transcribed verbatim, and subsequently returned to the participants for member checking (Patton, 2002).

Data Analysis

The interviews generated 75 pages of 1.5-spaced transcription. The transcripts were read several times in order to gain an in-depth understanding of the data. This study employed a post-positivist approach to qualitative research where three phases of the retirement process that provided the structure of the interview guide formed a deductive framework within which the interview data were inductively content analysed (Patton, 2002). This process of analysis involved identifying and extracting quotations that captured participants' experiences firstly on a case-by-case basis and subsequently across cases (Miles & Huberman, 1994). Quotations with similar meaning were grouped into lower-order categories and the categories subsequently clustered together into higher-order themes (Patton, 2002).

A number of procedures were employed to enhance the trustworthiness of the data. Member checking helped to ensure the adequacy and accuracy of the information, and protect against potential misinterpretations and researcher subjectivity (Lincoln & Guba, 1987). All of the participants confirmed the accuracy and adequacy of the data. Additionally, at every stage of analysis, the first and second authors engaged in coding consistency checks where validity was established when the same conclusions were drawn from the data. Additionally, peer debriefing was employed with the second author at each stage of the study to protect against researcher bias; the second author fulfilled a protagonist role (Lincoln & Guba, 1987).

Results and Discussion

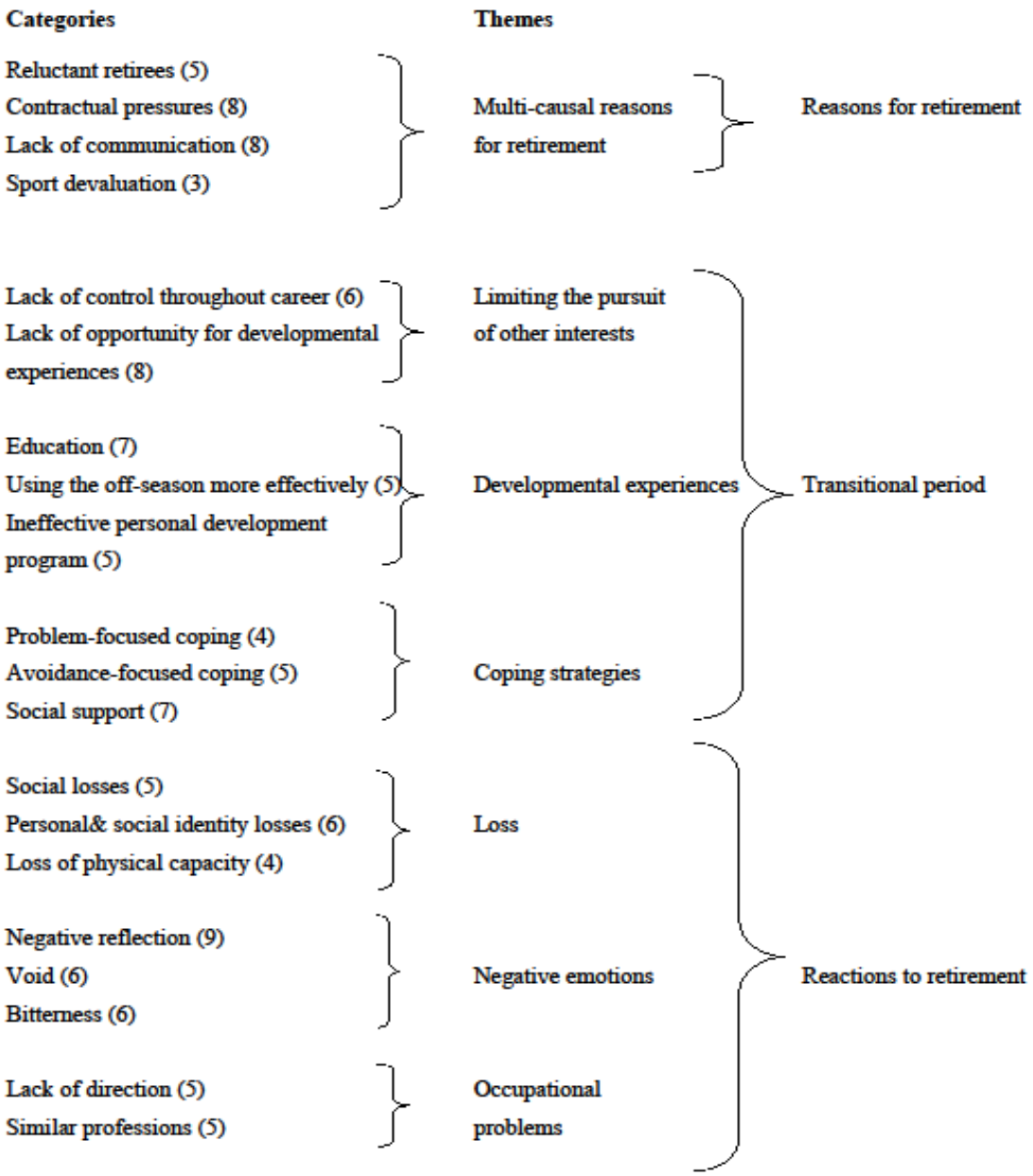
The main aim of the present study was to explore the career termination experiences of retired professional cricketers. The findings are considered within the deductive framework provided by the career termination literature: reasons for retirement, factors affecting adaptation and reactions to retirement. Each of these are described and explained below using the lower order categories and higher order themes that emerged from the inductive analysis of the data. A summary of the findings is depicted in Table 1.

Reasons for retirement

The participants' reasons for retirement were characterised by four categories: *reluctant retirees*, *contractual pressures*, *lack of communication* and *sport devaluation*, which formed one overall higher-order theme, *multicausality*. As such our results support the emerging consensus that the distinction between voluntary and involuntary career terminations fails to capture the full complexity of athletes' reasons for retirement (cf. Kerr & Dacyshyn, 2000; Koukouris, 1994; Park et al., 2012).

The category reluctant retirees reflected participants taking the decision to retire from professional cricket themselves, but not perceiving this decision as being a truly free choice. These participants suggested that a combination of factors meant that they perceived retirement to be the only option available to them in order to escape the pressures associated with attempting to prolong their careers (cf. Kerr & Dacyshyn, 2000). The second category, contractual pressures, reflected the perceived threat of not having a professional contract renewed and the financial and occupational uncertainty that accompanies this situation (cf. Lavallee et al., 1997; Swain, 1991).

Table 1: Summary of themes and categories



All of the participants who perceived their retirement as being voluntary (n = 3) or who were classed as reluctant retirees (n = 5) described the "overwhelming psychological bearing" that contractual pressures had on their decision to retire. They suggested that retirement for contractual reasons was seen as an "exit strategy" from the "emotional instability" (Participant D) associated with playing continuously for the one-year contracts that are commonplace in professional cricket in England and Wales. One participant suggested;

> The stress was too much. I had no idea whether I'd get another contract; nobody was giving me any information. I was living on the edge; I had to get out . . . get away from the not knowing. I wanted something with more security. (Participant E)

As Alfermann and Stambulova (2007) noted, studies with professional athletes are rare and this study highlights the role that the pressure of securing a professional contract plays in retirement from professional cricket.

In conjunction with this contractual uncertainty, all of the participants reported that there was often a lack of communication from the club regarding their future. This lack of communication exacerbated the difficulties experienced by the participants, especially during contract renewal periods. Individuals reported feeling as if they were continuously second-guessing the club's decision to renew their contracts or selection for a squad. In the absence of adequate information, the participants interpreted the lack of communication and demotion to the reserve team as cricket clubs "favouring" younger players (Participant I). One participant referred to being made to feel "past your sell-by-date" (Participant C). Another described his perception of the commercial impact of retaining older players:

> The way the club was going, they took an economic decision. They would have rather paid a couple of juniors than an older guy who's only going to play the longer format of

> the game. They had all these kids coming through; it was just the law of economics really. (Participant F)

In addition, players reported that they often felt "isolated" from their teammates and "commodified" when it was identified that their cricketing career was coming to an end (Participant I). Clubs were reported to "wash their hands" of the player:

> When I was dropped to the second team, the communication straight away was gone. One minute you're in the team, the next you're not. There was no communication . . . I'll try not to sound too bitter about this . . . I got a text message saying "we will not renew your contract" . . . It could have been so much better for me if I'd known. It's sort of ripped away from you and within the space of five minutes you go from being a cricketer to being unemployed. (Participant C)

This category supports previous research that has identified poor communication within teams as an organisational stressor (e.g., Fletcher & Hanton, 2003; Woodman & Hardy, 2001).

The final category relating to the reasons for retirement was sport devaluation, which emerged from the physiological and psychological impact of aging on the decision to retire. The physiological impact of aging was linked to the threat of deselection, difficulties in commanding a regular first team place and the perception that clubs favoured younger players. Participant D spoke of how physiological changes influenced his decision to retire; " . . . I wasn't poor but I probably wasn't as good as the standards I'd set in the past 5 years". The psychological aspects of aging were primarily linked to a loss of motivation. Participant I spoke of how his "motivation disappeared" and that he'd "totally lost his drive". Participant G explained:

> I'd had enough, I used to turn up at the [cricket] ground and think . . . God I play too much . . . I'm sick of this bloody game. I was completely and utterly sick of cricket, my motivational style somehow changed one day. I fell out of love with the game. I don't know why . . . I certainly didn't want to.

The intensity of Participant G's response is consistent with the construct of sport devaluation, a symptom of burnout, and a feature that may further complicate career termination and adaptation to retirement; however, only three participants reported this type of reaction. The multicausal nature of the decision to retire also appeared to *result* in symptoms consistent with emotional exhaustion, as described in the burnout literature (cf. Cresswell & Eklund, 2006). Participants who retired voluntarily or were classed as reluctant retirees reported that a combination of markers (age, threat of deselection, and a lack of communication) led them to pre-empt the possibility that the cricket club may not renew their contract: "I wasn't getting any better, it was so demoralising. I thought I'd pre-empt someone else's decision and hang my boots up, so to speak" (Participant E). In summary, the multicausal nature of the reasons for the participants' retirement confirms the observations of Alfermann and Stambulova (2007) and Lavallee et al. (1997) that a combination of factors influences retirement from sport, while also contributing new insight into the nature of these within the sport of cricket.

Factors affecting adaptation

Three themes accounted for the factors that affected participants' adaptation: *limited pursuit of other interests*, *developmental experiences* and *coping strategies*. Limited pursuit of other interests comprised two categories: *lack of control throughout career* and *lack of opportunity for developmental experiences*. The participants highlighted the negative effect that their perceived lack of control *throughout* their cricketing careers had on the subsequent adjustment to retirement (Kerr & Dacyshyn, 2000; Lavallee & Robinson, 2007). Six of the

participants explained that not having any "responsibility or control" over their lives while playing cricket and conforming to a "structured and regimented existence" presented them with "difficulties envisaging themselves outside of this environment" (Participant C). Participant D expanded on this issue, commenting that " . . . problems come from where you've got guys who are used to having everything done for them . . . guys can't stand on their own two feet, that's where they've got problems and will struggle". However, this perceived lack of control during their career had additional implications for the individuals' developmental experiences. Participants explained how they felt that the cricketing environment limited their pursuit of other interests, thereby restricting opportunities for their personal and professional development outside of the sport; which in-turn detrimentally affected their adaptation to retirement:

> It's really tricky to develop an enthusiasm for anything other than cricket. They [coaches] think you're not giving your full 100% to your game. I wish I had something outside of cricket, I would have found it easier to cut myself off. (Participant J)

Under the rubric of developmental experiences three categories emerged: *education*, *using the off-season more effectively* and *ineffective personal development programmes*. The role that education played in the adaptation process was highlighted by participants as being a potential "protecting factor" (Participant F), a "cushion in the background" and something that gave the individuals "empowerment" and "the potential" to adapt (Participant H). Participants emphasised the importance of pursuing their education before, or during their cricketing career, rather than approaching or following retirement. Previous research has suggested that acquiring academic qualifications prior to retirement may enhance post-athletic life satisfaction and self-esteem (Kleiber & Malik, 1989), providing the basis for the

development of non-athletic identities and skills transferable to other domains relevant to a second career (Price, Morrison, & Arnold, 2010).

In summary, the majority of the participants in the present study identified the lack of opportunity to explore developmental experiences such as education, as limiting their ability to adapt to retirement. Participants felt that they should have made more of the off-season in cricket to explore post-career employment opportunities, which they saw as a form of pre-retirement planning. The competitive season in professional cricket can be up to 6 months long, unless players are engaged at international level, where the season can occupy 10 months of the year. Indeed, the break from the competitive schedule (September to April in the UK) was described by participants as "notoriously under-utilised", despite providing an ideal window in which the individuals could engage in, for example, practical work experience. The findings of the present study support the suggestion that rehearsal opportunity might assist in the quality of the transition process (Goodman, Schlossberg, & Anderson, 2006).

Although a personal development programme jointly administered by the PCA and the ECB offering a number of services (e.g., training, mentoring, work placements) is available to assist all professional cricketers in their preparation for life after the game, it appears that there is a reluctance to participate in the programme, perhaps in part because of doubts about its effectiveness. Participants in the present study reported these services to be "ineffective" and "undirected" (Participant B) with "little incentive or promotion of the services on offer by the clubs" (Participant J). The negative perception of the programme on offer reinforces the findings of earlier studies that have also revealed player's unwillingness to participate in such schemes and plan for their post athletic career (Gorely, Lavallee, Bruce, Teale, & Lavallee, 2001; Petitpas & Champagne, 2000). However, the participants in the present study

highlighted additional concerns regarding the appropriateness of the programme content and the way the county cricket clubs perceive these services.

The third theme, coping strategies, comprised the categories of *problem-focused coping*, *avoidance-focused coping* and *social support*. Analysis of the transcripts revealed that participants used problem- and avoidance-focused strategies to help deal with the issues that confronted them on their retirement from sport. One participant (F) illustrated the problem-focused coping strategies he employed:

> I was just very conscious of moving on and finding something else that I could try and be good at. I kind of immediately enrolled on a course, got involved with a football team, and I just . . . I wanted to avoid developing dodgy habits at all costs and focus on things functional toward my future.

In contrast, Participant C illustrated the use of avoidance coping strategies:

> I thought I knew what was coming, but as it ended up, I hadn't got a clue. And you know, I was stewing about it, so I tried to stop thinking about it. I know it sounds like I'm storing a lot of problems in later life or something … I don't know . . .

There was no evidence of any of the participants having employed emotion-focused coping strategies, thereby failing to take advantage of the potential benefits that could be conferred by engaging in this coping strategy (Alfermann & Stambulova, 2007).

The final category in the coping strategies theme, social support, has been identified as playing a crucial role in the transition of retiring athletes (Petitpas & Champagne, 2000). Although participants' primary social support was derived from their athletic involvement (cf. Coakley, 1983; Rosenfeld, Richman, & Hardy, 1989), support was not always readily available during the transition process. The participants expressed regret that they were

unable to talk to teammates about the transition; with over half suggesting that more appropriate social support during the build-up to the transition would have facilitated both the transition and their adaptation to life after professional cricket. Participant C recalled:

> You're like a wounded animal that gets left alone. I think definitely people . . . cricketers . . . don't want to talk about the end of their careers and if you're in a position where it looks like you're coming to the end of yours . . . men aren't very good at talking anyway so they don't want to talk about your problems, but they also don't want to talk about a problem that's going to affect the atmosphere. So you do get yourself into a situation, which is like being in a vacuum where nobody wants to talk about what's happening, but they all know it is happening.

Parker (1994) identified similar issues, suggesting that a reluctance to discuss impending retirement could affect the psychological well being of individuals by creating the potential for residual emotions that have not been addressed sufficiently in the transitional process. Participants describing the loss of their social support network also highlighted further difficulties following retirement. Participant H noted:

> Well I missed out on the camaraderie when I wasn't involved . . . some friends, some of them, some team mates literally dropped me overnight because I was no longer contributing to their social circle which is . . . I mean I spotted straight away, and dealt with that. It was a bit of an eye opener.

Sinclair and Orlick (1993) also found that athletes in their study frequently reported missing the social aspects of their sport. In addition, participants' restricted social identity and the absence of alternative sources of social support may have contributed to the feelings of isolation felt following their retirement (Alfermann, 1995; Schmid & Schilling, 1997). In

summary, the participants described how a loss of personal control, the potential for disempowerment during a professional cricket career, and the lack of social support during the transition might have exacerbated difficulties in adapting to life after cricket.

Reactions to retirement

Three themes accounted for participants' reactions to retirement: *loss*, *negative emotions* and *occupational problems*. The theme of loss comprised three categories: *social losses*, *personal losses* and a *loss of physical capacity*. Participants described these losses regardless of whether they had reported retiring voluntarily or involuntarily. For example, when describing the enduring effects of retirement Participant E reported:

> I still dream about it [cricketing career]. Walking out to bat. Being on the back pages [of newspapers] the next day. The camaraderie . . . my friends . . . who I was . . . That's all gone now and I'm not sure I was really ready to let it go.

The theme negative emotions also comprised three categories, *negative reflection*, *void* and *bitterness*. When asked to comment on the quality of their transition, participants explained how they reflected on the experience with "negativity and regret" (Participant E). In addition, some participants criticized the manner in which they were treated by their organizations during the transition. Participant B described how this treatment "cast a cloud over my [cricketing] career, meaning I was isolated from my environment...everything I knew." Furthermore, one participant whose elite career spanned 19 years described his transition as:

> Like the break-up of a marriage. It is so involving, and it's so all encompassing. And suddenly . . . there's nothing. . . I had one love in life and it was cricket . . . and I guess

> when you realise you can't play it all the time anymore it is a very sad day, and I now wonder what all the hard work was for. (Participant A)

Following retirement Participant I reported experiencing a void that he continues to struggle to fill:

> When it was coming to an end [cricketing career] I was asking myself "what if this is a good as it gets?" Cricket, I mean. Then it [retirement] comes, and there's a gap. A void. Yes, Ok, I am working, but it's no substitute, I didn't . . . and still don't know how to fill it.

Participants also reported experiencing negativity and a sense of bitterness for up to five years after career termination, with no differences among those citing voluntary or involuntary retirement. In relation to the reaction to retirement, previous research has suggested elite athletes experience a "brief" and "occasional" sense of loss on retirement (Curtis & Ennis, 1988). However, our findings suggest that this reaction may be more enduring in the professional cricketing population.

The final theme, occupational problems, comprised two categories; *lack of career direction* and *similar professions*. The participants' accounts suggested that they faced occupational problems that manifested themselves in the form of a continued lack of career direction (n = 5), despite the provision of the personal development programme. This was commonplace among the participants who had ended their careers voluntarily. For example, Participant I claimed:

> I'm still in a bit of a quandary as to what I want to do really. You know, I've got some passions…sport for example. I just want to be successful in what I do, and I just want to emulate my cricketing career…. You know, I'm a creature of habit I will pursue a goal

and everything will stop in order for me to drive forward. But I don't know how successful I can be outside of cricket. I just don't know what to do.

The majority of participants suggested that moving into similar professions on the cessation of their cricket career may have protected them against the adverse psychological consequences associated with retirement: “I was petrified of working in an office. If I couldn’t play cricket, I wanted to move to something with the same challenges” (Participant H). Professions that shared preferred characteristics with a cricketing career such as competitiveness, physicality, travel, working in a team and performance related assessment as being desirable features of their post-cricket occupation were cited.

In terms of the quality of the transition, research suggests that athletes experience either a “healthy career transition” or a “retirement crisis” (e.g., Taylor & Ogilvie, 1994). Alfermann and Stambulova (2007) defined a "healthy career transition" as consisting of two elements; successful coping with the career termination process and success in life. In summary, the present study failed to find any support for either aspect of a healthy career transition, even among participants who reported retiring voluntarily. That is to say, all of the participants in this study reported some difficulty adapting to life after cricket; however, despite these difficulties there was no evidence to suggest the presence of any serious retirement crises in the form of substance abuse or psychopathology. Instead, the present study suggests that retiring athletes' experiences may fall somewhere along a continuum of retirement crises and unproblematic, straightforward adaptation (e.g., Alfermann et al., 2004; Lally, 2007; Sinclair & Orlick, 1993).

The present study had a number of strengths and limitations. First, the study involved the retrospective recall of a small sport-specific, purposeful sample of ex-professional cricketers in England and Wales. In some cases participants were expected to account for events up to

six years prior to interview, and potentially the data may have been subject to response or retrospective recall bias. However, we contend that the retrospective nature of our study afforded the participants the opportunity to reflect on their experiences in ways that could not have been readily accessed by other approaches. The present study is also gender and culture specific; as such, the findings are limited to the male professional game in England and Wales. In addition, the themes generated during the data analysis do not appear to contradict patterns of negative experiences of professional cricketers after career termination. Future research utilising a phenomenological perspective, for example, should seek to redress the balance by recruiting professional cricketers with positive experiences of career termination to gain a more balanced understanding of this critical life event. Finally, in order to protect against the effects of researcher subjectivity in such projects, bracketing methods such as keeping memos during the course of the research, being interviewed by individuals external to the research to uncover and bring into awareness preconceptions and biases and keeping a reflexive journal would have been beneficial and should be considered in future research (e.g., Tufford & Newman, 2012).

Research conducted with professional cricketers is rare. This study has highlighted the role that commercial and contractual pressures play in the transition process. Future research should seek to gain a clearer understanding of how such pressures impact athletes and their subsequent transition. Similarly, the role of burnout as a potential antecedent to retirement from elite sport should be investigated further, especially as it has previously been found to correlate strongly with affective disorders (Cresswell & Eklund, 2007; Peluso & deAndrade, 2005). Finally, it is recommended that the outcome of the transition process be examined, as it appears too simplistic to suggest that individuals experience either a healthy transition or a retirement crisis at the end of their careers.

The findings here should help enable sport psychologists to identify cricketers at risk of adaptation problems particularly in relation to the following risk criteria: contractual pressures, little educational preparation, and few interests outside of cricket. The absence of any emotion-focused strategies also highlights a key area of importance for sport psychologists, with a clear priority being increasing awareness of the importance of emotional coping. Sport psychologists therefore, need to be prepared to teach cricketers to regulate emotional responses, to seek out emotional social support and to modify cognitive efforts to re-appraise stressors. There are also a number of implications for cricket's governing and professional bodies. First, the proposal that the devaluation of the individual's autonomy during a professional cricketing career may delay adaptation to a post-sport life should be addressed. Issues relating to personal autonomy and control are linked to the structure of an organization and practitioners need to be able to influence change at an organizational level as this social context appears to be just as significant as individual difference factors. Moreover, as our results call into question the effectiveness of structured career transitions programmes, current provision should be reviewed. The participants' accounts provide an insight into how future pre-retirement planning interventions may be better directed to counteract occupational problems and the reported lack of career direction. Communication between players approaching a transition out of the game and coaches and administrators should be regular, open and honest to ensure that players' expectations are managed with regard to future selection and contract renewal.

In conclusion, this study is the first to examine the retirement experiences of elite cricketers. The in-depth examination of the issues experienced by the participants reinforced the suggestion that retirement from sport is influenced by a range of factors. Consequently, readiness to retire may be a more appropriate driver of the quality of adjustment to life after

sport than the commonly held voluntary versus involuntary retirement dichotomy. As noted, future research should focus upon role of contractual and commercial pressures and burnout as possible antecedents as well as provide a more detailed examination of the outcomes of the retirement process. Further investigation along these lines of enquiry will help build a more robust body of empirical evidence enabling practitioners to better prepare athletes for retirement from their sport.

CHAPTER 4

A QUASI-LONGITUDINAL ANALYSIS OF FACTORS PREDICTING ADAPTATION TO ATHLETIC CAREER TERMINATION IN PROFESSIONAL CRICKET AND PROFESSIONAL RUGBY UNION

Abstract

The present study investigated the impact of two aspects of the career termination experience: 1) the antecedents of retirement and 2) factors influencing the transitional period, on post-retirement life satisfaction at two points in time. Data was collected on or near athletic career termination (time 1), and again six years later (time 2). Retired professional cricketers (*n* = 86) and retired professional rugby union players (*n* = 113) from Great Britain completed an online version of the Retirement from Sport Survey (RSS; Alfermann, Stambulova, & Zemaityte, 2004). Four separate hierarchical multiple regression analyses were executed to examine whether antecedent and transitional variables would predict life satisfaction on retirement from professional sport at time 1 and time 2. In addition, changes in RSS variables were examined between groups and over time using a combination of factorial ANOVAs, Mann Whitney U, Wilcoxon, chi square and McNemar's tests. The findings revealed the biggest influence of post-retirement life satisfaction at time 1 was sport type, thereby suggesting that the experience of athletic career transition is largely sport-specific. Further factors influencing adaptation included postgraduate education, athletic identity, injury, injury status, voluntariness of retirement and time to adjust. Additionally, there were commonalities and variances between groups in the change in RSS variables over time. A general pattern of increases in levels of life satisfaction and decreases in athletic identity was observed over time since retirement. The results suggest an increasing pattern of adaptation to retirement over time, and a high degree of sport-specificity in the athletic career termination process.

Professional athletes frequently report high life satisfaction during their careers due to the often intense relationship they develop with their sport (Werthner & Orlick, 1986). However, these careers are notoriously short-lived and retiring athletes are faced with a period of transition during which a variety of obstacles to adaptation to life after sport are encountered. At this time, for many, a decreased level of life satisfaction and reduced quality of life result (Stambulova, 1994). According to Stambulova, Alfermann, Statler, and Côté (2009), life satisfaction is a key measure of adaptation to athletic career termination. They suggest that a healthy career transition is demonstrated by a general feeling of positive adjustment, and an increase in both contentment with one's sporting career and life satisfaction. Several factors are thought to have a bearing on life satisfaction. These include the antecedents of retirement, for example, athletic identity and pre-retirement planning; transition-related variables that include satisfaction with the athletic career and social support; and demographic variables, such as education and marital status.

In the context of sport, the antecedents of retirement are defined as factors that cause or contribute to the termination of an athletic career (cf. Taylor & Ogilvie, 1994). A key antecedent that is known to affect the quality of adaptation to a post-sport life is the voluntariness of retirement (e.g., Stambulova, Alfermann, Statler, & Cote, 2009). In such cases, the predictability of the end of an individual's athletic career brings a sense of control over their future, which inevitably leads to improved adaptation (e.g., Martin, Fogarty, & Albion, 2014). Additionally, career-ending injury is recognised as an influencing factor of levels of life satisfaction in retiring athletes (Malinauskas, 2010) for two reasons. Firstly, injury is an involuntary antecedent to retirement, and thus the element of control over retirement timing is lost, causing negative repercussions for adaptive outcomes (cf. Buβman & Alfermann, 1994; Gardner & Moore, 2006). Secondly, career-ending injuries often impose

long-term or permanent limitations upon athletes' independent functioning (e.g., Lu & Hsu, 2013). To further compound the issue, Kleiber and Brock (1992) concluded that collegiate athletes who suffered career-ending injuries and had a high degree of personal investment in sport, experienced reduced levels of life satisfaction for between 5 and 10 years post-retirement. However, although the relationship between career-ending injuries and life satisfaction appears compelling, the studies conducted to date have relied heavily on collegiate athlete samples (e.g., Perna, Ahlgren, & Zaichowsky, 1999). Furthermore, although career-ending injuries are purported to play a significant role in determining post-sport life satisfaction, it is unclear as to how long these psychological effects linger after retirement. These limitations highlight several avenues for research, in particular with professional athletes.

The 'high degree of personal investment in sport' referred to by Kleiber and Brock (1992) is encapsulated by the term athletic identity, which plays a key role in individual athlete's retirement experiences. Although positively associated with athletic performance (e.g., Werthner & Orlick, 1986), high levels of athletic identity can lead to an increased vulnerability to emotional distress for athletes in transition (Alfermann & Gross, 1998) as they are forced to relinquish a role they are publicly recognised for (Ungerleider, 1997). Studies investigating retirement from sport have shown that high levels of athletic identity ultimately lead to a reduction in life satisfaction (e.g., Webb, Nasco, Riley, & Headrick, 1998). However, there are contrasting perspectives on what happens after this point. For example, previous research suggests that the negative effects associated with athletic identity diminish post retirement from sport (Lavallee, Gordon, & Grove, 1997). Athletic identity has also been shown to decline with age (Brewer, 1994; Brewer, Van Raalte, & Linder, 1993), and when investing in a new career outside of sport (Shachar, Brewer, Cornelius, & Petitpas,

2004). However, Stambulova, Stephan and Jäphag (2007) propose that experiencing challenges in changing one's identity on career termination may be responsible for prolonging the duration of the transition, which in turn may cause a reduction in levels of life satisfaction. For those individuals experiencing challenges changing their identity, it is unclear is how long this reduction in life satisfaction persists.

Other factors such as pre-retirement planning (Park, Lavallee, & Tod, 2012), satisfaction with athletic career (Stambulova, Stephan, & Jäphag, 2007), coping strategies (Fouquereau, Fernandez, & Mullet, 2001), and the availability of social support (Gülaçti, 2010; Kadlick & Flemr, 2008), have been shown to influence life satisfaction on retirement. For example, pre-retirement planning, which includes vocational, psychological and financial preparations for the end of an athletic career (e.g., Park, et al., 2012) is influential in adjustment to post-sport life (Martin, Fogarty, & Albion, 2014). This proactive strategy reportedly provides subjective feelings of control at the end of a sport career, and increases feelings of self-efficacy in relation to adaptation (Alfermann, Stambulova, & Zemaityte, 2004). In addition, coping strategies employed during transition can affect adaptation. For example, McCann, Lipnevich, Burrus, and Roberts (2012) found that using problem-focused (active) coping during the transitional period predicts athletic career termination life satisfaction. However, despite the benefits of coping strategies, research suggests that they tend only to be employed by athletes retiring voluntarily (Alfermann, 2000), and even then, it is not clear how they influence life satisfaction over time.

Life satisfaction is also influenced by demographic factors such as education and marital status. Indeed, research investigating the link between education and life satisfaction suggests athletes' academic experiences have a positive influence on their perceived well-being (Kleiber & Malik, 1989). Moreover, athletes currently studying, or those with a

university degree, experience the least occupation-related difficulties on athletic career termination (Cecić Erpič, Wylleman, & Zupančič, 2004). Finally, a further demographic factor that has an impact on life satisfaction is marriage, at least for men in Western nations, where it is a source of positive affect (Dienar, 2000). However, although marital status has been identified as a significant predictor of life satisfaction when leaving non-sporting roles (Atchley, 1992; Szinovacz, 1996), there is no evidence to support this link in the retired athletic population. In summary, factors that are purported to influence adaptation to athletic career termination include antecedents to retirement, transition-related and demographic variables. Among the demographic factors, the influence of marital status on life satisfaction in athletic or former athletic samples has not previously been examined. Moreover, it is not clear how sport-related factors such as the voluntariness of retirement, injuries, athletic identity and social support, influence life satisfaction over time.

Whilst the temporal nature of the factors influencing adaptation to athletic career termination is unclear, a small number of studies have attempted to determine how long it takes before adaptation typically occurs in retired athletes. These studies have produced conflicting results. For example, Douglas and Carless (2009) and McKenna and Thomas (2007) suggested that adjustment occurs around 18 months post retirement. However, other studies investigating variables indicative of adaptation, such as feelings of control and the absence of common mental disorders, have suggested that adaptation may take between 2 (Professional Cricketers' Association, 2014) and 8 years (Gouttebarge, Frings-Dresen, & Sluiter, 2015). Indeed, at present there appears to be a lack of consensus over the length of time it takes to adapt to athletic career termination, as well as the relationship between the factors that influence life satisfaction and adaptation over time.

Capturing individuals' experiences of, and adaptation to, athletic career termination is key to understanding the complexities of this transitional process. Several measures have been produced to gather data on this process (e.g., see: Cecić Erpič, 2000; Fernandez, Stephan, & Fouquereau, 2006; Schlossberg, 1993; Sinclair & Orlick, 1993). Among the most popular of these is the Retirement from Sport Survey (RSS; Alfermann et al., 2004), a 50-item questionnaire that collates, among other variables, the quality and long-term consequences of career termination, and life satisfaction. The RSS has been used to compare the career termination experiences of national and international-level multi-sport athletes from Germany, Lithuania and Russia (Alfermann et al., 2004) and France and Sweden (Alfermann & Stambulova, 2007), with the results of these studies highlighting cross-national differences in the athletes' experiences of athletic career termination. For instance, the antecedents to retirement, emotional reactions, coping strategies employed, levels of athletic identity, life satisfaction and the duration of the transition differed according to the nationality of the participants. This diversity in athletic career termination experiences due to culturally- and nationally-specific factors (Seiler, Anders, & Irlinger, 1998; Wylleman, Alfermann, & Lavallee, 2004) suggests that additional influences may account for differences in athletes' experiences, especially at the end of their athletic careers. For example, if adaptation experiences are sensitive to cross national differences, the sport environment, its associated cultural traditions and norms may also account for differences in the experiences of athletic career termination, and even adaptation to life after retirement. Although this particular, sport-specific focus has not been investigated to date.

To summarise, there are several aspects of adaptation to athletic career termination that previous research has not fully explored. Importantly, there is a lack of data pertaining to professional athletes' transitional experiences; in particular, the temporal nature of the factors

influencing adaptation and the sport-specificity of the athletic career termination process. Therefore, the primary goal of the present study was to conduct a quasi-longitudinal examination of the factors predicting adaptation to athletic career transition in a sample of former professional male athletes from cricket and rugby union in the United Kingdom. The present study examined factors relating to both the antecedents of athletic career termination and the transitional period.

Hypotheses

The present study examined the impact of two aspects of the career termination experience: 1) the antecedents of retirement and 2) factors influencing the transitional period, on post-retirement life satisfaction at two points in time. Data was collected on or near athletic career termination (time 1), and again six years later (time 2). It was hypothesised that the demographic variables of level of education and marital status would account for significant variance in life satisfaction at time 1. In terms of the antecedents to retirement, it was hypothesised that pre-retirement planning, the voluntariness of retirement, retirement through injury, and levels of athletic identity would all account for a significant amount of variance in life satisfaction at time 1. For the factors affecting the transitional phase of career termination, it was hypothesised that the demographic variables (education and marital status), athletic identity, injury status, identity change, time to adjust, the use of active coping, satisfaction with career and levels of social support would account for a significant amount of variance in life satisfaction at time 1. The same variables were used to predict life satisfaction at time 2. This second stage of the analysis was conducted to examine the impact of the transitional process upon life satisfaction 6-8 years post-retirement, addressing the lack of long-term data highlighted earlier. A second, more exploratory, purpose of the study was to examine how the perceived quality and long-term consequences of the transition changed

during the six years between the initial and follow-up data collection. It was hypothesised that levels of life satisfaction and education would increase, while athletic identity would decrease over time. Participants' connection to sport was also hypothesised to decrease over time. Other long-term consequences of the transition were examined using a series of variables representing aspects of elements of the athletic career missed by the participants, demographic variables and the perceived benefits from the athletic career.

Method

Participants

A purposive sample of 423 potential participants meeting a number of criteria were invited to take part in the present study. Specifically, the respondents needed to have been (a) professionally contracted to a cricket club or rugby union club in Great Britain, and (b) retired from professional cricket or rugby union for no longer than 3 years. A total of 217 athletes provided data in 2008 (time 1). Of these 217 athletes, 199 provided further data in 2014 (time 2). Only data provided by participants at both time 1 *and* time 2 (n = 199) was used for the analysis in the present study. Of this final sample, 113 were former professional rugby union players and 86 were former professional cricketers (see Table 1).

Table 1

Participant demographics

	N	**Mean age at retirement**	**Mean age (Time 1)**	**Mean time since retirement (Time 1)**	**Mean age (T2)**
Rugby Union	113	30.07 (*SD* = 2.46)	32.03 (*SD* = 2.37)	2.2 years (*SD* = 0.28)	39.04 (*SD* = 2.37)
Cricket	86	30.24 (*SD* = 2.63)	32.22 (*SD* = 2.79)	2.34 years (*SD* = 0.22)	39.22 (*SD* = 2.79)

Measure

The Retirement from Sports Survey.

The Retirement from Sports Survey (RSS; Alfermann et al., 2004) is a 50-item questionnaire that measures several transition-related variables. The questionnaire collected demographic information including: level of education, marital status, sport and level represented (e.g., professional, international), the length of time it took to adjust to retirement from sport, and any periods of unemployment. Pre-conditions of retirement determined the reasons for athletic career termination and whether the participant had engaged in pre-retirement planning, retired voluntarily or not, suffered an injury during their career and whether adjustment to life after sport was necessary (all presented as yes / no questions). The transitional period and coping were measured by Likert scales including an abbreviated version of the original COPE (Carver, Scheier, & Weintraub, 1989), scored on a five point Likert scale (1= not at all to 5 = very much), with higher scores representing more frequent use of the strategy, and the Athletic Identity Measurement Scale (AIMS; Brewer, Van Raalte, & Linder, 1993). The abbreviated version of the AIMS (Alfermann et al., 2004) featured a seven-point Likert scale containing statements relating to athletic identity, where the participants were asked to indicate to what extent they were true (1 = not at all, 7 = completely true). Finally, in the section of the questionnaire that recorded the quality and long-term consequences of career termination, levels of life satisfaction were measured using a scale comprised of 4-items, with 2 items taken from the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985): *I am satisfied with my life* and *I have gotten pretty much what I expected out of life*, and a further 2 items taken from the Life Satisfaction Index-A (LSI-A; Neugarten, Havighurst, & Tobin, 1961), with the wording slightly amended for use with athletes: *I am just as happy now as when I was competing in*

professional sport and *this is the happiest time in my life*. To ensure the LSI-A was tailored specifically for participants from rugby and cricket, small amendments to the wording of selected questions were made. For example; *I am just as happy now as when I was competing in professional sport* became *I am just as happy now as when I was competing in professional rugby / cricket*.

Despite the repeated use of the RSS, it is not clear whether the measure is universally internally consistent, with no validation of this measure available using a range of samples (Park, Lavallee, & Tod, 2013). Additionally, the internal consistency of the scales in this measure have been previously assessed using Cronbach's alpha. For example, the alpha coefficients for the 5-item AIMS were reported as 0.68 (Alfermann et al., 2004) and 0.69 (Stambulova et al., 2007). Alpha coefficients associated with the other scales such as the abbreviated COPE and emotional reactions measures were reported as having alpha values between 0.71 and 0.80. However, Cronbach's alpha is largely dependent on the number of items in the scales (e.g., Cortina, 1993) and consequently, it is widely accepted that when there are less than ten items in a scale, the resultant alpha co-efficient is likely to be small (Voss, Stem, & Fotopoulos, 2000). It is problematic therefore to employ this method of scale reliability in an instrument such as the RSS, where some scales consist of 4 to 5 items. Further problems with the employment of Cronbach's alpha are associated with sample size. In the two aforementioned examples of studies that employed the RSS, the sample sizes were 257 (Alfermann et al., 2004) and 157 (Stambulova et al., 2007) respectively. Whilst these may appear large sample sizes in the context of studies involving elite athletes, they are not large enough to avoid the deleterious effects of sampling error where Cronbach's alpha is used. In such cases a sample size of 300 or more is recommended (Nunnally & Bernstein, 1994). To overcome these difficulties in the present study, an examination of the validity of

the RSS was undertaken using the Partial Least Squares (PLS) modelling tool (Smart-PLS version 2.0 M3; Ringle, Wende, & Will, 2006).

Procedure

Time 1.

Following ethical approval, for the data collected at time 1, the RSS was uploaded onto Survey Monkey (www.surveymonkey.com), an online survey software site. The online measure was piloted with a small number of participants (n = 10) representing both sports to ensure the online tool was operating correctly, appropriate data was being collated, and for conceptual equivalence. The internet link to access the survey was sent by e-mail to all potential participants at time 1 (n = 423) along with a covering letter to explain the purpose and scope of the study and asking participants to provide informed consent. Restrictions were built into the online version of the survey limiting access to invited individuals only and preventing noncompliant responses. This was achieved by setting password protected access to the survey, an inability to select more than one answer, error messages for non-compliant responses when measuring scales (ranks) and where duplication occurred. Recommendations for undertaking data collection via the internet (British Psychological Society, 2013; Benfield & Szlemko, 2006) were followed.

Time 2.

For data collected at time 2, a scaled-down version of the RSS was uploaded using the same online platform for the purposes of collecting follow-up data. As in time 1, the online measure was piloted with a small number of participants (n = 10) representing both sports. The internet link to access the survey was sent by e-mail to all previous participants at time 2 (n = 217).

Data Analysis

Testing the validity of the RSS.

Before the main analyses, data screening was employed to check for the accuracy of data entry and the presence of outliers. This led to all cases being retained. Next, an assessment of the validity of the RSS was carried out using the PLS structural equation modelling (SEM) tool (Smart-PLS version 2.0 M3; Ringle, Wende, & Will, 2006). PLS is ideal for analysis of data involving smaller samples (Chin, 1998), making it suitable for use with a sample size of 199. In the present study, PLS was employed to determine the relationships among the measures underlying each construct (see Table 2).

The first test of the measurement model was individual item reliability. This was assessed by calculating the factor loading of the items on the corresponding construct. It is commonly held that manifest variables should load higher on the construct of interest than on any other variable (e.g., Chin, 1998). Therefore, items that generated low standardized loadings (<0.40) were dropped and the scales reduced and re-assessed (cf. Hair, Black, Babin, Anderson, & Tatham, 2007) until individual item reliability could be demonstrated. The second test carried out was for composite reliability (CR), which represents a measure of the internal consistency of a scale and is interpreted in the same fashion as Cronbach's alpha; with a value of 0.70 or greater considered a good level of internal consistency (Fornell & Larcker, 1981). The CR is considered a superior measure of internal consistency than Cronbach's alpha as it does not assume equal weightings of items (Silva et al., 2010) and it is unaffected by scale length (Shamir, Zakay, Brainin, & Popper, 2000). The third test was for the convergent validity of the scales, which can be determined by examining the average variance extracted (AVE). The AVE measures the variance captured by the manifest variables relative to measurement error; a value of 0.50 or greater is required to demonstrate

convergent validity, thereby justifying the use of a scale (Barclay, Higgins, & Thompson, 1995).

Table 2

ARQ scales examined using PLS with all items prior to deletion

Scale	Manifest Variables	Factor Loading	t-values
Life Satisfaction Scale	I am satisfied with my life	0.53	5.20***
	This is the happiest time in my life	0.79	23.69***
	I am just as happy now as when I was competing in professional sport	0.83	16.38***
	I have gotten pretty much what I expected out of life[a]	0.11	0.74
COPE	Refusing to believe that my sports career is finished	0.71	9.60***
	Taking action to try to make the situation better[a]	-0.09	0.54
	Trying to come up with a strategy or plan about what to do[a]	0.34	1.90
	Using alcohol or other drugs to make myself feel better	0.70	12.43***
	I've given up trying to deal with the situation	0.85	22.50***
	I've been saying things to let feelings escape	0.56	9.05***
	I've been spending time or talking with other people to make me feel better	-0.55	10.06***
	I've been expressing my negative feelings[a]	-0.20	1.46
	I've been trying to see the situation in a different light, to make it more positive	0.41	3.94***
	I've been doing something to think about it less –like going to movies, watching TV etc...	0.58	6.46***
	I've been accepting the reality that my sport career is finished	0.78	13.87***
	I've been making jokes about the situation I was in[a]	0.12	0.84
Athletic Identity Scale	Sport was the most important part of my life	0.82	8.85***
	I needed to participate in sport to feel good about myself	0.90	11.85***
	Other people saw me mainly as an athlete[a]	0.50	1.62
	I started to feel bad about myself when I did poorly in sport	0.89	10.25***
	I considered myself mainly as an athlete	0.91	10.65***

[a]items deleted after initial estimation of construct validity using PLS. PLS uses a bootstrapping method to calculate item weights (or outer weights), and t-values of each formative indicator to determine whether they are significant (Bruhn, Georgi, & Hadwich, 2008; Diamantopoulos & Winklhofer, 2001; Chin, 1998).
t-values >1.96 are significant at the .05* level, t-values >2.58 are significant at the .01** level, t-values >3.29 are significant at the .001*** level.

Other sections of the RSS were used to examine post-transition responses, yet the majority of these were not included in the validity analysis as they were not being used to measure latent variables, but rather to look at aspects of adaptation, post-transition. These variables included marital status, health change and identity change. In addition, career-related variables such as satisfaction with current career and current career success were analysed alongside factors indicating connection to sport, changes in social network, elements missed and benefits of the athletic career.

Initial data screening (time 1).

As participants involved in the study represented two different professional sports: cricket and rugby; an independent groups t-test was conducted to compare levels of life satisfaction between these two groups. The analyses revealed the former cricketers reported significantly lower levels of life satisfaction (M = 1.79, SD = 0.46) than the retired rugby union players (M = 2.96, SD = 0.63), t (197) = 15.74, p = 0.001, d = 2.10, 95% CI [-2.42, -1.72]. Despite this difference, the two samples were combined for further analyses. There were several reasons behind this decision. The final sample consisted of 199 participants. Large numbers of participants meeting the qualifying criteria for a study like this would be unlikely, due to restricted population numbers. By combining the two samples, the total sample size increased to n = 199 thereby providing greater statistical power to study the effects of interest. The inclusion of 199 participants allowed predictive models to be constructed using a ratio of 15 participants to 1 predictor variable, providing scope for the use of up to 13 predictor variables in the analyses (Stevens, 1996). In the present study, therefore, sport type was a variable controlled for in the subsequent analyses.

The main aim of the present study was to identify predictors of life satisfaction following retirement from professional sport at two time points; immediately following

retirement and six years or more later. Hierarchical multiple regression was employed as the primary method of analysis to calculate individual predictor's contribution to, and the overall model's ability to predict, levels of life satisfaction (cf. Petrocelli, 2003). The reliability of the inferences from hierarchical regression models are dependent on meeting a number of assumptions in the data (Tabachnick & Fidell, 2013). All data was checked to ensure the values entered for each variable were valid, that there was no missing data or outliers. Kolmogorov-Smirnov tests indicated that the data was normally distributed. Homoscedasticity was verified through a visual examination of the plot of standardised residuals and indicators of the absence of multicollinearity were obtained through examining the Pearson correlation matrices of the predictor variables in each of the constructed models. Having satisfactorily addressed the statistical assumptions, four separate hierarchical regression analyses were employed to examine whether the antecedent and transitional variables, measured at time 1, just after participants' retirement from sport, would predict life satisfaction on retirement from professional sport at that time (time 1) and again six years or more later (time 2). The ordering of predictor variable entry for each regression model is described in detail below.

Hierarchical order of demographic variable entry.

To effectively test the predictions, the order of entry for the predictor variables was guided by the psychological literature. The order of predictor entry was based upon Cohen and Cohen's (1983) 'causal priority' principle and therefore in a series of steps. Demographic and static variables were entered into the first block for analysis (Cohen & Cohen, 1983) due to their time-bound occurrence (e.g., Schafer, 1991). In response to Petrocelli's (2003) criticisms regarding the absence of detail relating to hierarchical ordering of predictor variables, the full rationale for the selection and order of entry of these are described below.

Model one: Antecedents of retirement.

Preliminary analyses identified differences in life satisfaction between the retired professional cricketers and the retired professional rugby players. Sport type therefore was entered into the first block of data entry, alongside the other demographic variables. The next block included voluntariness of retirement based on previous findings suggesting it is potentially the key determinant of post career life satisfaction (Webb, Nasco, Riley, & Headrick, 1998) and an influencing factor in the quality of adaptation to a post-sport life (Alfermann, 2000; Stambulova, Alfermann, Statler, & Cote, 2009). Injury was included along with voluntariness of retirement in recognition of the far-reaching consequences of the unexpected and involuntary retirement triggered by injury. The second block of data featured the pre-retirement planning and athletic identity variables, both of which are commonly recognised as influencing the quality of adaptation to retirement and life satisfaction (Stambulova et al., 2009; Werthner & Orlick, 1986). The final predictor variable entered in the final step examined the interaction between athletic identity and voluntariness of retirement (using centred variables). This model was used to test the predictors of life satisfaction at time 1 and time 2.

Model two: The transitional period.

A separate model was constructed to determine the importance of several empirically identified predictor variables prevalent during the transition out of sport, and their significance in relation to levels of life satisfaction. This model featured five blocks of hierarchical data entry. The first block featured the demographic variables as detailed in the antecedents model. Athletic identity was entered into the second block due to the empirical evidence of its relationship with adjustment to life after sport. The third step included the injury status variable deemed to be theoretically significant in affecting the quality of the

transition and, consequently, life satisfaction. As the data pertaining to having suffered a sporting injury and whether there were on-going consequences of this injury or not were collected from questions with binary outcomes (e.g., yes or no), a new variable was created using dummy coding. The re-categorised variable involved 'no injuries' as the baseline, which was measured against 'injuries with consequences' and 'injuries with no consequences' categories.

The fourth block of data entry included the following variables: identity change, time to adjust, coping and satisfaction with career. The first of these variables recorded whether the participant felt the need to change their identity during their transitional period. This was included as a predictor variable in this model because previous research has suggested that problems in changing one's identity on career termination may prolong the transition, which may affect levels of life satisfaction (Stambulova, Stephan, & Jäphag, 2007). Next, the time taken to adjust to life after the end of a sporting career was included in the same block of data in recognition of the impact it can have on levels of life satisfaction. Coping variables were entered next due to their suggested influence on life satisfaction. The average score for avoidant and active coping was calculated and entered into this block of the analysis. The final variable entered in this block was 'satisfaction with career' in recognition of the role it plays in reducing negative emotions on retirement (Stambulova et al., 2007). The final block of data entry for the transitional model featured the variable of social support, which was included based on its effectiveness as a coping mechanism during the transitional period (Park et al., 2013) and the relationship between perceived social support from the family and increased levels of subjective well-being (Gülaçti, 2010). For the transitional period model for time 2, the dependent variable changed to the measure of life satisfaction taken at time 2.

Examining changes in RSS variables between groups and over time.

Further analyses were conducted to examine the differences in selected RSS variables both between groups at time 1 and time 2, and the change in the variables over time. Where groups of variables or significant interactions were analysed, Bonferroni corrections were applied to the resultant significance levels. Furthermore, effect sizes and 95% confidence intervals (CI) of the effect sizes were calculated for each analysis. The effect sizes calculated included ω^2 for the ANOVAs, Cohen's *d* for t-tests, *r* for Mann Whiney and Wilcoxon, and Cramer's *V* for chi square and McNemar's tests. Reporting the effect sizes for each analysis provided an indicator of the degree of association between the effect (e.g., a main effect, an interaction) or result and the dependent variable. The 95% CIs of the effect sizes provided a further estimate of the precision of the effects reported in the analyses (e.g., Mullen, Jones, Oliver, & Hardy, 2016).

Specifically, mixed factorial ANOVAs (2x2; Sport x Time, with repeated measures on the time factor) were conducted to examine differences in the individual variables of life satisfaction, athletic identity, and change in social network. Significant interactions were followed up with Bonferroni corrected t-tests ($p < .0125$). The same analyses were conducted on groups of variables such as avoidant and active coping ($p < .025$), features missed from the athletic career ($p < .004$) and benefits from the athletic career ($p < .004$). The specific Bonferroni corrections applied to each group of variables are indicated in brackets.

Mann Whitney U and Wilcoxon Signed Rank tests were employed to analyse the change in the participants' level of education over time. Finally, Chi Square and McNemar's tests were used to analyse the change over time in the individual nominal variables of marital status, health status, satisfaction with career and current career success. Current connection to

sport was measured via 7 separate items and therefore Bonferroni adjusted significance values were examined ($p < .007$).

Results

The results of the analyses are presented in three main sections. Firstly, descriptive statistics of the key variables will be presented, followed by the intercorrelations between the predictor variables measured in the study and the assumptions tested in preparation for the hierarchical regression analyses. The second section includes the main results of the hierarchical regression analyses, and the final section will detail the changes in the post-transition variables over time.

Descriptive Statistics

Table 3

Descriptive statistics for regression variables

Variable	**Time 1**			**Time 2**		
Life satisfaction	**M**	**SD**		**M**	**SD**	
Cricket	1.79	0.46		4.33	1.02	
Rugby	2.92	0.65		4.60	0.88	
Athletic identity	**M**	**SD**		**M**	**SD**	
Cricket	5.58	0.84		3.61	2.71	
Rugby	5.14	1.21		3.22	0.84	
Level of education	**School**	**U/G**	**P/G**	**School**	**U/G**	**P/G**
Cricket	17 (20%)	64 (74%)	5 (6%)	14 (16%)	62 (72%)	10 (12%)
Rugby	47 (42%)	48 (42%)	18 (16%)	43 (38%)	52 (46%)	18 (16%)
Marital status	**Single**	**Married***	**Separated**	**Single**	**Married***	**Separated**
Cricket	3 (3%)	56 (65%)	27 (32%)	2 (2%)	44 (51%)	40 (47%)
Rugby	17 (15%)	93 (82%)	3 (3%)	9 (8%)	97 (86%)	7 (6%)

Injury status (consequences)	**Yes**	**No**	**Yes**	**No**
Cricket	78 (91%)	8 (9%)	80 (93%)	6 (7%)
Rugby	98 (87%)	15 (13%)	102 (90%)	11 (10%)
Identity change	**Yes**	**No**	**Yes**	**No**
Cricket	63 (73%)	23 (27%)	80 (93%)	6 (7%)
Rugby	61 (54%)	52 (46%)	100 (88%)	13 (12%)
Avoidant coping	**M**	**SD**	**M**	**SD**
Cricket	2.94	1.59	3.04	0.85
Rugby	4.06	0.94	2.68	0.76
Active coping	**M**	**SD**	**M**	**SD**
Cricket	3.32	0.44	2.53	0.86
Rugby	3.32	0.44	2.31	0.60
Satisfaction with career	**Yes**	**No**	**Yes**	**No**
Cricket	29 (34%)	57 (66%)	27 (31%)	59 (69%)
Rugby	49 (43%)	64 (57%)	52 (46%)	61 (54%)

* "Married" variable included individuals co-habiting or in a civil partnership.

Table 4

Descriptive statistics for regression variables collected at time 1 only

Pre-retirement Planning	**Yes**	**No**
Cricket	64 (74%)	22 (26%)
Rugby	75 (66%)	38 (34%)
Injuries	**Yes**	**No**
Cricket	81 (94%)	5 (6%)
Rugby	113 (100%)	0 (0%)
Social support	**M**	**SD**
Cricket	2.52	0.37
Rugby	2.54	0.43
Time to adjust (months)	**M**	**SD**
Cricket	14.69	7.52
Rugby	10.61	6.47
Opportuneness of retirement	**Too early**	**About right**
Cricket	82 (98%)	2 (2%)
Rugby	110 (97%)	3 (3%)

Assumptions and Correlations

Both the antecedent and transitional period models were examined for evidence of multicollinearity, the results of which precluded concerns (see Table 5). Additionally, to explore the relationship between the predictor variables selected for analysis (see Table 6), Pearson correlations were computed for continuous variables, point-biserial correlations for dichotomous, nominal variables and Spearman's correlations for ordinal and nominal variables. The highest correlation was .70 reflecting the association between the dependent variables of life satisfaction at time 1, and the same variable measured 6 years later. In the remainder of the variables, there was a significant association between level of education and life satisfaction at time 1 and time 2 and sport type (*rs* = .14 - .28), pre-retirement planning and marital status (*r* = .22), injury status and sport type (*r* = .19), identity change and voluntariness of retirement (*r* = .20), time to adjust and sport type, pre-retirement planning and athletic identity (*rs* = .20 - .33), avoidant coping and sport type and injury status (*rs* = -.23 - .28), active coping and athletic identity and injury status (*rs* = -.17 - .21) and finally satisfaction with career and sport type, and voluntariness of retirement (*rs* = -.15 - .27).

Table 5

Multicollinearity statistics

Model	**VIF**	**Tolerance**	**Correlation Range**
Antecedents T1	1.221	0.829	0.00 to -0.28
Antecedents T2	1.292	0.892	0.00 to -0.28
Transitional Period T1	1.221	0.940	0.00 to -0.33
Transitional Period T2	1.252	0.892	0.00 to -0.33

The results of the hierarchical multiple regression analyses for the time 1 and time 2 antecedents model are shown in tables 5 and 6. In the first model (time 1), demographic variables significantly predicted levels of life satisfaction and accounted for 52% of the variance. Unique predictors of life satisfaction in this block included sport type and level of education. The second step revealed a significant relationship between athletic identity and life satisfaction, which accounted for a further 3% of variance. Finally, by including the Athletic identity x Voluntariness of retirement interaction (see Figure 1), a further 1% of the variance was accounted for. Overall, this model accounted for 56% of the total variance of life satisfaction on retirement from professional sport, $F(9, 198) = 25.20$, $p = 0.001$, $\omega^2 = 0.513$, 95% CI [0.39, 0.47] with sport, postgraduate education, athletic identity and Athletic Identity x Voluntariness of retirement contributing unique variance to the final model. Specifically, higher levels of life satisfaction on retirement from sport are predicted by the sport represented, a postgraduate level of education and a low level of athletic identity. Furthermore, the presence of a significant interaction indicates that the effect of athletic identity on life satisfaction is different depending on the voluntariness of retirement. Therefore, life satisfaction is higher in individuals with high levels of athletic identity when they retire voluntarily.

Table 6

Correlations between regression variables

	Variable	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
1	Life satisfaction	(α)															
2	Life satisfaction 6 years	.70**	(α)														
3	Sport	**.04**	**.14**	(α)													
4	Level of Education	**.28****	**-.14***	**.16***	(α)												
5	Marital status	**.03**	**-.09**	**-.05**	**.07**	(α)											
6	Voluntariness of retirement	*-.12*	*.11*	*-.14*	*-.12*	*-.11*	(α)										
7	Retirement through injury	*.10*	*-.08*	*.05*	*.09*	*.04*	*.05*	(α)									
8	Pre-retirement planning	*.00*	*.01*	*.09*	*-.03*	*.22***	*.07*	*-.04*	(α)								
9	Athletic identity	-.31	.16	-.20	-.27	.03	.00	.03	.14	(α)							
10	Injury Status	-.19**	-.06	-.22	.03	-.07	-.08	-.04	.09	-.02	(α)						
11	Identity Change	*.17*	*.01*	*.20*	*.04*	*.06*	*.20***	*.19*	*.03*	*-.13*	*.18*	(α)					
12	Time to Adjust	-.33**	-.05	-.28	-.07	.05	.14	.10	. 24**	.20**	.06	.09	(α)				
13	Avoidant Coping	.28**	.03	.14	.09	-.02	-.09	.17	.07	-.18	-.23**	.29	-.21	(α)			
14	Active Coping	.19	.00	.16	.18	-.12	-.07	.06	.02	.21**	-.17*	.16	.12	.06	(α)		
15	Satisfaction with Career	*-.27***	*.04*	*.17*	*-.07*	*-.08*	*-.15**	*.06*	*-.05*	*.23*	*.03*	*-.11*	*.00*	*.10*	*-.17*	(α)	
16	Social Support	.06	.01	.03	.02	-.11	.00	-.02	-.12	-.28	.10	-.01	-.15	.02	-.03	-.10	(α)

Numbers in parentheses along the main diagonals are the alpha coefficients. *p<.05, **p<.01, ***p<.001. Pearson correlations stated for continuous variables. Numbers in *italics* represent point-biserial correlations. Numbers in **bold** represent Spearman's correlations

Antecedents of Retirement Models

Table 7

Hierarchical Regression Results: Antecedents Model, Time 1

	B	SE B	*β*	*p*
Demographic variables				
Constant	0.59 (0.22, 0.96)	0.19		
Sport	1.11 (0.92, 1.30)	0.10	.69	*p* = .000
Level of education	0.48 (0.21, 0.75)	0.14	.19	*p* = .001
Marital status	0.04 (0.00, 0.05)	0.12	.02	*p* = .755
Step 1				
Constant	0.36 (-0.33, 1.20)	0.32		
Sport	1.10 (0.93, 1.31)	0.09	.68	*p* = .000
Level of education	0.46 (-0.21, 0.75)	0.14	.18	*p* = .001
Marital status	0.06 (0.00, 0.06)	0.12	.03	*p* = .639
Voluntariness of retirement	-0.02 (-0.17, 0.17)	0.09	-.01	*p* = .883
Injuries	0.10 (0.39, 0.65)	0.09	.05	*p* = .298
Step 2				
Constant	0.98 (0.20, 1.98)	0.39		
Sport	1.08 (0.91, 1.30)	0.10	.67	*p* = .000
Level of education	0.37 (0.11, 0.67)	0.14	.15	*p* = .009
Marital status	0.08 (0.02, 0.08)	0.12	.04	*p* = .488
Voluntariness of retirement	-0.01 (-0.16, 0.18)	0.09	-.01	*p* = .949
Injuries	0.10 (-0.40, 0.62)	0.09	.06	*p* = .246
Pre-retirement planning	-0.08 (-0.25, 0.10)	0.09	-.04	*p* = .410
Athletic identity	-0.10 (0.17,0.02)	0.04	-.14	*p* = .012
Step 3				
Constant	2.46 (0.90, 4.03)	0.79		
Sport	1.11 (0.92, 1.31)	0.10	0.69	*p* = .000

Level of education	0.36 (0.09, 0.64)	0.14	0.15	p = .010
Marital status	0.10 (0.04, 0.11)	0.12	0.05	p = .322
Voluntariness of retirement	0.01 (-0.16, 0.18)	0.09	0.01	p = .904
Injuries	0.15 (-0.36, 0.65)	0.26	0.03	p = .562
Pre-retirement planning	-0.10 (-0.28, 0.08)	0.09	-0.06	p = .272
Athletic identity	-0.36 (-0.62, -.10)	0.13	-0.49	p = .007
Athletic identity x Voluntariness of retirement	0.16 (0.01, 0.31)	0.08	0.37	p = .010

Note: $R^2 = .52^{***}$ for Demographic variables; $\Delta R^2 = .00$ for Step 1, $\Delta R^2 = .03^{**}$ for Step 2, $\Delta R^2 = .03^{*}$ for Step 3.

Table 8

Hierarchical Regression Results: Antecedents Model, Time 2

	B	**SE B**	***β***	***p***
Demographic variables				
Constant	4.19 (2.25, 2.53)	0.32		
Sport	0.27 (0.35, 0.51)	0.16	.14	p = .096
Level of education	0.48 (0.23 0.74)	0.14	.19	p = .052
Marital status	-0.17 (-0.12, -0.18)	0.20	-.07	p = .401
Step 1				
Constant	4.52 (2.31, 2.93)	0.54		
Sport	0.31 (0.34, 0.49)	0.16	.16	p = .050
Level of education	0.24 (0.19, 0.48)	0.14	.17	p = 0.48
Marital status	0.23 (0.20, 0.24)	0.20	-.09	p = .256
Voluntariness of retirement	0.29 (-0.08, 0.06)	0.14	.15	p = .050
Injuries	-0.31 (-0.41, 0.08)	0.15	-.15	p = .038

Step 2				
Constant	3.64 (2.40, 3.12)	0.65		
Sport	0.39 (0.33, 0.49)	0.16	.20	p = .017
Level of education	0.21 (0.15, 0.39)	0.12	.16	p = 0.67
Marital status	0.23 (0.20, 0.24)	0.20	-.09	p = .239
Voluntariness of retirement	0.33 (-0.08, 0.06)	0.15	.17	p = .023
Injuries	-0.33 (-0.41, 0.01)	0.15	-.16	p = .027
Pre-retirement planning	-0.14 (-0.06, 0.08)	0.15	-.07	p = .347
Athletic identity	0.17 (-0.05, 0.01)	0.06	.19	p = .010
Step 3				
Constant	2.35 (1.75, 2.96)	0.31		
Sport	0.39 (0.32, 0.46)	0.04	.64	p = .000
Level of education	0.14 (-0.02, 0.29)	0.08	.15	p = .085
Marital status	0.24 (0.21, 0.25)	0.20	-.09	p = .210
Voluntariness of retirement	0.01 (-0.06, 0.08)	0.03	.02	p = .025
Injuries	-0.01 (-0.04, 0.03)	0.02	-.02	p = .032
Pre-retirement planning	-0.13 (-0.06, 0.08)	0.15	-.07	p = .347
Athletic identity	0.17 (-0.05, 0.01)	0.06	.19	p = .012
Athletic identity x Voluntariness of retirement	-0.02 (-0.08, 0.04)	0.03	-.11	p = .550

Note:R^2 = .05 for Demographic variables; ΔR^2 = .03* for Step 1, ΔR^2 = .03* for Step 2, ΔR^2 = .00 for Step 3.

The second regression analysis was conducted using life satisfaction data collected six years later. The regression model was re-run using the same method described above. At time 2, demographic variables accounted for only 5% of the variance in life satisfaction. Voluntariness of retirement and retiring through injury significantly predicted levels of life satisfaction at time 2. Step one of the model accounted for a further 3% of the variance in

levels of life satisfaction. The second step involved entering retirement planning and athletic identity variables. This revealed a significant relationship between athletic identity and life satisfaction, which accounted for a further 4% of the variance. Overall, this model accounted for 12% of the total variance of life satisfaction on retirement from professional sport, $F(9, 198) = 2.84$, $p = 0.01$, $\omega^2 = 0.074$, 95% CI [0.00, 0.13]. Specifically, higher levels of life satisfaction six years or more after athletic career termination are predicted by the sport represented, voluntariness of retirement, retiring through injury and a low level of athletic identity.

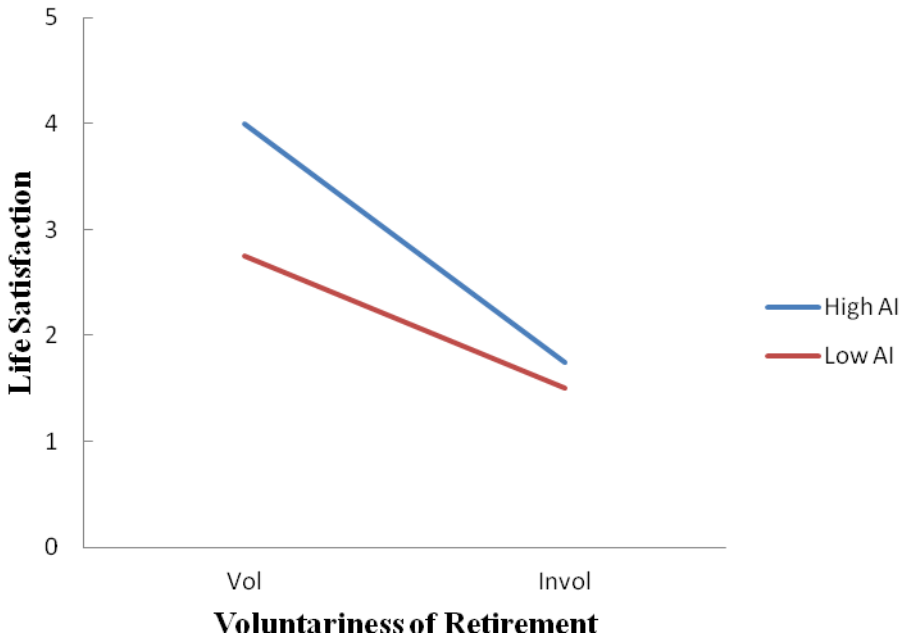


Figure 1. Interaction of voluntariness of retirement and athletic identity and their effects on life satisfaction as antecedents at time 1.

Transitional Period Models

Table 9

Hierarchical Regression Results: Transitional Period Model, Time 1

	B	SE B	*β*	*p*
Demographic variables				
Constant	0.59 (0.22, 0.96)	0.19		
Sport	1.11 (0.92, 1.30)	0.10	.69	*p* = .000
Level of education	0.48 (0.21, 0.75)	0.14	.19	*p* = .001
Marital status	0.04 (0.00, 0.09)	0.12	.02	*p* = .755
Step 1				
Constant	1.19 (0.61, 1.77)	0.30		
Sport	1.08 (0.89, 1.27)	0.10	.67	*p* = .000
Level of education	0.39 (0.11, 0.66)	0.14	.15	*p* = .006
Marital status	0.05 (0.00, 0.10)	0.12	.02	*p* = .660
Athletic identity	-0.10 (-0.18, -0.03)	0.04	-.14	*p* = .007
Step 2				
Constant	1.99 (1.26, 2.71)	0.37		
Sport	1.06 (0.88, 1.25)	0.09	.66	*p* = .000
Level of education	0.32 (0.05, 0.59)	0.14	.13	*p* = .014
Marital status	0.06 (0.00, 0.16)	0.11	.03	*p* = .608
Athletic identity	-0.07 (-0.15, 0.01)	0.04	-.10	*p* = .050
Injury status	-1.00 (-1.41, -0.41)	0.26	-.36	*p* = .000
Step 3				
Constant	2.34 (1.46, 3.22)	0.45		
Sport	1.08 (0.86, 1.30)	0.11	.67	*p* = .000
Level of education	0.34 (0.07, 0.60)	0.14	.13	*p* = .008
Marital status	0.09 (0.00, 0.12)	0.11	.04	*p* = .428
Athletic identity	-0.06 (-0.14, 0.14)	0.04	-.09	*p* = .105
Injury status	-0.94	0.25	-.37	*p* = .000

	(-1.44, -0.44)			
Identity change	0.06	0.08	.03	p = .518
	(-0.11, 0.22)			
Time to adjust	-0.02	0.01	-.14	p = .010
	(-0.03, -0.00)			
Avoidant coping	-0.04	0.04	-.06	p = .394
	(-0.13, 0.05)			
Active coping	-0.05	0.07	-.50	p = .413
	(-0.19, 0.09)			
Satisfaction with career	-0.01	0.05	-.01	p = .901
	(-0.09, 0.08)			
Step 4				
Constant	2.26	0.57		
	(1.14, 3.38)			
Sport	1.08	0.11	.67	p = .000
	(0.86, 1.30)			
Level of education	0.34	0.14	.14	p = .008
	(0.70, 0.61)			
Marital status	0.04	0.11	.04	p = .441
	(0.00, 0.10)			
Athletic identity	-0.06	0.04	-.08	p = .134
	(-0.14, 0.02)			
Injury status	-0.95	0.26	-.38	p = .000
	(-1.45, -0.44)			
Identity change	0.06	0.08	.03	p = .516
	(-0.11, 0.22)			
Time to adjust	-0.02	0.01	-.14	p = .010
	(-0.03, -0.00)			
Avoidant coping	-0.04	0.04	-.06	p = .394
	(-0.13, 0.05)			
Active coping	-0.05	0.07	-.05	p = .423
	(-0.19, 0.09)			
Satisfaction with career	-0.01	0.05	-.01	p = .909
	(-0.09, 0.09)			
Social support	0.02	0.10	.01	p = .850
	(-0.18, 0.23)			

Note: :R^2 =.52*** for Demographic variables; ΔR^2 =.02***for Step 1, ΔR^2 =.03*** for Step 2, ΔR^2 =.02*** for Step 3 and ΔR^2 =.00 for Step 4.

The results of the hierarchical multiple regression analyses for the time 1 and time 2 transitional period model are shown in tables 7 and 8. At time 1, demographic variables significantly predicted levels of life satisfaction and accounted for 52% of the variance. Both predictors contributed significantly. Step one included adding athletic identity which accounted for a further 2% of the variance in levels of life satisfaction. The second step included the introduction of injury status to the model, which accounted for a further 3% of

variance. At step 3, time to adjust was a unique predictor of life satisfaction at time 1 and adding the variables in this step accounted for a further 2% of variance. Overall, this model accounted for 59% of the variance in levels of life satisfaction at time 1, $F(9, 198) = 19.18$, $p = 0.001$, $\omega^2 = 0.44$, 95% CI [0.31, 0.51], with sport, postgraduate education, athletic identity, injuries (with or without on-going consequences) and time taken to adjust to retirement contributing a unique amount of significance to the final model.

Table 10

Hierarchical Regression Results: Transitional Period Model, Time 2

	B	**SE B**	***β***	***p***
Demographic variables				
Constant	4.19 (2.23, 2.53)	0.32		
Sport	0.27 (0.35, 0.51)	0.16	.14	$p = .096$
Level of education	-0.51 (-0.03, 0.19)	0.23	-.17	$p = .028$
Marital status	0.66 (-0.03, 0.16)	0.48	.08	$p = .168$
Step 1				
Constant	3.31 (2.26, 2.74)	0.49		
Sport	0.31 (0.35, 0.50)	0.16	.16	$p = .050$
Level of education	-0.38 (-0.06, 0.17)	0.23	-.13	$p = .107$
Marital status	0.69 (-0.03, 0.16)	0.48	.09	$p = .164$
Athletic identity	0.15 (-0.05, 0.01)	0.06	.17	$p = .023$
Step 2				
Constant	3.61 (2.43, 3.04)	0.64		
Sport	0.29 (0.34, 0.50)	0.16	.15	$p = .075$
Level of education	-0.39 (-0.08, 0.15)	0.24	-.13	$p = .102$
Marital status	0.07 (-0.02, 0.16)	0.05	-.01	$p = .858$
Athletic identity	0.16 (-0.05, 0.02)	0.07	.18	$p = .020$
Injury status	-0.31 (-0.48, -0.06)	0.44	-.10	$p = .489$

Step 3				
Constant	3.62 (2.54, 3.28)	0.79		
Sport	0.40 (0.37, 0.55)	0.20	.21	$p = .042$
Level of education	-0.35 (-0.06, 0.16)	0.24	-.12	$p = .143$
Marital status	0.08 (-0.13, 0.09)	0.06	-.02	$p = .665$
Athletic identity	0.14 (-0.05, 0.02)	0.07	.16	$p = .045$
Injury status	-0.30 (-0.49, -0.07)	0.45	-.10	$p = .511$
Identity change	-0.03 (-0.06, 0.08)	0.15	-.02	$p = .822$
Time to adjust	-0.01 (-0.00, 0.00)	0.01	-.02	$p = .757$
Avoidant coping	0.01 (-0.06, 0.02)	0.08	.01	$p = .903$
Active coping	-0.10 (-0.10, 0.02)	0.13	-.08	$p = .415$
Satisfaction with career	0.08 (-0.04, 0.04)	0.08	.08	$p = .340$
Step 4				
Constant	3.12 (2.35, 3.29)	1.01		
Sport	0.41 (0.37, 0.55)	0.20	.21	$p = .040$
Level of education	-0.33 (0.06, 0.17)	0.24	-.11	$p = .180$
Marital status	0.07 (-0.02, 0.17)	0.05	.09	$p = .124$
Athletic identity	0.16 (-0.05, 0.02)	0.07	.18	$p = .032$
Injury status	-0.34 (-0.50, -0.07)	0.46	-.12	$p = .452$
Identity change	-0.03 (-0.06, 0.08)	0.15	-.02	$p = .827$
Time to adjust	-0.01 (-0.00, 0.00)	0.10	-.02	$p = .835$
Avoidant coping	0.01 (-0.06, 0.01)	0.08	.01	$p = .918$
Active coping	-0.09 (-0.10, 0.02)	0.13	-.08	$p = .454$
Satisfaction with career	0.08 (-0.04, 0.04)	0.08	.09	$p = .301$
Social support	0.15 (-0.06, .0.11)	0.18	.06	$p = .424$

Note: $R^2 = .05$ for Demographic variables; $\Delta R^2 = .025^{***}$ for Step 1, $\Delta R^2 = .00^{***}$ for Step 2, $\Delta R^2 = .01^{***}$ for Step 3 and $\Delta R^2 = .00^{***}$ for Step 4

In the time 2 model, demographic variables significantly predicted levels of life satisfaction but now accounted for only 5% of the variance. Only sport type was a unique predictor of life satisfaction in this block. In the next step, athletic identity accounted for a further 2.5% of the variance in levels of life satisfaction. In step two, none of the variables were unique predictors of life satisfaction, but in combination accounted for a further 1% of the variance in life satisfaction. Overall, this model accounted for 9% of the variance in levels of life satisfaction at time 2, $F(9, 198) = 1.35$, $p = 0.18$, $\omega^2 = 0.15$, 95% CI [0.00, 0.04], with only postgraduate education and athletic identity contributing a significant amount of variance to the final model. Higher levels of life satisfaction were predicted by a postgraduate level of education and low levels of athletic identity. The unique predictors of life satisfaction from each of the regression models are summarised in table 11.

Table 11

Unique Predictors of Life Satisfaction

Antecedents Model T1	**Antecedents Model T2**
Sport	Sport
Postgraduate education	Voluntariness of retirement
Athletic identity	Athletic identity
Voluntariness of retirement x Athletic identity	Injury
Transitional Period Model T1	**Transitional Period Model T2**
Sport	Sport
Postgraduate education	Athletic identity
Athletic identity	
Injury status	
Time to adjust	

Changes in RSS Variables over Time

The third and final aspect of the results involves the analyses conducted to examine changes in key variables between time 1 and time 2. Firstly, life satisfaction and athletic identity levels were assessed for changes over time using mixed factorial ANOVAs (2x2, Sport Type x Time). For life satisfaction, both main effects were significant, $F(1, 197) = 341.63$, $p = 0.00$, $\omega^2 = 0.632$, 95% CI [0.56, 0.69], and $F(1, 197) = 239.18$, $p = 0.00$, $\omega^2 = 0.546$, 95% CI [0.46, 0.62], for Time and Sport, respectively. The Time x Sport interaction was also significant (see figure 2), $F(1, 197) = 92.56$, $p = 0.00$, $\omega^2 = 0.316$, 95% CI [0.21, 0.41]. Follow up independent t-tests revealed that retired cricketers experienced lower levels of life satisfaction than the retired rugby players at time 1, $t(197) = -13.79$, $p = 0.002$, $d = -1.97$, 95% CI [-2.31, -1.63]. Yet, at time 2, the levels of life satisfaction were more comparable between the retired athletes from the two sports $t(197) = -0.65$, $p = 0.52$, $d = -0.09$, 95% CI [-0.37, 0.19]. A paired-samples t test was conducted to compare the change in life satisfaction between time 1 and time 2 for retired cricketers, which increased significantly, $t(112) = -20.50$, $p = .000$, $d = -3.21$, 95% CI [-3.66, -2.75]. The same change was noted in the retired rugby players, $t(112) = 15.58$, $p = .000$, $d = -2.17$, 95% CI [-2.50, -1.84].

For athletic identity, there was a main effect for time, $F(1, 197) = 116.38$, $p = 0.00$, $\omega^2 = 0.368$, 95% CI [0.26, 0.46]. The main effect for sport was not significant, $F(1, 197) = 0.661$, $p = 0.42$, $\omega^2 = 0.00$, 95% CI [0.00, 0.03]. However, there was a significant Time x Sport interaction (see figure 3), $F(1, 197) = 4.15$, $p = 0.05$, $\omega^2 = 0.015$, 95% CI [0.00, 0.07]. Post hoc independent t-tests revealed cricketers were more likely to have higher levels of athletic identity at time 1, $t(197) = 2.92$, $p = 0.004$, $d = 0.42$, 95% CI [0.14, 0.70], but not at time 2, $t(197) = -0.65$, $p = 0.519$, $d = 0.40$, 95% CI [0.09, 0.15]. Paired-samples t tests identified that there was a significant decrease in the levels of athletic identity between time 1

and time 2, t (112) = 6.41, p = .000, d = 0.98, 95% CI [0.66, 1.29] in the retired cricketers and rugby players, t (112) = 10.27, p = .000, d = 1.20, 95% CI [0.90, 1.48].

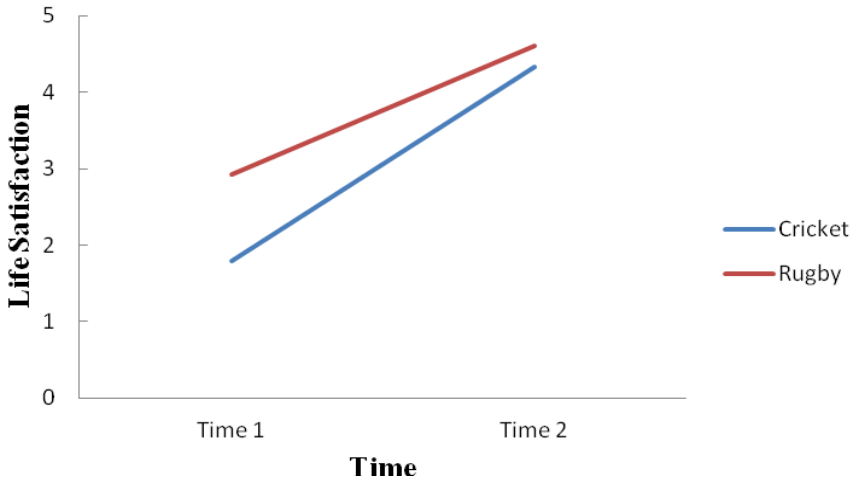


Figure 2. The significant Time x Sport interaction for changes in levels of life satisfaction.

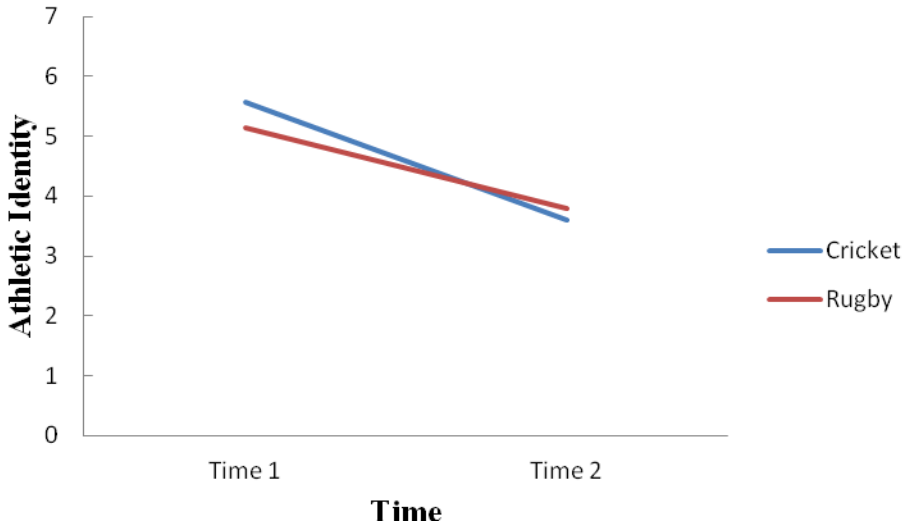


Figure 3. The significant Time x Sport interaction for changes in levels of athletic identity

Descriptive statistics for level of education and marital status along with variables measuring the change in health and identity, satisfaction with career and success in current career are presented in tables 12, and 13.

Table 12

Descriptive statistics for health change

Variable		**Time 1**			**Time 2**	
Health Change	**No**	**Worse**	**Better**	**No**	**Worse**	**Better**
Cricket	16	66	14	13	73	0
Rugby	75	23	15	16	97	0

Table 13

Descriptive statistics for identity change, satisfaction with career and career success

Variable	**Time 1**		**Time 2**	
Identity Change	**Yes**	**No**	**Yes**	**No**
Cricket	63	23	80	6
Rugby	61	52	100	13
Satisfaction with Career	**Yes**	**No**	**Yes**	**No**
Cricket	29	57	27	59
Rugby	49	64	52	61
Career Success	**Yes**	**No**	**Yes**	**No**
Cricket	42	44	49	37
Rugby	82	31	85	28

To highlight the significant results from these analyses, a Wilcoxon Sign Rank test revealed a significant increase in educational level (time 1 and time 2 *mdn* = 3.00 for both groups) in the six or more years since athletic career termination in the retired rugby players, z = -2.00, p = .046, r = 0.02, 95% CI [-0.15, 0.11]. For change in marital status, chi square analyses revealed a significant association between sport group and marital status at time 1, $\chi^2(4) = 40.88$, p = .000, V = 0.45, 95% CI [0.05, 0.50]. Post hoc tests revealed that cricketers

were more likely to be divorced at time 1, $\chi^2(4) = 23.04$, $p = .001$, $V = 0.22$, 95% CI [0.15, 0.32] and at time 2, $\chi^2(4) = 23.04$, $p = .000$, $V = 0.22$, 95% CI [0.15, 0.32]. Results of the further non-parametric, chi square analyses are presented in table 14 below.

Table 14

Results of chi square and McNemar analyses of health status, identity change, satisfaction with current career and current career success

	χ^2	df	p value	*V*	95% CI
Health Status					
Sport time 1	62.89	2	.000***	0.56	0.32 0.68
Sport time 2	0.36	2	.850	0.01	0.00, 0.00
Cricket t1-t2	-	-	.000***	0.77	0.28, 0.71
Rugby t1-t2	-	-	.079	0.21	0.00, 0.11
Identity Change					
Sport time 1	7.72	1	.005**	0.34	0.21, 0.42
Sport time 2	1.16	1	.280	0.05	0.00, 0.00
Cricket t1-t2	-	-	.000***	0.45	0.00, 0.98
Rugby t1-t2	-	-	.079	0.39	0.00, 0.49
Satisfaction with Current Career					
Sport time 1	1.91	1	.17	0.01	0.00, 0.00
Sport time 2	4.36	1	.04*	0.16	0.00, 0.20
Cricket t1-t2	-	-	.500	0.84	0.65, 0.93
Rugby t1-t2	-	-	.250	0.95	0.87, 1.00
Current career success					
Sport time 1	1.78	1	.19	0.02	0.00, 0.00
Sport time 2	3.25	1	.22	0.17	0.00, 0.21
Cricket t1-t2	-	-	.016*	0.85	0.71, 0.85
Rugby t1-t2	-	-	.250	0.93	0.76, 1.00

The chi square analyses were conducted for between sport analyses, and McNemar's tests examined the differences between each sport separately at time 1 and time 2. The results indicated that cricketers were more likely to report that their health had become worse since retiring at time 1, and in addition, there was a significant decline in their perception of their health status at time 2. A similar pattern emerged in the identity change variable where the

retired cricketers were more likely to agree that they perceived the need to change their identity at time 1. Furthermore, the numbers of this group reporting the need to change identity increased at time 2. Finally, the retired cricketers were more likely to report that they were not satisfied with their current career at time 2, and experience a decline in their perception of their current career success between time 1 and time 2.

The final non-parametric analyses were conducted to determine the change in the participants' connection to sport between time 1 and time 2. As seven dependent variables were examined in this subset of the analysis, a Bonferroni correction was applied, resulting in an alpha level of .007. Descriptive statistics are detailed in table 15.

Table 15

Descriptive statistics for connection to sport

	Time 1		**Time 2**	
Exercise myself	**Yes**	**No**	**Yes**	**No**
Cricket	72	14	25	61
Rugby	60	53	28	85
Veterans Competitions				
Cricket	49	37	39	47
Rugby	54	59	42	71
Still in touch with coach				
Cricket	59	27	41	45
Rugby	34	79	37	76
Friends teammates				
Cricket	51	35	10	76
Rugby	8	105	19	94
Work in sport				
Cricket	51	35	54	32
Rugby	31	82	39	74
Sport spectator				
Cricket	6	80	16	70
Rugby	23	90	35	78
Advise athletes				
Cricket	62	24	58	28
Rugby	64	49	60	53

Chi square analyses along with McNemar's tests were used to determine if there were any differences in the way participants remained connected to sport over the six years. The results of the tests concluded that both groups of participants were less likely to exercise; stay in touch with team mates and watch their respective sports as a spectator after six years of retirement. The full set of analyses are summarised in table 16.

Table 16

Chi square analyses for connection to sport

	χ^2	df	p value	*V*	95% CI
Continuing to exercise					
Sport time 1	20.51	1	.000***	0.02	0.41, 0.72
Sport time 2	0.46	1	.500	0.01	0.00, 0.00
Cricket t1-t2	-	-	.000***	0.07	0.12,- 0.08
Rugby t1-t2	-	-	.000***	0.15	0.16, 0.22
Veterans competitions					
Sport time 1	1.65	1	.200	0.09	0.00, 0.21
Sport time 2	1.24	1	.100	0.10	0.00, 0.22
Cricket t1-t2	-	-	.980	0.99	0.98,0.99
Rugby t1-t2	-	-	.970	0.99	0.98,0.99
Still in touch with coach					
Sport time 1	29.10	1	.000***	0.38	0.18, 0.50
Sport time 2	25.15	1	.000***	0.36	0.18, 0.49
Cricket t1-t2	-	-	.960	0.91	0.89, 0.99
Rugby t1-t2	-	-	.250	0.94	0.83, 1.00
Friends former teammates					
Sport time 1	6.34	1	.012	0.18	0.08, 0.20
Sport time 2	1.05	1	.300	0.07	0.00, 0.10
Cricket t1-t2	-	-	.940	0.89	0.89, 0.99
Rugby t1-t2	-	-	.001**	0.61	0.65, 0.86
Work in sport					
Sport time 1	20.47	1	.000***	0.32	0.05, 0.41
Sport time 2	15.69	1	.000***	0.28	0.06, 0.40
Cricket t1-t2	-	-	.250	0.93	0.79, 1.00
Rugby t1-t2	-	-	.008	0.86	0.66, 0.92
Sport spectator					
Sport time 1	8.13	1	.004**	0.20	0.00, 0.25
Sport time 2	22.86	1	.004**	0.34	0.00, 0.40
Cricket t1-t2	-	-	.002**	0.57	0.00, 1.00
Rugby t1-t2	-	-	.000***	0.62	0.60, 0.75
Advise athletes					
Sport time 1	5.02	1	.025	0.16	0.00, 0.19

Sport time 2	2.40	1	.120	0.11	0.00, 0.13
Cricket t1-t2	-	-	.219	0.84	0.62, 0.94
Rugby t1-t2	-	-	.841	0.59	0.55, 0.76

The descriptive statistics for coping and elements missed and benefits from the athletic career are summarised in tables 17 and 18.

Table 17

Descriptive statistics for coping and elements missed from the athletic career

Variable	**Sport**	**T1**		**T2**	
		Mean	**SD**	**Mean**	**SD**
Avoidant coping	Cricket	2.94	1.59	3.04	0.85
	Rugby	4.06	0.94	2.68	0.76
Active coping	Cricket	3.32	0.44	2.53	0.86
	Rugby	3.32	0.44	2.31	0.60
Elements missed from athletic career					
Competitions	Cricket	4.79	0.41	4.60	0.83
	Rugby	4.76	0.51	4.52	0.47
Success	Cricket	4.90	0.31	2.23	0.85
	Rugby	4.44	1.04	1.92	0.72
Financial rewards	Cricket	4.90	0.31	2.23	0.85
	Rugby	4.44	1.04	1.92	0.72
Travel	Cricket	2.83	1.37	2.35	0.85
	Rugby	3.53	1.21	2.70	0.55
Training	Cricket	3.13	1.67	2.77	1.51
	Rugby	2.63	1.92	2.61	1.91
Physical exertion	Cricket	3.57	1.46	3.17	1.46
	Rugby	3.78	1.65	3.49	1.62
Teammates	Cricket	4.70	0.58	3.49	0.63
	Rugby	4.14	0.97	2.95	0.65
Staff	Cricket	2.86	1.38	1.67	0.69
	Rugby	3.03	1.44	1.89	0.92
Feeling of competence	Cricket	4.01	0.82	2.52	0.50
	Rugby	2.97	1.34	2.12	0.70
Feeling of progress	Cricket	3.77	1.08	2.49	0.57
	Rugby	2.84	1.61	1.99	0.74
Social recognition	Cricket	3.22	0.51	2.62	0.69
	Rugby	4.23	1.40	2.62	0.69
Sport atmosphere	Cricket	4.73	0.47	2.49	0.75
	Rugby	4.23	0.86	2.78	0.84

Table 18

Descriptive statistics for benefits from athletic career

Variable	Sport	T1		T2	
		Mean	**SD**	**Mean**	**SD**
Goal setting	Cricket	3.50	0.50	4.03	0.95
	Rugby	3.43	0.50	4.02	1.02
Coping skills	Cricket	3.71	1.39	3.03	1.00
	Rugby	3.88	0.89	3.18	0.55
Self-control	Cricket	3.07	1.47	2.58	1.08
	Rugby	4.04	0.94	3.33	0.62
Self-confidence	Cricket	3.80	0.88	4.10	0.69
	Rugby	4.46	0.52	4.48	0.50
Will power	Cricket	3.02	1.46	3.09	0.55
	Rugby	4.55	0.76	3.47	0.50
Physical condition	Cricket	3.37	1.21	2.57	1.08
	Rugby	3.90	1.25	3.56	0.64
Health	Cricket	3.58	1.15	2.38	0.69
	Rugby	3.51	1.04	2.58	0.92
Friends	Cricket	3.14	0.97	3.01	0.77
	Rugby	3.68	1.32	2.94	0.64
Social ties	Cricket	3.13	0.82	2.80	0.63
	Rugby	3.11	1.25	3.10	0.94
Spouse/Partner	Cricket	2.38	1.47	2.86	0.51
	Rugby	1.56	0.94	2.65	0.85
Knowledge & skills	Cricket	3.58	1.05	2.16	1.14
	Rugby	3.12	1.40	1.56	0.92
Financial stability	Cricket	3.35	1.43	3.09	0.68
	Rugby	1.84	1.05	2.72	0.99

The results of mixed factorial ANOVA analyses include a significant interaction effect of Time x Sport indicating that the effect of time on the use of both coping strategies was different depending on the sport represented. Specifically, a pattern of changes occurred in the employment of coping strategies between time 1 and time 2 alongside sport-specific differences. In summary, the retired cricketers reported increasing their use of avoidant coping strategies between time 1 and time 2 while the retired rugby players reduced theirs. Both groups of participants reported reducing their use of active coping strategies between

time 1 and time 2. Further mixed factorial ANOVA analyses conducted are summarised in Table 19 below.

Table 19

Mixed factorial ANOVA results for coping and change in social network

	F / t	**df**	***p***	***ω^2 / d***	**95% CI**
Avoidant coping					
Time x Sport	121.00	1, 197	.000***	0.38	0.27, 0.47
Time	90.52	1, 197	.000***	0.31	0.21, 0.41
Sport	10.86	1, 197	.000***	0.05	0.00, 0.12
Post hoc tests					
Cricket t1-t2	1.59	112	.116	-0.10	-0.40, 0.20
Rugby t1-t2	12.88	112	.000***	1.61	1.31, 1.91
Sport t1	-7.44	197	.000***	-1.06	-1.36, -0.76
Sport t2	3.63	197	.000***	0.53	0.24, 0.81
Active coping					
Time x Sport	119.02	1, 197	.000***	0.37	0.27, 0.46
Time	70.41	1, 197	.000***	0.26	0.16, 0.35
Sport	8.10	1, 197	.005**	0.03	0.00, 0.10
Post hoc tests					
Cricket t1-t2	-1.77	112	.081	1.92	-0.46, 0.14
Rugby t1-t2	14.21	112	.000***	1.92	1.60, 2.23
Sport t1	-8.46	197	.000***	-1.21	-1.51, -0.90
Sport t2	3.63	197	.000***	0.53	0.24, 0.81
Change in social network					
Time x Sport	17.36	1, 197	.000***	0.08	0.02, 0.16
Time	139.58	1, 197	.000***	0.41	0.31, 0.50
Sport	23.27	1, 197	.005**	0.10	0.03. 0.19
Post hoc tests					
Cricket t1-t2	12.63	112	.000***	-1.73	-2.08, -1.38
Rugby t1-t2	10.27	112	.000***	1.20	0.90, 1.48
Sport t1	-5.25	197	.000***	-0.62	-0.39, -0.66
Sport t2	-0.29	197	.775	-0.01	0.00, 0.01

Note: Bonferroni corrected significance levels for coping p = < .025

The final analyses involved using a mixed factorial ANOVA to determine changes over time and between sports for variables relating to things missed from the athletic career and the participants' perceptions of the benefits they had gained from their athletic career. The descriptive statistics for both scales are presented above (see table 17 and 18). Of the 12

variables in the "things missed" scale, there were Time x Sport interactions for financial rewards, travel, training, competence, development and social recognition. Additionally, there were main effects of sport on the variables of missing success and teammates indicating that the retired cricketers missed both of these elements more than the retired rugby union players. Finally, there were main effects of time on missing success, physical exertion, teammates coaching staff and the sporting atmosphere with reductions noted over time (see table 20 for a summary).

Table 20

ANOVA summary for things missed from an athletic career

	F / t	**df**	***p***	***ω^2 / d***	**95% CI**
Competitions					
Time x Sport	1.32	1, 197	.253	0.02	0.00, 0.05
Time	1.32	1, 197	.253	0.02	0.00, 0.05
Sport	3.05	1, 197	.08	0.01	0.00, 0.06
Success					
Time x Sport	0.76	1, 197	.40	0.01	0.00, 0.03
Time	989.33	1, 197	.000**	0.83	0.79, 0.86
Sport	23.69	1, 197	.000**	0.10	0.03, 0.19
Financial rewards					
Time x Sport	8.27	1, 197	.004**	0.04	0.00, 0.10
Time	319.04	1, 197	.000***	0.62	0.54, 0.68
Sport	7.94	1, 197	.005	0.03	0.00, 0.10
Post hoc tests					
Cricket t1-t2	26.61	112	.000***	4.17	3.64, 4.71
Rugby t1-t2	20.68	112	.000***	2.82	2.82, 3.18
Sport t1	0.89	197	.376	0.12	0.00, 0.15
Sport t2	6.00	197	.000***	0.85	0.56, 1.14
Travel					
Time x Sport	10.01	1, 197	.002**	0.04	0.00, 0.11
Time	135.86	1, 197	.000***	0.41	0.30, 0.49
Sport	15.01	1, 197	.005	0.07	0.00, 0.11
Post hoc tests					
Cricket t1-t2	5.95	112	.000***	0.41	0.11, 0.71
Rugby t1-t2	10.89	112	.000***	0.88	0.61, 1.16
Sport t1	-3.84	197	.000***	-0.55	-0.83, -0.26
Sport t2	-3.66	197	.000***	-0.56	-0.84, -0.27

Training					
Time x Sport	16.73	1, 197	.000**	0.07	0.02, 0.15
Time	20.29	1, 197	.000***	0.09	0.03, 0.17
Sport	1.70	1, 197	.19	0.00	0.00, 0.04
Post hoc tests					
Cricket t1-t2	3.86	112	.000***	0.23	-0.07, 0.53
Rugby t1-t2	1.00	112	.32	0.01	-0.25, 0.27
Sport t1	1.92	197	.06	0.28	-0.01, 0.56
Sport t2	0.63	197	.53	0.09	-0.13, 0.37
Physical exertion					
Time x Sport	0.69	1, 197	.41	0.04	0.00, 0.03
Time	30.32	1, 197	.000***	0.13	0.05, 0.22
Sport	1.47	1, 197	.23	0.00	0.00, 0.04
Teammates					
Time x Sport	0.02	1, 197	.88	0.00	0.00, 0.01
Time	591.78	1, 197	.000***	0.75	0.69, 0.79
Sport	34.48	1, 197	.000***	0.14	0.06, 0.24
Coaching staff					
Time x Sport	0.39	1, 197	.84	0.00	0.00, 0.02
Time	107.80	1, 197	.000***	0.35	0.25, 0.44
Sport	2.38	1, 197	.12	0.01	0.00, 0.05
Competence					
Time x sport	9.96	1, 197	.000***	0.04	0.00, 0.11
Time	298.89	1, 197	.000***	0.60	0.62, 0.66
Sport	40.46	1, 197	.000***	0.17	0.08, 0.26
Post hoc tests					
Cricket t1-t2	15.73	112	.000***	2.19	1.81, 2.57
Rugby t1-t2	9.09	112	.000***	0.80	0.52, 1.07
Sport t1	6.34	197	.000***	0.91	0.61, 1.20
Sport t2	7.42	197	.000***	1.26	0.95, 1.57
Development					
Time x Sport	9.35	1, 197	.003***	0.04	0.00, 0.11
Time	229.73	1, 197	.000***	0.54	0.44, 0.61
Sport	25.53	1, 197	.000***	0.11	0.04, 0.20
Post hoc tests					
Cricket t1-t2	12.28	112	.000***	1.48	1.14, 1.82
Rugby t1-t2	9.09	112	.000***	0.80	0.52, 1.07
Sport t1	4.16	197	.000***	0.65	0.37, 0.94
Sport t2	4.16	197	.000***	0.74	0.75, 1.03
Social recognition					
Time x Sport	20.58	1, 197	.000***	0.09	0.03, 0.17
Time	1769.79	1, 197	.000***	0.90	0.88, 0.92
Sport	4.82	1, 197	.029	0.02	0.00, 0.08
Post hoc tests					
Cricket t1-t2	9.51	112	.000***	0.99	0.67, 1.30
Rugby t1-t2	21.52	112	.000***	1.46	1.16, 1.73

Sport t1	4.16	197	.000***	0.41	0.13, 0.69
Sport t2	6.23	197	.000***	1.01	0.80, 1.40
Sport atmosphere					
Time x Sport	5.40	1, 197	.021	0.02	0.02, 0.08
Time	1072.55	1, 197	.000***	0.84	0.81, 0.87
Sport	2.59	1, 197	.109	0.00	0.00, 0.05

Note: Bonferroni corrected significance levels p = < .004

Finally, mixed factorial ANOVAs were conducted to examine the change in perception of the benefits gained from an athletic career over time. There were significant interaction effects found in the self-control, self-confidence, will power, physical condition, friends, social ties, spouse/partner and financial stability variables. Additionally, there were significant effects of time for each variable on this scale. The participants reported a decrease in the perception that coping, self-control, will power, physical condition, health, friends, social ties and knowledge and skills were benefits derived from their athletic career between time 1 and time 2. However, there was a general increase in perception that goal setting, self-confidence and finding a spouse or partner were derived from their former career. Finally, there were significant main effects for sport with retired rugby players citing a greater perception of the benefits of self-control, self-confidence, will power, physical condition and friends from their athletic career. Retired cricketers however, were more likely to perceive finding a spouse or partner, knowledge and skills and financial stability as resulting from their former career. The summary of the mixed factorial ANOVA analyses can be found in table 21.

Table 21

ANOVA summary for benefits from an athletic career

	F/ t	**df**	***p***	***ω²/ d***	**95% CI**
Goal setting skills					
Time x Sport	0.11	1, 197	.74	0.02	0.00, 0.01
Time	57.68	1, 197	.000***	0.22	0.13, 0.32
Sport	0.24	1, 197	.62	0.00	0.00, 0.02
Coping skills					
Time x Sport	0.14	1, 197	.74	0.02	0.00, 0.02
Time	425.51	1, 197	.000***	0.68	0.61, 0.73
Sport	1.31	1, 197	.25	0.00	0.00, 0.04
Self control					
Time x Sport	11.30	1, 197	.001**	0.05	0.00, 0.12
Time	314.53	1, 197	.000***	0.61	0.57, 0.61
Sport	35.42	1, 197	.000***	0.15	0.07, 0.24
Post hoc tests					
Cricket t1-t2	9.01	112	.000***	0.38	0.08, 0.68
Rugby t1-t2	16.84	112	.000***	0.89	0.62, 1.16
Sport t1	-5.69	197	.000***	-0.82	-1.11, -0.53
Sport t2	-6.15	197	.000***	-0.88	-1.18, -0.59
Self confidence					
Time x Sport	16.02	1, 197	.001**	0.07	0.01, 0.15
Time	20.48	1, 197	.000***	0.09	0.03, 0.17
Sport	36.50	1, 197	.000***	0.15	0.07, 0.25
Post hoc tests					
Cricket t1-t2	-3.89	112	.319	-0.38	-0.68. 0.07
Rugby t1-t2	1.00	112	.319	0.04	-0.30, 0.22
Sport t1	-6.60	197	.000***	-0.94	-1.24, -0.65
Sport t2	-4.43	197	.000***	-0.65	-0.93, -0.36
Will power					
Time x Sport	73.95	1, 197	.000**	0.27	0.13, 0.26
Time	57.09	1, 197	.000***	0.22	0.13, 0.32
Sport	81.50	1, 197	.000***	0.30	0.19, 0.38
Post hoc tests					
Cricket t1-t2	0.55	112	.587	0.06	-0.36, 0.24
Rugby t1-t2	16.80	112	.000***	1.68	1.37, 1.98
Sport t1	-9.54	197	.000***	-1.36	1.67, -1.04
Sport t2	-5.04	197	.000***	-0.73	-1.02, 0.44
Physical condition					
Time x Sport	8.39	1, 197	.001**	0.04	0.00, 0.10
Time	47.50	1, 197	.000***	0.19	0.10, 0.28
Sport	36.21	1, 197	.000***	0.15	0.07, 0.24
Post hoc tests					
Cricket t1-t2	10.38	112	.000***	0.70	0.39, 1.00
Rugby t1-t2	2.51	112	.013	0.64	0.08, 0.60
Sport t1	3.01	197	.000***	-0.43	-0.71, -0.15
Sport t2	8.20	197	.000***	-1.17	-1.48, -0.87
Health					
Time x Sport	2.45	1, 197	.12	0.00	0.00, 0.05
Time	166.09	1, 197	.000***	0.45	0.35, 0.54

Sport	0.31	1, 197	.58	0.00	0.00, 0.02
Friends					
Time x Sport	13.34	1, 197	.000***	0.06	0.00, 0.13
Time	26.74	1, 197	.000***	0.12	0.04, 0.20
Sport	4.47	1, 197	.036	0.02	0.00, 0.07
Post hoc tests					
Cricket t1-t2	1.29	112	.200	0.15	-0.15, 0.45
Rugby t1-t2	5.89	112	.000***	0.71	0.44, 0.98
Sport t1	-3.21	197	.002**	-0.46	0.74, -0.14
Sport t2	0.73	197	.466	0.21	0.18, 0.27
Social ties					
Time x Sport	11.51	1, 197	.001**	0.05	0.00, 0.12
Time	12.83	1, 197	.000***	0.06	0.00, 0.13
Sport	1.12	1, 197	.300	0.00	0.00, 0.04
Post hoc tests					
Cricket t1-t2	4.71	112	.000***	0.45	0.15, 0.75
Rugby t1-t2	0.14	112	.887	0.01	-0.25, 0.27
Sport t1	0.14	197	.889	0.02	0.00, 0.07
Sport t2	-2.52	197	.012*	0.52	0.12, 0.62
Spouse					
Time x Sport	8.66	1, 197	.000***	0.03	0.00, 0.10
Time	57.72	1, 197	.000***	0.22	0.13, 0.32
Sport	27.48	1, 197	.000***	0.12	0.04, 0.21
Post hoc tests					
Cricket t1-t2	-2.83	112	.006	-0.44	-0.74, -0.13
Rugby t1-t2	8.67	112	.000***	-1.22	-1.50, -0.93
Sport t1	4.96	197	.000***	0.68	0.39, 0.96
Sport t2	2.06	197	.040**	0.29	0.00, 0.57
Knowledge & skills					
Time x Sport	0.37	1, 197	.54	0.00	0.00, 0.02
Time	169.47	1, 197	.000***	0.46	0.36, 0.54
Sport	21.03	1, 197	.000***	0.09	0.03, 0.18
Financial stability					
Time x Sport	27.35	1, 197	.000***	0.12	0.04, 0.20
Time	8.21	1, 197	.005	0.04	0.00, 0.10
Sport	77.80	1, 197	.000***	0.30	0.18, 0.37
Post hoc tests					
Cricket t1-t2	1.57	112	.120	0.23	-0.06, 0.53
Rugby t1-t2	-6.16	112	.000***	-0.86	-1.13, -0.59
Sport t1	8.59	197	.010	1.23	0.92, 1.53
Sport t2	3.03	197	.000***	0.43	0.14, 0.71

Note: Bonferroni corrected significance levels p = < .004

Discussion

The purpose of the present study was to examine the predictors of life satisfaction following athletic career termination by investigating variables associated with two distinct phases of athletic career termination; the antecedents of retirement and the transitional period. Predictors of life satisfaction were examined on or near to retirement (time 1), and again six years later (time 2). It was hypothesised that the demographic variables of level of education and marital status and the antecedent variables of pre-retirement planning, voluntariness of retirement, retirement through injury, and levels of athletic identity would all account for a significant amount of variance in life satisfaction at time 1. Furthermore, for the factors affecting the transitional phase of career termination, in addition to demographic variables, it was predicted that athletic identity, injury status, identity change, time to adjust, the use of active coping, satisfaction with career and levels of social support would also account for a significant amount of variance in life satisfaction at time 1. The repeat of the regression analyses using the life satisfaction data collected at time 2 were more exploratory in nature due to the theoretical and empirical uncertainties of the relationship between the predictor variables and life satisfaction six years or more after retirement. For the quasi-longitudinal analyses of the RSS data, it was hypothesised that life satisfaction and educational levels would increase while athletic identity levels and participants' connection to sport would decrease between time 1 and time 2.

Initially, the validity of scales within the RSS that measured latent variables (life satisfaction, COPE and AIMS) were systematically examined using PLS. This led to the scales being revised to ensure they were valid and reliable measures of their respective constructs, suitable for use with a sample of former professional rugby union players and cricketers. This initial phase of the study provided additional data on the validity of the RSS

and illustrated a more robust method of calculating internal consistency of the scales. The present study therefore, has demonstrated the utility of factor loadings, CR and AVE measures to determine individual item reliability, internal consistency and convergent validity to overcome the issues of using Cronbach's alpha on data sets with small sample sizes and measures with scales consisting of less than ten items (e.g., Cortina, 1993; Nunnally & Bernstein, 1994). Following the validity testing, hierarchical regression analyses were conducted to examine both the antecedent and transition phase RSS variables as predictors of life satisfaction. The results of these analyses however, only partially supported the hypotheses. The most significant finding emerging from the analyses was the role of sport type as a key predictor of life satisfaction across both the antecedents and transitional period models at both time 1 and time 2. To clarify, the results of the present study suggest that one of the strongest influences on life satisfaction on athletic career termination is the sport one chooses to compete in. The results suggested that sport type was a significant predictor on or near retirement, an effect that dissipated as time passed. This finding lends strong support to the assertion that the career termination experience is largely sport-specific in nature. That is to say, a closer examination of the organisational and cultural features of each sporting system may help elucidate these effects.

Looking at the overall results in more detail, focusing on the results of the antecedent models first, sport type accounted for 52% of the variance in participants' levels of life satisfaction close to the time of their retirement (time 1); however, the impact of sport type reduced to 5% variance six years later (time 2). The demographic variable of level of education, specifically postgraduate education, was a unique predictor of life satisfaction at time 1. This finding supports the conclusions of previous studies linking a College or University education with higher levels of life satisfaction (Bukenya, Gebremedhin, &

Schaeffer, 2003). However, the present results are more specific, suggesting that it is a postgraduate level of education that is linked to increases in life satisfaction. This relationship might exist because high levels of education provide the individual with the ability to work towards goals, adapt to changes and ultimately therefore influence subsequent occupational opportunities (Diener, Suh, Lucas, & Smith, 1999; Salinas-Jiménez, Artés, & Salinas-Jiménez, 2013). Although 'high levels' of education in the supporting literature remain undefined. However, future research should seek to uncover further detail concerning this relationship, as it may be linked with the socio-economic, political and employment issues specific to each country. That is to say, the relationship may be associated with *credentialism* or *academic inflation* in the U.K., where good academic qualifications, such as an undergraduate degree, no longer guarantees employment due to the number of people attaining this level of educational award (cf. Brook, 2016). It is important to note however, that the relationship between postgraduate education and life satisfaction diminished at time 2. Although the reason for this change in significance was not apparent from the data collected in the present study, it is suggested that postgraduate qualifications may enhance employability on transition into a subsequent career. As such, the participants may have acquired a distinction in the labour market (e.g., Waters, 2009) by "...accumulating advantage over and above a first degree" (Bowman, 2005, p.234).

Of the hypothesised predictors in the antecedent models, athletic identity was a unique predictor of life satisfaction at both time 1 where it accounted for 3% of variance and time 2, with 4% of the variance. In addition, the Athletic Identity x Voluntariness of retirement interaction emerged as a predictor of life satisfaction at time 1. On its own, the negative influence of athletic identity on life satisfaction mirrors the findings of previous research that has observed a negative effect of an exclusive athletic identity on adaptation to

retirement from sport (e.g., Stambulova et al., 2007; Webb et al., 1998). However, the present study sheds new light on the long-term deleterious effects of athletic identity. As a combined variable alongside the voluntariness of retirement, the results of the present study show that the effect of athletic identity on levels of life satisfaction depends on whether the individual retired voluntarily or not. These findings mirror those of Martin et al., (2014) who found that planned retirement, which on its own is associated with fewer adaptation difficulties (e.g., Alfermann, 2000; Alfermann & Gross, 1997), combined with a reduction in athletic identity led to increases in life satisfaction.

Injury emerged as a predictor of life satisfaction at time 2, yet contrary to the hypotheses, this relationship was not present as an antecedent at time 1. At time 1, the voluntariness of retirement did emerge as a predictor, and due to the relatedness between this variable and injury, the correlations between the two were checked. The correlational analyses concluded that the two variables were not statistically related therefore ruling out confounding effects between them. They will be discussed independently in the context of the time 2 antecedents model. Retirement through injury is commonplace in sport. Indeed, studies have reported that 1 in every 5 male elite athletes (Kettunen, Kujala, Kaprio, Koskenvuo, & Sarna, 2001), 47% of footballers (Drawer & Fuller, 2002) and 54% of top-level Finnish athletes (Ristolainen, Kettunen, Kujala, & Heinonen, 2012) retire through injury. In the latter study, 70% of athletes who had been forced to retire through injury admitted that they were left to contend with mild or moderate permanent disability, affecting their ability to function in normal everyday activities. The results of the present study support the notion that athletes retiring through injury report significantly lower levels of life satisfaction after retirement (Kleiber & Brock, 1992; Petitpas & Danish, 1995). However, the

findings of the present study provide new insights into the enduring negative effect of athletic career termination through injury on the ability to adapt to life after sport.

In the analysis of variables present in the transitional phase demographic variables accounted for up to 52% of variance at time 1, and only 5% of variance at time 2. Additionally, in this phase it was hypothesised athletic identity, injury status (e.g., suffering the consequences of sport injuries), identity change, time to adjust, the use of active coping, satisfaction with career and levels of social support would account for a significant amount of variance in life satisfaction at time 1. This hypothesis was only partially supported with athletic identity, injury status and time to adjust emerging as unique predictors instead.

Athletic identity has been discussed in depth in the context of the antecedents' model, but it is important to note that this variable accounted for 2% and 2.5% of unique variance in life satisfaction at time 1 and time 2 respectively, establishing itself as a key contributor to adaptation to athletic career termination. The other two predictors of life satisfaction in the transitional period were only significant at time 1; injury status and time to adjust. As a variable, injury status reflected whether participants sustained an injury during their athletic career, and if so, whether they still suffered the consequences of that injury. As a unique predictor of life satisfaction at time 1, the link between injury status and life satisfaction supports findings of previous studies indicating the negative association with sport injuries and quality of life (for a review see: Moreira, Vagetti, Oliveira, & de Campos, 2014). The main reason for this relationship is the associated pain and physical limitations that often lead to secondary effects such as lost opportunities, recurrent injuries, and general restrictions in day to day living (Kuehl, Snyder, Erickson, & McLeod, 2010). It is surprising, however, that given the impact of injury status at time 1, the same results were not observed at time 2. This indicates a level of adaptation perhaps to the pain, discomfort and physical limitations

associated with the effects of injury, or indeed the effects of the injuries sustained were short-lived. Clearly, follow-up studies are needed to investigate this issue further, particularly in professional rugby union where in the English Premiership alone there were on average, 86 injuries per 1000 hours of training and competition in the period 2002-2015 (England Rugby Premiership Injury and Training Audit Steering Group, 2016). The final unique predictor of life satisfaction at time 1 was the time to adjust to retirement, which was negatively related to life satisfaction. This is consistent with findings in both the gerontological (Gall, Evans, & Howard, 1997) and sport psychology literature, which suggests that longer adjustment periods are negatively related to levels of life satisfaction due to the associated stress and anxiety that results (Park, Lavallee, & Tod, 2012).

Turning to the analyses examining the change in the RSS variables over time, it was hypothesised that life satisfaction would increase and athletic identity would decrease between time 1 and time 2, furthermore it was hypothesised that the level of education of the participants would increase and that there would be a change in the participants' connection to sport over time. All hypotheses in this section were supported. Firstly, there was an interaction effect for Sport x Time on life satisfaction, where post hoc tests revealed the retired rugby union players had higher levels at time 1. In addition, there was an interaction effect of Time x Sport on levels of athletic identity, where post hoc tests showed cricketers were more likely to report higher levels at time 1. Furthermore, educational level did increase between time 1 and time 2, and post hoc testing suggested that this was mostly associated with the retired rugby union players. This may indicate the availability of more opportunities for further study or perhaps a culture that supports this direction for retired athletes. Additionally, as hypothesised, the participants' connection to sport changed between time 1 and time 2. The results determined that at time 2, participants were less likely to exercise,

stay in touch with coaching staff and teammates and watch their respective sports as a spectator. There were also sport specific differences in the participants' connection to sport where retired rugby players were more likely to maintain friendships with former teammates and were more likely to work in sport at time 2. In amongst the connection to sport variables measured, was the participants' engagement with exercise. This is a critical relationship to examine given the beneficial links between physical activity, positive affect and self-perception (e.g., Hyde, Conroy, Pincus, & Ram, 2011). Although outside of the scope of the present study, it would be useful to determine the nature of the relationship between the ability to exercise after retirement from sport, the consequences of any sport injuries and the level of adaptation to athletic career termination. Of further interest was the sport specific differences in participants working in sport 6 years or more after athletic career termination. In general, the desire to stay working in sport may result from identity foreclosure (Shachar et al., 2004), which in turn, may foster a commitment to one career goal without examining other occupations (Blustein, Ellis, & Devenis, 1989). Additionally, as with the participants in the present study, retired athletes may find comfort in the familiarity of the sporting environment, a lack of perceived threat of working in this domain or the avoidance of stress associated with exploring other career options (Torregrosa, Ramis, Pallarés, Azócar, & Selva, 2015). Indeed, Werthner and Orlick (1986) suggested that continued involvement in one's sport post-retirement eased the negative effects of the transition. By remaining in the sporting environment, the individual may be able to maintain a high level of athletic identity (Shachar et al., 2004) as it is likely that they "base their self concept solely on sport" (p.73), or as Stephan, Bilard, Ninot, and Deligniéres (2003) noted, reduce the frustration of not being an athlete. Whatever the motivation behind pursuing a non-athletic career in sport, Lavallee, Grove and Gordon (1997) suggested that retired athletes who stayed working in sport after the end of their athletic career experienced fewer adjustment difficulties as they relied on the

same support system they enjoyed whilst playing sport. Certainly, future research should seek to investigate the long-term impact on adjustment of retired athletes working in sport and how this affects the individual's adjustment post-athletic career.

Although this study is the first to examine the predictors of life satisfaction, several limitations should be noted. Firstly, the numbers of respondents in this study was relatively low given the quantitative design. The selection criteria for participation were exceptionally stringent, requiring only former professional athletes from Great Britain, which restricted the identification and subsequent accessibility of a larger sample. Secondly, the design of this study relied on retrospective recall, which is susceptible to memory decay, reporting biases and a potential for re-appraisal of experiences after the event (e.g., Holland & Kensinger, 2010); this may have influenced the results obtained. However, at the same time, the research design allowed the capture of participants' perceptions of their experiences at 2 given points in time, which was essential in addressing the research question. Other limitations include the previously reported weaknesses in the RSS (Stambulova et al., 2007), among which is the criticism of questions requiring only a 'yes / no' answer for the collection of critical data such as the engagement in pre-retirement planning and injury status. Although, as part and parcel of the extensive RSS, these questions serve to illustrate the 'big picture' of the athlete's retirement experiences. However, future research should seek to find a more targeted, efficient way of measuring variables associated with the experience of career termination in sport. Finally, and perhaps the most notable limitation, is the selection of life satisfaction as the dependent variable, as a marker of psychological adjustment. Previous research in occupational (e.g., Fouquereau, Fernandez, Fonseca, Paul & Uotinen, 2005), military (e.g., Speigel & Shultz, 2003) and gerontological (e.g., Reis & Pushkar-Gold, 1993) psychology has similarly examined levels of life satisfaction in traditional retirees but the question

remains as to whether it is the best measure of a healthy adjustment. For example, life satisfaction as a construct is thought by some to be relatively stable over time, thereby indicating that the major contributors to this may be personality traits (e.g., emotional stability; Reis & Pushkar-Gold, 1993) rather than the characteristics of the experience itself. Furthermore, research indicates that life satisfaction judgements are subject to priming (Suh, Diener, & Updegraff, 2008). Situational priming has the potential to make certain experiences more salient and therefore certain judgment standards more accessible. Furthermore, it has been suggested that life satisfaction judgements are susceptible to mood and ordering effects (Krueger & Schkade, 2008). Therefore, completing the 50-item RSS, which requires retrospective recall on issues such as the antecedents of retirement and injury status, may skew reported levels of life satisfaction that are asked for at the end of the questionnaire. That said, life satisfaction scales as measures of adaptation to life events are highly reliable and valid, and have been repeatedly successfully deployed in a number of disciplines for such purpose (e.g., Diener, Inglehart, & Tay, 2013). More importantly, Michaelson, Abdallah, Steuer, Thompson, and Marks suggest "it is all very well knowing that someone is satisfied with their life, but the interesting question is why" (2009, p. 56). It is recommended therefore that future research explores sport-specific factors influencing life satisfaction after athletic career termination from a qualitative perspective to further extend understanding of the complex process of athletic retirement.

The results of the current study presents new evidence for governing bodies and support staff such as sport psychologists to enhance their understanding of the experiences of athletes at the end of their athletic career. With the knowledge that athletic career termination experiences are largely sport-specific, the athletes' needs can be properly anticipated with proactive developmental initiatives over the course of their athletic career. In addition, if

reactive interventions are required, they are likely to be more effective if the process of retirement from sport is better understood. The results of the present study make it clear that opportunities to study at an undergraduate and postgraduate level during an athletic career should be made available to athletes in order to provide an immediate safeguard for their end of career transition. One particular idea worthy of consideration is the introduction of a mandatory transition programme at the end of an athletic career, where athletes prepare to leave their athletic role and adopt another. Such a initiative could include advice on a maintenance exercise programmes, continuous rehabilitation advice for long-term injuries, appropriate nutrition for a reduced physical workload, careers advice, practical assistance and the maintenance of a network of support in the form of their teammates and coaching staff.

In conclusion, this study has demonstrated the sport-specificity of athletic career termination, and has shed further light on the predictors of adaptation to retirement over time. These findings primarily support the notion that in order to fully understand the experiences of athletes retiring from their sport, the specific context, organisational and cultural features of that sport need to be fully understood. Furthermore, the present study has highlighted the changing influence of particular transition-related variables over time on the adaptation of retired professional athletes. Thus, to further increase understanding of the complex process of athletic career termination, future research should involve a in-depth examination of the sport-specificity of retirement from sport, and the reasons for changes in adaptation over time.

CHAPTER 5

CHANGES IN LIFE SATISFACTION AFTER RETIREMENT FROM PROFESSIONAL SPORT: A COMPARISON BETWEEN CRICKET AND RUGBY UNION

Abstract

The present study employed a qualitative approach to examine in greater depth, two key findings from study 2: (1) the sport-specific nature of differences in adaptation to athletic career termination and (2) the change in adaptation over time. Participants were a purposive sample of former professional cricketers (n = 8) and rugby union players (n = 8) from Great Britain who had previously participated in study 2. They took part in retrospective, semi-structured interviews, the data from which was subjected to both within- and cross-case analysis using inductive thematic analysis. The results were organised into three main categories: stressors, coping and personal factors. Stressors created barriers to adaptation over time and differed subtly according to sport. For example, injuries differed in type and severity between sports and their ongoing effects continued to have a negative impact on adaptation. The coping theme illustrated strategies used to overcome the psychological legacy of an athletic career. One of the major differences was the cricketers' propensity to return to an athletic career as a means of asserting control over the career termination process. Finally, personal factors provided further insight into athletic identity's impact on adaptation over time. Subtle differences emerged between the groups, although overall this theme illustrated how high levels of athletic identity initially presented barriers to adaptation, yet over time it helped kick-start subsequent careers. Furthermore, as participants reported relinquishing the role of the athlete, a new "sport" identity was adopted. Overall, life satisfaction was perceived to fluctuate over time in response to a number of factors, many of them sport-related.

The present study follows on from study 2 of this thesis, which quantitatively examined the predictors of life satisfaction in a sample of retired professional cricketers and rugby union players. The study explored the changing nature of adaptation to athletic career termination over time. To do so, it employed life satisfaction as a measure of self-perceived adjustment (e.g., Neugarten, Havinghurst, & Tobin, 1961), examined at two points in time: on or near retirement (time 1), and again six years later (time 2). The results of this examination concluded that the strongest influence of adaptation was the sport one chooses to compete in. That is to say that, the career termination experience appears to be largely sport-specific in nature and examining the organisational and cultural features of each sporting system may help elucidate these effects. Additional influences (both positive and negative) on life satisfaction included postgraduate levels of education, athletic identity, injury status, the time taken to adjust to and the voluntariness of retirement. Furthermore, there was an interactive effect of sport and time on life satisfaction, athletic identity, coping strategies, changes in social network, the features of an athletic career missed by participants and the benefits they perceived they gained from a career in sport. In addition, there were sport-specific differences in levels of education and current connection to sport, thereby reinforcing the influence of the cultural and organisational features of each sport in individual athletes' experiences of retirement and adaptation.

The aforementioned findings present two distinct dimensions of athletic career termination that warrant further exploration: (1) the sport-specificity of the experience and (2) influences on the change in levels of life satisfaction over time. The results that highlight the sport-specificity of the career termination experience provide further evidence supporting the recent call for a less generalised and more context-specific approach to understanding this process (Stambulova, 2016; Stambulova & Ryba, 2013, 2014). This somewhat new approach

to the study of athletic career termination builds upon the work undertaken by Alfermann, Stambulova and Zemaityte (2004) and Stambulova, Stephan and Jäphag (2007) where they highlighted the national- and cultural-specific nature of retirement from sport.

The national- and cultural-specific investigations into retirement from sport were designed to counter a traditionally universal, generalisable approach to athletic career termination (Kuettel, Boyle, & Schmid, 2017). This more culturally sensitive perspective uncovered both similarities and differences in athletes' experiences (Stambulova, Alfermann, Statler, & Côté, 2009). For example, cross-national studies identified specific sociocultural contexts that influenced some of the differences in adaptation to a life after sport. The studies found that athletes from China, Russia and France were more likely to move into a non-athletic job in sport after retirement, a pattern that is not replicated in countries such as Germany and Sweden where the remunerated job opportunities in sports are rare (e.g., Alfermann, Stambulova, & Zemaityte, 2004; Stambulova, Stephan, & Jäphag, 2007). Additionally, certain cultures have been shown to have different standards to attain in determining whether they are satisfied with their transition quality. For example, retired Swedish athletes take longer to adjust to a life after sport than German, French, Lithuanian, and Russian athletes, as the post-sport career standards they strive for are driven by cultural expectations; Swedish living standards, being among the highest in Europe (Ryba, Stambulova, & Ronkainen, 2016).

The interpretation of the cross-national and cross-cultural differences in athletic career termination was aided by Bronfenbrenner's (1979) ecological model of human development, where the transition out of sport was viewed as being embedded in a specific context influenced at the macro-, meso- and micro-level. Macro-level influences were viewed as the socio-cultural and socio-economic context, meso-level influences were the influences from

governing bodies of sport, the sports clubs and their support systems, and at the micro-level, influences arose from the social network of the athletes. It is clear that the cross-national and cross-cultural studies have addressed the macro-level influences, yet there is a further layer of influence that remains untapped - the specific sporting context. Given that the findings of cross-national and cross-cultural studies have concluded that transition out of sport often takes place within a specific national (Alfermann, Stambulova, Zemaityte, 2004) and cultural context (e.g., Alfermann & Stambulova, 2007; Kuettel et al., 2017), it appears logical therefore that the meso-level of the sport has a similar impact. Certainly, the results of the previous study would suggest the same. However, a further examination of the quantitative findings are required in order to shed further light on the detail.

The second dimension of athletic career termination that warrants further exploration is the general change in levels of life satisfaction, and therefore adaptation to retirement, over time. The results of the previous study highlighted a pattern of increases in levels of life satisfaction as time passed, which indicates a higher degree of adaptation six years or more after retirement. Although there is still no consensus regarding the timeliness of adaptation to athletic career termination, or indeed the relationship between the factors that influence life satisfaction and adaptation over time, these findings provide a foundation upon which to examine this effect in more detail. Indeed, Torregrosa, Ramis, Pallarés, Azócar and Selva (2015) recommended the use of qualitative research to complement quantitative data for the purposes of providing a holistic perspective on athletic career termination.

In summary, as a follow up to the previous quantitative study examining predictors of life satisfaction in two groups of retired professional athletes, the current study aims to further understand the sport-specific nature of the differences in adaptation to athletic career termination. In addition, given the importance of life satisfaction as a global measure of self-

perceived adjustment (Neugarten, Havinghurst, & Tobin, 1961), and the lack of consensus as to how it is affected in the time following athletic career termination, further investigation is necessary. The present study aimed to qualitatively explore the experiences of participants from professional cricket and rugby union in the 7 years or more since retirement.

Method

Participants

The participants were a purposive sample of eight former professional cricketers and eight former professional rugby union players from Great Britain who had previously provided quantitative data on their transitional experiences in 2008 (time 1) and six years later in 2014 (time 2). Extreme case sampling was used to select participants with the highest increases and decreases in life satisfaction from time 1 to time 2 to develop a richer, more in-depth understanding of the reasons for those changes. Furthermore, the selection procedure was designed to ensure there was an equal sample size from each sport. The average age of the cricket participants in the present study was 40.25 years (*SD* = 3.73) and for the rugby union participants, 38.38 years (*SD* = 3.25). The average number of years since retirement was 9.62 years (*SD* = 0.74) and 9.50 years respectively (*SD* = 1.20). Tables 1 and 2 contain participant demographic information.

Table 1

Cricket participant demographics

Participant	Age @ interview	Age @ retirement	Yrs retired	LS @ T1	LS @ T2
C1	34	25	9	1.00	3.00
C2	44	33	11	1.00	3.00
C3	43	33	10	1.33	3.00
C4	41	31	10	1.00	2.67
C5	41	32	9	2.07	3.67
C6	43	34	9	2.33	4.00
C7	41	31	10	1.33	3.00
C8	35	26	9	2.07	4.00

Table 2

Rugby union participant demographics

Participant	Age @ interview	Age @ retirement	Yrs retired	LS @ T1	LS @ T2
RU1	39	30	9	1.00	2.67
RU2	35	26	9	3.67	2.33
RU3	36	26	10	2.07	3.67
RU4	39	29	10	2.33	4.00
RU5	36	28	8	2.33	4.00
RU6	42	31	11	4.00	3.67
RU7	36	28	8	1.00	2.67
RU8	44	33	11	2.33	4.00

Interviews

Semi-structured interviews were conducted with the use of an interview guide that was compiled after a review of the relevant research literature. The guide was specifically designed to explore the findings that emerged from the quantitative analysis of participants' retirement experiences across the two time points (2008-2014). The guide contained five sections. Section one outlined the purpose of the research and recapped on the events surrounding athletic career termination (e.g., "...are you able to tell me a little more about the events surrounding your retirement?"). Section two explored participants' recollection of the events during their time since retirement (e.g., "...can you explain what has happened in your personal life during this time?"). Section three asked participants to discuss their second

career choices (e.g., "...can you confirm which career you pursued after your retired from playing rugby / cricket?"). Section four explored factors that may have affected their levels of life satisfaction (e.g., " ...was there anything else that has happened in your life during the last 7 years?"). Finally, section five focused on possible changes in athletic identity between time 1 and time 2 (e.g., "I would like to ask you about the degree to which you still consider yourself to be an athlete and how has this changed over the last 7 years."). In each section probes were used to ensure the participants' responses were suitably focused, in-depth and detailed. The most commonly used was a clarification probe (e.g., Patton, 2015), where participants were asked: "What impact did this have on your levels of life satisfaction at that time?" to ensure that the accounts of the participants reflected the aim of the study. The interviews were piloted with one participant from each sport who had participated in the previous study. This led to small revisions to the wording of the proposed questions in the interview guide.

Procedure

Following university ethical approval, participants who met the criteria were contacted by e-mail or telephone to explain the purpose of the study and elicit their agreement to participate in a semi-structured interview. A mutually convenient time and place was then agreed to conduct the interviews. Ten participants (n = 6 retired cricketers and n = 4 retired rugby union players) were interviewed in a quiet area at their respective workplaces, or in an office at a university campus. Due to difficulties of keeping track of participants over the course of seven years, it was challenging to secure face to face meetings with all identified individuals. As a result, for those residing overseas or where face to face interviews were difficult, interviews (n = 2 retired cricketers and n = 4 retired rugby union players) were conducted over Skype as a "viable alternative" (Lo Iacono, Symonds, &

Brown, 2016, p.1). The interviews lasted between 60 and 90 minutes, were audio recorded and transcribed verbatim. The transcripts were returned to each participant for member checking (Patton, 2015). All participants confirmed the accuracy and adequacy of the information.

Data analysis

This study employed a constructivist-interpretivist approach to qualitative research where the data were socially constructed and subjective. The interviews generated 138 pages of 1.5-spaced transcription with 43,410 words. The data were subject to both within- and cross-case analysis (e.g., Ayres, Kavanaugh, & Knafl, 2003) using inductive thematic analysis (e.g., Braun & Clarke, 2006). Inductive thematic analysis involves a recursive process characterised by six distinct phases: 1) familiarisation with the data, 2) generating initial codes, 3) searching for themes, 4) reviewing themes, 5) defining and naming themes and 6) producing the results (Braun & Clarke, 2006). The data was analysed by systematically working through the text to identify areas of interest related to the research question. This process involved identifying and extracting similarities and differences from the transcribed text that adequately reflected the participants' experiences firstly on a case-by-case basis and subsequently across cases (Miles, Huberman, & Saldaña, 2014). Those areas of interest were coded manually by writing notes in the margins of the transcripts. Once coding was complete, the different codes generated were sorted hierarchically into categories, themes and sub-themes. Finally, the categories, themes and sub-themes were reviewed to ensure that they accurately reflected the data.

Trustworthiness

Trustworthiness of the data was established using several methods. Firstly, peer debriefing was employed, where the researcher and her supervisors critically reviewed the implementation and evolution of the research methods as an "external check on the inquiry process" (Lincoln & Guba, 1985; p. 301). Specifically, frequent debriefing and peer scrutiny was carried out and involved the review and assessment of transcripts, emerging themes and the final analysis. Furthermore, member checking provided the participants with the opportunity to assess the accuracy of data to protect against researcher bias and misinterpretation (Lincoln & Guba, 1985).

Results and Discussion

The aim of the present study was to follow up study 2 of this thesis by qualitatively examining the career termination experiences of participants from professional cricket and rugby union, with a particular focus on the factors that contributed to changes in their levels of life satisfaction since their retirement. A number of categories, themes and sub-themes emerged from the data that highlighted both commonalities and variance in the experiences of individuals from both sports. In accounting for changes in levels of life satisfaction since retirement, three broad categories emerged: stressors, coping and personal factors. Stressors related to the on-going concerns that arose directly as a result of retirement from sport, the consequences of which were described as "enduring" (C2). Coping was a category that encapsulated both the initial strategies used to successfully negotiate the transitional period, but also techniques that continued to be employed by the participants to overcome stressors particular to retired athletes. Finally, personal factors reflected perceptions, emotions and behavioural reactions to the challenges of being a retired athlete, helping to explain how levels of life satisfaction changed over time. Each category and its associated themes and sub-themes are presented and discussed in detail below.

Stressors

Both the retired cricketers and rugby players described the impact that particular stressors had on changes in levels of life satisfaction since their retirement. In this category, the following themes emerged: the physical and psychological toll of sport, the lasting effects of sport-related injuries, finance, the narrowing of social networks and life event stress.

The physical and psychological toll of sport.

Firstly, the physical toll of sport was reported as having a significant bearing on levels of life satisfaction for both groups, albeit for different reasons. For example, the retired cricketers spoke of their relief of being released from the burden and stress of physical training, therefore increasing their levels of life satisfaction on retirement. A retired cricketer explained how the lack of training brought about positive psychological effects: "My body enjoyed the lack of training, it certainly helped my mind for a while too" (C1). Conversely, for the retired rugby players, the physical toll of rugby was a defined stressor, viewed as a contributor to an early retirement which left the participant feeling aggrieved: "... rugby union is such a physical sport. It really takes its toll, and it did on me. Such physical stress week in, week out, you know you're not going to last as long as other sportsmen. Sad but true" (RU6). In contrast to the cricketers, the rugby players also discussed how the psychological toll of being an injured athlete endured into retirement:

> When I think back now, I think not just about all the injuries and rehab and that, but how it affected me emotionally. I think I signed over my body to the sport and I was forever up and down and all over the place emotionally. (RU6)

The effects of this psychological toll were described as being responsible for a decrease in levels of life satisfaction as participants regretted the impact a rugby career had on their

psychological health. The findings that suggest the physical and psychological toll of an athletic career may lead to a decrease in life satisfaction supports the extant literature that demonstrates an inverse relationship between these variables (e.g., Brown, 1998; Chang, 1998; Kent, Gorenflo, & Forney, 1993; Malinauskas, 2010). However, more relevant in the context of the present study are the differences that exist between the two sports in their perception of the associated physical toll experienced. The cricketers' responses to the absence of physical training were characterised by relief, whereas conversely, the rugby union players perceived the physical toll of their athletic career to be a stressor due to the amount of injuries they suffered.

Lasting effects of sport injuries.

The lasting effects of sport-related injuries was a theme that emerged from both groups of participants where they explained their pain, discomfort and, in some cases, disability which impacted negatively on their post-sport lives, hindering their adaptation. There were, however subtle differences present in the participants' accounts of their sport-related injuries, which amounted to the characteristics of the types of injuries sustained during the course of their athletic careers.

For example, in the retired cricketers' narratives, they spoke regularly of the chronic, cumulative trauma (e.g., Clarsen, Rønsen, Myklebust, Flørenes, & Bahr, 2013), of the physical toll of their sport:

> Years of little niggles, here and there, and my body is absolutely broken. I am an old man in terms of my physical health. If I had to draw a picture of me based on how my body feels, I'd be an old man hunched over with two walking sticks [laughs]. (C4)

The physical effects of rugby, by subtle contrast were regularly described as being more acute and "brutal":

> A rugby career is brutal - physically brutal. I don't think that most people consciously think about it when they start, but what you're doing is giving up your body and your future health to play rugby for a few years. (RU5)

In accounting for the lasting effects of those injuries, they were universally described as causing decreases in levels of life satisfaction due to the constant reminder of a career that the participants missed, or due to the continuous pain and discomfort experienced:

> I've just got used to not being able to do really silly small things, but I'd be lying if I said it wasn't frustrating at all - it is. I guess it's a bit of a war wound and it reminds me quite a lot about my career and things which I do miss every now and again. (C5).

Likewise, the lasting effects of rugby-related injuries were perceived to cause decreases in levels of life satisfaction:

> The numbness is actually like pins and needles really, so when I touch something, or if I try to do certain things, there are horrible electrical signals that shoot down my arms. The problem is pretty constant. I have to take medication to try to reduce the signals from the nerves. It's quite frustrating really. (RU5)

Finally, the long-term effects of sporting injuries were described as being responsible for a fluctuation in levels of life satisfaction over time. Participant RU6 explained:

> But then you have times where the old injuries start reminding you that things aren't so good and that there's a reminder of a tough period of your life. The aches and the

> pains and the operations and things like that mean I feel a bit older than I actually am. It's up and down, most of the time really. But then you have a chat to yourself and are reminded of what you've got. It gets easier, then a bit harder, then a bit easier again.

The identification of the lasting effects of sport-related injuries as a factor contributing to a decrease in life satisfaction mirrors findings of previous research in this area. For example, such decreases are usually associated with physical limitations that impact on work performance or other daily activities and may render individuals unable to fulfil social or personal roles (e.g., Synder, Parsons, Valovich McLeod, Curtis Bay, Michener, & Sauers, 2008). In addition, the pain associated with the lasting effects of sport-related injuries may be responsible for poorer perceptions of well-being (e.g., McLeod, Bay, Parsons, Sauers, & Synder, 2009; Turner, Barlow, & Heathcore-Elliott, 2000). Although the end result was the same, the different types of injuries sustained by the participants highlighted the distinct features of the different sports. Notably, the examination of this particular theme revealed the fluctuating nature of levels of life satisfaction (e.g., Ehrhardt, Saris, & Veenhoven, 2000) after athletic career termination, which was illustrated by the difficulties presented by the long-term consequences of athletic injuries. However, this point in particular raises a wider issue: if levels of life satisfaction fluctuate according to the psychological legacy of an athletic career, adaptation as a steady state may not be achievable.

Finance.

A further theme that was classified as a stressor in the participants' accounts was that of finance-related matters. Both groups of participants spoke of how they struggled adjusting from having a good salary as a professional athlete, to the reality of lower wages in their subsequent career: "I was earning well as a rugby player, and I didn't want to go into a low paid coaching role or something like that. I had a mortgage and a car y'know?" (RU4).

Similarly, participant C2 explained:

> I don't think I really understood that the money coming in was going to be less than my cricket salary. I think you spend a long time thinking about what you'll do next, but less about the financial implications of it.

Focusing on the changes over time, the retired cricketers accounts of finance-related matters tended to be centred on the desire for more financial security. When asked what would improve his levels of life satisfaction seven years after retirement, participant C5 explained: "...maybe a bit more financial security. God, that sounds so serious doesn't it? I suppose as you get older, you understand the need for financial security. Especially when you have a family and things like that. Your priorities change."

The retired rugby union players also mentioned the role of injury retirement insurance payouts, but for some, the reported lack of financial planning meant that these funds were quickly exhausted:

> I had a bit of insurance for the injuries and that, but that didn't last long given I was unemployed after I retired from rugby, and spent it to top up my earnings when I first started in insurance. I mean, I didn't think I'd ever really need to put anything away. It's silly really. (RU4)

Additionally, the retired rugby union players spoke of how they regretted not actively engaging with the financial advice provided to them during their athletic career:

> ...we had guys coming in [to the rugby club] talking to us about budgeting, and saving and stuff like that, but it didn't register. Especially when I had a comfortable salary. I mean, you never think you'll be without it, no matter what anyone says. It just doesn't register. It's quite a shock going from earning well to not earning well. It takes some

adjustment. It was really tough. It's like you have to give up things that you're used to. Tough. It is tough. (RU4)

These findings concur with previous research that establishes financial planning as one of the most influential factors in the quality of athletes' post-sport life adjustment (Fortunato & Marchant, 1999; Park et al., 2013). The adaptation to a reduction in income and earning potential, and the financial pressures of having to provide for a family (see, e.g. Thelwell, Weston, & Greenlees, 2007) were reported as being the source of a decrease in life satisfaction over time. This is especially significant during times of uncertainty with employment, as described by both groups of participants in the present study.

Narrowing of social networks.

A further theme characterised as a stressor, was the narrowing of social networks which incorporated the loss of friendship. It was only the retired rugby players that cited the loss of friendships as being responsible for a decrease in levels of life satisfaction. They spoke of "losing touch" and "feeling isolated" from their former teammates (RU7), and how this "hindered" the process of adapting to athletic career termination (RU5): "I think it's natural. You're all at different stages of your life and for some, if you're not playing [rugby] you're out of the group. That was an effect of my retirement that I didn't deal well with." (RU8). There was no mention of social exclusion in the retired cricketers' accounts of their experiences, which may be attributable to the work the Professional Cricketers' Association (PCA) does in keeping in touch with all former players, and providing opportunities for personal development and networking regardless of how long the individual has been retired for. Participant C6 commented:

> The work that the PCA does is phenomenal really. You rarely feel like you're on your own. I mean, I had access to a whole network of people who had been through the same thing as me. It was just knowing that they were there that made the difference.

The loss of friendships after athletic career termination are commonly reported occurrences in retired athletes. For example, a narrowing of social networks and difficulty in establishing new ones has previously been reported in this population (Lavallee, Grove, & Gordon, 1997; Park, Lavallee, & Tod, 2012). Losing friends reduces the availability of social support, and in some cases lengthens the adjustment period to life after sport (Grove, Lavallee, & Gordon, 1997). The loss of friendships was a theme only prevalent among the retired rugby union players, and therefore it would be useful to further understand the organisational characteristics of the sport that leads to retired athletes to losing touch with their former teammates.

Life event stress.

The final stressor noted in this category, was the presence of life event stress which included three sub themes: involuntary retirement, breakdown of romantic relationships and perspective and resilience. The process of athletic career termination itself was described by both groups of participants as a stressful life event. In this theme, participants described the psychological effects of involuntary retirement. When referring to his release from his contract, participant C068 said: "I think I worried because I wasn't the person making that decision, and it's what every cricketer fears - someone else telling you you're not good enough for your contract." He went on to say that his involuntary retirement left him "embarrassed", especially as his retirement all played out in the public eye. Participant RU6 provided a similar account:

> I think you lose a bit of face when someone has to sit you down and say "it's time". Nobody wants to be in that situation. All rugby players...all sportsmen want to be able to have a glittering career and then bow out at a time of their choosing to save face I suppose. I think it's like an unwritten rule. Everyone wants to play on for as long as they can, at the top of their game, and then suddenly, they have this epiphany...oh look..it's time for me to go now. I will bow out with my head held high and retire on a high. You know...there's few of us that actually manage that! The reality is so much more harsh.

Life event stress also came in the form of the breakdown of romantic relationships which was reported by both groups of participants. In each case, the participants perceived that relationship breakdowns impacted negatively on their ability to adapt to life after sport. Participant C5 explained:

> I think it's fair to say that my marriage didn't survive the end of my cricketing career. I guess that I must have changed a bit and of course I was really under pressure because of the way my career ended and because I hadn't got anything lined up for afterwards. I already told you that I was doubting my ability to make the right choices and all of that type of stuff. This, without question, had such a negative effect on my relationship. My ex-wife thought that I was selfish and couldn't see what I had - you know the kids. I think she struggled with the change in our circumstances and the change in me.

Participant RU4's experiences were similar, but occurred after the termination of his athletic career:

> I don't think I was the same person compared to when we met. The retirement from rugby, the unemployment, the new direction.....it just put so much pressure on us. I wasn't happy. It wasn't a great decision to get married, and she [girlfriend] had to put up with so much. It's sad really, I think we became different people. She was expecting me to return to being me if you know what I mean? The problem was, I'd changed for good. I wasn't happy go lucky anymore.....because I just wasn't lucky!

The second sub-theme of perspective and resilience tells a different tale. Both groups of participants reported life event stress in the form of family ill-health and loss, but in these instances, a greater sense of perspective and resilience resulted, which was reported as enhancing adaptation to life after sport. Participant C1 noted: "I became a father to a little girl - she was born prematurely and that was a bit hairy, y'know. It puts everything in perspective." Similarly, participant RU7 spoke of how he recently lost his father to cancer: "I watched the old man slowly deteriorate and that for me was really difficult to deal with. My reactions to his death caught me off guard a bit." Participant C1 went on to explain about his daughter: "She's fine now, but it was touch and go, and seriously when things like that happen, any worries you have just melt away. Things are insignificant in comparison." Likewise participant RU7 explained: "I know now that if I can get through that, I can get through anything. Little things seem so trivial these days."

The two opposing reactions to different types of life event stress warrant discussion. Firstly, the reports of the participants' reactions to the stress of involuntary retirement help shed new light on the findings in study 2 which suggested that the voluntariness of retirement was a long-term predictor of life satisfaction. In the present study, participants reported the stressful nature of not being in control of the decision to retire and of the public nature of their contract termination which left them feeling "embarrassed". They also reported having a

positive expectation of their retirement process, which was not met when their contracts were terminated. The remarks made about voluntary retirement being preferable to "save face" and the "embarrassment" associated with involuntary retirement may be linked with the social identity component of athletic identity, and should be investigated further. In a similar vein, the breakdown of romantic relationships after athletic career termination was reported as a stressor in the present study. Although there are regular reports of relationship breakdowns in anecdotal accounts of athletes' post-sport lives (e.g., McKenzie, 2005), research has not examined their experiences in this context. There are however, a number of reports in the general population linking a relationship breakdown to decreased life satisfaction. For example, recent studies involving the general population concluded that divorced people had significantly lower levels of life satisfaction than spouses who had stayed together (Gustavson, Røysamb, von Soest, Helland, & Mathiesen, 2012; Soons, Liefbroer, & Kalmijn, 2009). This decrease in life satisfaction is potentially attributable to the very high levels of distress associated with the breakdown of a partnership (e.g., Blekesaune, 2008). Indeed, divorce has been claimed to be "..the most traumatic situation, having the furthest reaching implications of all life events" (Frisby, Booth-Butterfield, Dillow, Martin, & Weber, 2012, p. 712).

The experience of ill-health or death of close family members appeared to have the opposite effect on both groups of participants, generating a sense of perspective and resilience, which in turn was perceived to enhance the individual's capacity to adapt. Although traditionally, there has been a tendency to assume that negative situations and circumstances impede positive adaptation (Sarkar & Fletcher, 2014), research suggests that individuals with a history of adversity reported better mental health and well-being outcomes than people with none (e.g., Neff & Broady, 2011; Seery, 2011; Seery, Holman, & Silver,

2010). There is also evidence to suggest this is a long-term effect, since individuals confronted with life event stress can show substantial declines in well-being which may linger only in the short-term (Infurna & Luthar, 2016). Additionally, the mention of perspective and resilience in the context of life event stress was connected in some instances, to parenthood. This finding links to recent sport psychology research that suggests parenthood contributes to an athlete or former athlete's change in perspective and greater resilience due to the need to negotiate multiple identities (e.g., Debois, Ledon, Argiolas, & Rosnet, 2012).

In summary, there were both similarities and differences of the experiences of stressors creating barriers to or opportunities to enhance the experience of adaptation to athletic career termination in both groups of participants. Whilst the rugby players perceived the physical toll of sport to be a stressor and in part, responsible for their injuries, cricketers saw the absence of this physical toll on retirement as a psychological release. In addition, the participants' accounts of injury and its role in adaptation were subtly different between groups. The cricketers reported the more chronic, cumulative physical effects and in contrast, the rugby players' narratives focused on the more acute and "brutal" injuries. Both groups reported the struggle to adjust to a reduced income as affecting their adaptation to retirement, although the rugby players spoke more frequently about their desire to have undertaken more financial planning. The narrowing of social networks as a cause of decreased life satisfaction was only reported by the rugby players. Finally, both groups reported the dual role of life event stress in their adaptation. Firstly, the lasting impact of the stress of involuntary retirement and the breakdown of romantic relationships were common in both groups and led to participants experiencing lower levels of life satisfaction. Conversely, life event stress in the form of family illness and death created resilience and perspective that ultimately

enhanced their ability to adapt. To conclude, the findings of the present study confirm the links between stressors and adaptation (Deary, Smart, & Wilson, 1992; Johnson, 1997; Sadavoy & Fogel, 1992). These findings provide an insight into the experiences of retired athletes from two different professional sports and how specific stressors may continue to affect the global assessment of their quality of life seven years or more after their retirement from sport.

Coping

Coping as a category had a number of facets. Firstly, participants described how a readiness to retire was central to their ability to cope over time with adaptation to athletic career termination. Three sub-themes were associated with the generation of this readiness: practical preparation for retirement, managing expectations and the return to an athletic career. Particular coping strategies that helped increase levels of life satisfaction over time were working in sport post-retirement, time, social support and physical fitness and exercise. Finally, crisis coping emerged as a theme prevalent in the accounts of the retired rugby players where feelings of jealousy and complete withdrawal from the sport resulted.

Readiness to retire.

The success of transitioning through retirement from professional sport and onto a second career was attributed to preparation for retirement. Both groups of participants explained the importance of the readiness to retire in facilitating coping with adaptation. For each participant, readiness meant knowing what to expect from retirement, and for some that was associated with having control over its timing: "I've said it before, but to go out on your own terms means that you've thought about it, planned it and are ready to see it through. That makes the difference" (C4). This theme was consistent in the accounts of both groups of

participants. In explaining the effect it had on his life satisfaction, participant RU6 described the impact of his lack of readiness to retire:

> I knew it was going to happen, I guess it had been at the back of my mind, but I'd not allowed myself to think about it or consider my options. I was in denial. Then you get the regrets and constant wondering about how it all happened.

A readiness to retire from an athletic career has previously been described by Park et al. (2012) as an expression of an individual's "confidence to deal with post-sport life" (p. 448). Furthermore, Alfermann et al. (2004) suggest that it is reflective of one's cognitive, emotional, and behavioural preparedness for their career transition. The significance of the readiness to retire in influencing levels of life satisfaction post-athletic career is inextricably connected to planning for retirement which mirrors the findings of Alfermann, Stambulova and Zemaityte (2004), Cecić Erpič (1998) and Park, Tod, and Lavallee's (2012) research. The findings of the present study connect both the readiness to retire and planning for retirement to the construct of life satisfaction. This suggests that individuals who are unprepared for retirement will experience more difficulties adjusting than those who are. The findings of the present study provide new insight into the long-term effects of a lack of preparedness to retire.

Practical preparation for retirement.

Participants explained how a preparedness for athletic career termination was facilitated by practical preparation for their second career. This theme was prevalent in all of the accounts of the retired cricketers and over half of the retired rugby union players, yet in distinctly different ways. When talking about the importance of practical preparation for life post-athletic career, participant C1 explained:

> You don't always appreciate it at the time, but the work that that the Professional Cricketers' Association (PCA) was great. When I look back now, I use so much of what I learned from some of the workshops and personal development stuff.

To illustrate the counterpoint, one of the retired rugby union players explained how they had access to advice and resources, but not appreciating its significance at the time, thereby delaying the adaptation process:

> ...we had former pros come in to talk to us, we always had the Player Development guy working with us helping us to put together development plans n'that but it was all a bit abstract really. I don't think it really clicked when I was doing stuff like that. I think I might have been going through the motions a bit. (RU4)

Actively preparing for retirement which includes both readiness to retire and practical preparation for this phase of one's life has previously been linked with positive adaptation, career decision-making and vocational adjustment to career transitions in sport (Blustein & Phillips, 1994; Park, Lavallee & Tod, 2013). Engaging in practical preparation for athletic career termination is a popular approach to adaptive coping among retired athletes (Park et al., 2013), which explains its relationship with increases in levels of life satisfaction (e.g. Cecić Erpič, 1998). It is interesting to note the different ways the retired cricketers and retired rugby union players engaged with the resources provided by their respective associations and how this in turn, affected the course of their adaptation. Future research should involve a review of engagement with the transition services each provide to ensure they are providing assistance to athletes as intended.

Managing expectations.

Linked to the themes of readiness to retire and practical preparation was the theme of managing expectations. This theme was mostly reported by retired cricketers. Managing expectations meant having an awareness of the next phase of one's life, and ultimately understanding that whatever was coming next was unlikely to surpass the experience of an athletic career. This was reported as being important for either the maintenance or increase of levels of life satisfaction, as "sportsmen are a bit different in that they get the great career and then everything goes a bit downhill from there on." (C6). The retired cricketers explained that is was essential to have a realistic expectation of the next phase of one's life to avoid disappointment. To illustrate further, on reflecting on his increase in levels of life satisfaction since retirement, participant C3 explained his change in thinking after he retired:

> I had some great days, some amazing experiences and nothing will ever come close to these. I think you just have to consider that you will not replace them. Managing your expectations I think is key. I really didn't manage to do this. I, and I think many others finish their careers and they go in search of something that is supposedly going to match these amazing experiences. It's like the bar has been set and whatever's next for them, for me, had to be comparable to this. It's all very silly really if you think about it but we're all blinded to it. Expectations need to be lowered and that's it really. I needed to know that, although I probably wouldn't have believed it if anyone told me! I'm quite passionate about this, I mean I do think that cricketers, even more so now need to be a bit more humble. Just because you've had an amazing job, doesn't automatically give you the right to having another amazing role. Expectations need downgrading.

The effect of expectations on life satisfaction is a relatively new research area (Frijters, Liu & Meng, 2012; Senik 2008). Some authors, such as Schwartz (2003), have stressed the important role that holding low expectations may have in generating future happiness; according to this argument, people who hold high expectations are more likely to face future disappointment, although this perspective does not account for how this may impact on levels of life satisfaction. However, the relationship between expectations and life satisfaction is far from clear. Recent research has shown that having high life expectations positively contributes to people's current satisfaction with life, while having low life expectations tends to reduce people's current satisfaction (De Juan, Mochón, Rojas, 2014). Further research should seek to uncover the true relationship behind expectations and levels of life satisfaction in retired athletes, including an investigation into the ways sporting organisations communicate with their athletes throughout their careers and effectively prepare them for a life outside of their sport. This recommendation should also include helping athletes manage their expectations of the antecedents to their retirement, as highlighted in the stressors theme. If life satisfaction is the difference between expectations and present life experiences, the management of these expectations up front is perhaps the key to a successful adaptation by securing life satisfaction in the future.

Returning to an athletic career.

The next sub-theme associated with the readiness for retirement was labelled returning to an athletic career. Returning to an athletic career was a sub-theme only prevalent in the accounts of retired cricketers. Interestingly, they gave an account of how returning to a cricketing career or moving into a different athletic career helped their ultimate adjustment to a post-sport life. Participant C5 explained: "There has always been something there - a bit of anger maybe. Unresolved. I just felt that I might try and get it out of my system [by returning

to an athletic career]." Likewise, participant C1 explained how by returning to cricket he felt better able to move on:

> I think I needed to go back just to realise that I really was completely finished, so it was a useful experience. Did I lose any face by making a return and not being successful? Maybe. I think I was just pleased to get cricket out of my system.

In addition, participant C4 explained the importance of having time to develop his readiness to retire and to be able to say that he ultimately controlled the timing of his retirement:

> I was down at the prospect of never having it [cricket] in my life again and I just needed one last stint. Like a final goodbye I guess. I'd retired too quickly, and I didn't have time to prepare myself for it mentally. This time, I knew that my return would be the end but I guess I just needed to do that for myself - to be in a situation where I said enough is enough. To go out on my own terms.

Although the desire to continue with an athletic career is a common observation amongst many retiring athletes, there is a lack of empirical evidence investigating the motivation to continue in this career, the opportunities available to do so, or indeed the psychological impact of sporting comebacks. It is suggested that the characteristics of professional cricket, with the three different competitive formats: Test or first class cricket where games can last up to 5 days, one day or limited overs cricket which involves playing 50 overs per side, and Twenty20 cricket, a much shorter, quicker format of the game where each team plays 20 overs per side, may promote this opportunity. Indeed, sport sociologists have recently observed that first class or test cricketers retire from this longer format of the game, opting instead to limit their involvement to shorter formats such as Twenty20 cricket in order to prolong "their (injury prone) careers" (Rumford, 2013, p.49). The present study therefore

highlights the potential opportunity afforded by an extension of a cricketing career specifically to generate a readiness to retire in athletes, and an illusion of control over the end of their careers. Both elements (readiness to retire and voluntariness of retirement) have been demonstrated to influence levels of life satisfaction in retired athletes (e.g., Cecić Erpič, 1998; Park et al., 2013). Notably, none of the rugby union participants mentioned returning to an athletic career as an option on retirement. It is suggested that the physical demands of rugby union are associated with higher injury rates than most mainstream sports leaving retired players less likely to be able to continue to as an athlete (e.g., Piggin & Pollock, 2016). However, further research is needed to better understand the effects of athletic comebacks after retirement, including the influence of the athlete's sport on such decisions.

Working in sport.

Linked to the desire to return to an athletic career was the shared theme of working in sport post-transition (n = 12). Both groups of participants reported wanting to stay working in sport, yet different motives emerged. For retired rugby players, leaving their sport completely was unappealing. Participant RU145 explained why he moved into a role coaching rugby: "I've been obsessed with rugby since I was 5 so when you love something that much there's difficulty in giving it up. Everything comes to an end and for a sportsman. Too soon actually, this was my way of keeping in rugby." (RU145). Retired cricketers had different reasons for wanting to continue to work in sport. They explained how this tactic promoted a swifter adaptation by remaining in an industry they were familiar with:

> I think for me, by sort of staying in the field, it was easier because I didn't have to make such a big jump in my transition and start all over again with something completely new, which would have been really really daunting for me. I also think

> that when you get a bit older, you want a shortcut to something that's going to work, that you can sort of hit the ground running with. (CO6)

However, there was a downside to staying in sport for some, which contributed to the decrease in levels of life satisfaction:

> I do really enjoy it, but I sometimes think, what next? I think I might be a bit stuck. Job prospects are a bit limited, and on reflection, I think I could have done something a bit better with myself. There's also no security really in coaching. A run of bad results, and you're out. That's always at the back of my mind. (RU145)

Of further note is the connection between the ages that the participants retired at and their desire to stay in sport. Of the participants citing this theme, it was more prevalent amongst those who had retired at an (relatively) older age (>29 years).

As a retired athlete, the desire to stay working in sport may result from identity foreclosure (Shachar et al., 2004), which in turn, may generate a commitment to one career goal without examining other occupations (Blustein, Ellis, & Devenis, 1989). Additionally, as with the participants in the present study, retired athletes may find comfort in the familiarity of the sporting environment, a lack of perceived threat of working in this domain or the avoidance of stress associated with exploring other career options (Torregrosa, Ramis, Pallarés, Azócar, & Selva, 2015). Indeed, Werthner and Orlick (1986) suggested that continued involvement in one's sport post-retirement eased the negative effects of the transition. By remaining in the sporting environment, the individual may be able to maintain a high level of athletic identity (Shachar et al., 2004) as it is likely that they "base their self concept solely on sport" (p.73), or as Stephan, Bilard, Ninot, and Deligniéres (2003) noted; reduce the frustration of not being an athlete. Whatever the motive behind pursuing a non-

athletic career in sport, Lavallee, Gordon, and Grove, (1997) suggest that retired athletes that stay working in sport after the end of their athletic career experience fewer adjustment difficulties as they rely on the same support system they enjoyed whilst playing sport. The present study confirms the extant research in this area, and suggests that life satisfaction may be enhanced for retired athletes by pursuing a non-athletic career in sport, especially amongst those retiring from sport at a (relatively) older age (>29 years). However, it is important to reinforce the detrimental impact that staying in sport may have on the life satisfaction of those who choose an inherently less stable role in sport such as coaching. With reference to study 2, this finding may, in part, explain the long-term deleterious effects of athletic identity six years or more after retirement. For example, if working in sport after athletic career termination is a common occurrence for those with high levels of athletic identity, yet the jobs they have chosen are inherently less stable, this may, in part explain the connection between athletic identity as a predictor of life satisfaction six years or more after retirement.

Of the remaining four themes in this category, three were cited as precursors to an increase in life satisfaction over time. Of those coping factors that helped individuals increase their levels of life satisfaction were time, social support, physical fitness and exercise.

Time.

The sub-theme of time was only prevalent in the accounts of the retired cricketers who emphasised the benefits of consciously giving themselves space to "do some clear thinking and get my head in order" (C3), to "work through things" (C5) and to allow "a period of time to mourn" (C8). In addition, time eased the emotional hurdles of retirement from sport: "As time went on, it just got easier to adapt" (C1). The enhanced levels of adaptation generated by the passing of time is supported by longitudinally-designed studies that suggest transition difficulties erode over time (e.g., Douglas & Carless, 2009; Lally,

2007; McKenna & Thomas, 2007; Stephan et al., 2003; Wippert & Wippert, 2008). Additionally, this may be linked to the claim that perceived levels of stress decrease with age (Cohen & Williamson, 1988) and that life satisfaction is a continually changing state (Ehrhardt, Saris, & Vennhoven, 2000). Furthermore, this finding supports the claim that "people inevitably adapt" with emotional reactions to major life events reducing over time (Lucas, 2007, p.75) and as Inferna & Luthar (2016) note: ""it is quite plausible that time does, in fact heal--for most people and given long enough periods of time." (p.191). This aspect of the retirement process was notably absent for the retired rugby players.

Social support.

Social support was regularly cited by both groups of participants as a resource that helped them cope over time; however, subtle differences emerged in the use of the different types of social support between the groups. The cricketers, for example reported relying on emotional support, which was predominantly provided by their families: "Without a doubt, my family were instrumental in supporting me through my retirement and beyond." (C2). In addition, they regularly cited the benefits of tangible support provided by the Professional Cricketers' Association (PCA) as giving them the impetus to adapt:

> I have to admit though, I didn't really have the confidence to do this off my own back. I think people fall into the trap of thinking that just because you are successful at one thing, that you'll be successful at another. So I used the PCA support quite a lot when I was thinking about what to do next. They were just great, they really helped me think about my plans, who I needed support from and what they could help me with. I was able to get some really good advice and made some really useful contacts that helped me when I came to put everything together. I will always be really grateful for that. (C6)

Emotional social support featured heavily in the retired rugby participants' accounts of increased life satisfaction, yet this was provided by friends, rather than family: "I spent quite a lot of time with a mate who was in the same position as me. We compared stories and kind of struggled through together. It's always good to know it's not just you going through this stuff." (RU7)

The link between social support and life satisfaction is well-established through the availability of support from family and friends (Cohen & Wills,1985; Helliwell, Layard, & Sachs, 2010). This effect is achieved by social support in its various forms easing psychological responses to stress that may negatively impact health and well-being (Cohen, Gottlieb, & Underwood, 2000). The relationship between social support and life satisfaction is most effective when the type of social support deployed matches demands created by the stressors (Cohen & Wills, 1985). However, it was interesting to note the differences that emerged in the types of social support utilised by each group. The retired cricketers discussed the benefits of the continued availability of informational support received from the PCA, and the retired rugby players the importance of emotional support from friends. Future research should seek to address the reasons for these sport specific differences in the availability and use of social support.

Physical fitness and exercise.

Prevalent in the accounts of retired cricketers only, physical fitness and exercise was believed to help improve life satisfaction after the end of an athletic career. Participant C5 explained: "I decided to give cycling a go. I went and did some races and things like that. The training kept me fit, maybe even fitter than cricket and the activity has always helped me mentally." This finding adds to accumulating evidence that daily physical activity has a direct association with life satisfaction (Maher, Pincus, Ram, & Conroy, 2015). Indeed, Maher et al.

(2015) suggest "physical activity is considered a valuable tool for enhancing life satisfaction" (p.1047). The link here may be associated with the benefits of acute bouts of physical activity, which have been shown to increase positive affect and self-perceptions (e.g., Hyde, Conroy, Pincus, & Ram, 2011) or indeed the euphoric effects of exercise as noted by McAllister, Motamedi, Hame, Shapiro and Dorey (2001). Once again, the notable absence of physical activity as a means of enhancing one's life satisfaction levels in the retired rugby players' accounts requires further investigation. To speculate, there may be a link between the consequences of a high injury rate in rugby union (e.g., Brooks, Fuller, Kemp, & Reddin, 2005) and the ability to exercise after athletic retirement. Yet, given the likelihood of such a positive effect on well-being, these sport-specific differences in coping require further attention.

Crisis coping.

The final theme responsible, in part, for a decrease in levels of life satisfaction over time was crisis coping which consisted of two sub-themes: jealousy and withdrawal. Crisis coping was only mentioned in the accounts of retired rugby union players. Transition crises were described as being responsible for *initial* reports of low life satisfaction on retirement:

> I'm ashamed to say that when I didn't have to go in [to training] anymore, I just sat at home. I felt lost. What did I have left? All my mates were training, my girlfriend at the time was great, but she was going out to work during the day. One day just ran into the other and I spent time watching TV, playing video games and drinking to ease the pain. (RU7)

However, these crises were matched with crisis coping interventions: "It put things in perspective, I allowed myself to be down about things, 'cause he [the sport psychologist] said

it was normal, and that everyone pretty much went through the same when they retire" (RU1), which served to increase adaptation and therefore levels of life satisfaction. For some, when coping strategies failed, feelings of jealousy were allowed to take hold, which caused decreases in life satisfaction:

> ...there were difficult days, when the team was playing really well and you're obviously delighted and the whole squad is delighted but there is that 20% you are missing when you're not on the pitch and you can't replicate that. That's the competitiveness in people. It is hard to feel a part of it and it's hard to feel anything other than a bit jealous really. (RU3)

For others, their approach to coping was to withdraw from rugby completely:

> I wanted to go into a completely different industry. Clean slate. I think I had a bit of a backlash against rugby. I mean I really love the sport but if I couldn't play, I didn't want to be involved. I couldn't really watch it on the telly, or at the ground. It was too painful for a while. I guess it was easier to avoid it altogether. (RU4)

The crisis-coping findings in the present study suggest that the participants affected experienced an imbalance in coping resources and barriers to adaptation to a post-sport life (e.g., Stambulova & Hvatskaya, 2013). Crisis-coping interventions delivered by a sport psychologist was noted as being effective in helping the participants to overcome their barriers to adaptation (e.g., Stambulova, 2011), thereby increasing levels of life satisfaction. However, specific to the retired rugby union participants were notable failures in coping at different times *after* their retirement, where feelings of jealousy resulted and withdrawal from the sport was employed as a coping behaviour. Jealousy is an emotion that functions to induce somatic, cognitive, and behavioural responses designed to address relationship threats

(Buss, Larsen, Westen, & Semmelroth, 1992; Salovey, 1991). It has been described as "a combination or blend of the feelings of anger, anxiety, betrayal, and hurt" and is identified as a discrete emotional response to a specific type of anticipated or actual social rejection (DeSteno, Valdesolo, & Bartlett, 2006; p. 627). In this case, it appears that the participants affected may have felt that their retirement ostracised them from a once cohesive group (e.g., their former team). Of further interest is the link between the reports of jealousy and the breakdown of friendships from the same participants providing further support to the likely cause of perceived ostracism. In relation to this study, jealousy is labelled as a disengaged negative emotion that has been shown to have a negative relationship with life satisfaction (Kuppens, Realo, & Diener, 2008).

The final sub-theme prevalent in the coping category was withdrawal. Withdrawal is classified as a maladaptive passive avoidant coping strategy that involves keeping oneself away from directly perceived stressors or stressful situations (e.g., Krohne, 1993). In the case of the participants in the present study, anything rugby-related was perceived to be too stressful to engage with and therefore complete withdrawal resulted. Research supports the participants' accounts of avoidant coping strategies such as withdrawal being associated with decreases in life satisfaction (Polman, Borkoles, & Nicholls, 2010).

In summary, coping was a category that encapsulated both the initial strategies used to successfully negotiate the transitional period, but also techniques that continue to be employed by the participants to overcome stressors particular to retired athletes. The participants' accounts indicated that for many, there was a constant need to employ coping strategies into their post-sport life in order to overcome a psychological legacy from their athletic career. In these cases adaptive coping has been shown to be closely linked with increases in levels of life satisfaction and conversely maladaptive strategies coping can be

precipitated by low levels of life satisfaction (Frisch, 1998, 2006). There were notable differences in the approaches to coping taken by the retired cricketers and the retired rugby union players in the present study. In summary, the cricketers felt that the management of expectations of a post-athletic career were key to coping with the transition, along with taking time to make that adaptation. This potentially relates to advice they may have received at this stage of their career from sport psychologists, or other practitioners from their sporting environment. The most notable difference that emerged in the participants' accounts was the propensity of the cricketers to attempt a sporting comeback after retirement, which was an option that was not mirrored in the rugby players' accounts. Both groups of participants spoke of the importance of continuing to work in sport on their ability to adapt, yet for subtly different reasons. The cricketers felt this was an easier way to transition, and the rugby players cited their inability to leave rugby behind. Finally, the sources of social support differed between groups, with cricketers relying on the instrumental support provided by the ECB and PCA. Both groups reported that their adaptation was enhanced by social support, which was provided mainly by family in the case of the cricketers and by friends in the case of the rugby players. Finally, physical activity and exercise was reported as a beneficial coping strategy by the cricketers only, which is perhaps linked to the long-term consequences of the different types of sporting injuries experienced by participants in both groups. In all cases, future research should be conducted to determine the source of those differences in coping.

Personal factors

The final category that emerged from the transcripts was personal factors. Personal factors consisted of a number of themes including identity, peer comparison, physical self-

perception, common mental disorders, stability and autonomy as influencing factors in the participants' changes in levels of life satisfaction over time.

Identity.

Identity emerged as a resounding theme accounting for changes in levels of life satisfaction in the transcripts of the majority of participants in this study (n = 14). Identity consisted of two complementary sub-themes: athletic identity and general sport identity. Athletic identity was identified in the previous study as being a significant predictor of life satisfaction on retirement, and six years or more after retirement. Additionally, there were interaction effects of sport and time on athletic identity, yet in general, levels of athletic identity were shown to decrease over time. The results of the present study add to the findings of study 2. To elaborate, both groups of participants spoke of how their levels of athletic identity caused a decrease in their levels of life satisfaction in their post-retirement lives. In accounting for the long-term negative impact of athletic identity on adaptation, there were subtle differences between the groups. For example, the retired cricketers focused mainly on the self-identity (e.g., Martin, Mushett, & Eklund, 1994) component of athletic identity: “It's a real problem when in your head you're still a cricketer, but there's no cricket for you.” (C7). However, in accounting for his low levels of life satisfaction on retirement, rugby participant RU7 explained: “It's a pride thing. You're now just like everyone else. There's nothing special about you. You are just another average person.” emphasising instead, the social identity component of athletic identity (e.g., Brewer, Van Raalte, & Linder, 1993).

Both groups similarly illustrated the general pattern of decline in levels of athletic identity as time passed. The retired rugby players attributed their reductions to age (e.g., Grove, Fish, & Eklund, 2004): “I did struggle a bit with this [athletic identity] for a while, but

as I've got older, I'm a bit wiser." (RU4). The cricketers however, attributed their reduction of athletic identity to a personal investment in a new career outside of sport (e.g., Shachar, Brewer, Cornelius, & Petitpas, 2004):

> I think when I was trying to call time on my cricketing career, that jump from a full time professional cricketing career to that of a businessman helped me think about myself differently I had to adopt a new attitude and to a certain degree, a new persona to deal with the challenges of my new role. It was a challenge, as my reputation as a cricketer was one that helped by business, so I had to hang onto it o a certain degree. Inside though, as soon as I embarked on my business, I changed inside. (C2)

Although high levels of athletic identity are associated with poorer adaptation outcomes on athletic career termination (Cecić Erpič, Wylleman, & Zupancic, 2004), both groups of participants explained how their athletic identity allowed them to eventually establish and embrace new roles, and in some cases it facilitated their new ventures:

> …starting out it was difficult as all of my contacts knew me as a cricketer, so that whole environment just reinforced everything [athletic identity] really. You're continually reminded of it, and that just sustains it all really. It was only really when my business was established and I started to meet new clients and things, that I started to adapt to my new role and identify with that role. It is difficult really because you kind of need to be that cricketer / former cricketer to sustain your new business and for people to know a bit about who you are, what you were to get some respect. (C5)

For participant RU6, who transferred into a non-athletic role in rugby after his retirement, he expressed the benefit of the social function of athletic identity (e.g., Brewer, Van Raalte, &

Linder, 1993): “I think people like the fact I am who I am, it brings a bit of prestige to the club and maybe some novelty.”

The findings of the present study suggest that the respective sporting environments help create, reinforce and maintain athletic identity (e.g., Mills, Butt, Maynard, & Harwood, 2014) through the structure and norms of each. There are a number of themes to examine within the category of athletic identity: the social component of athletic identity in rugby, the benefits of harnessing athletic identity to launch a second career, and the propensity to return to an athletic career in the cricketing sample. Firstly, the connection between the emphasis of the social component of athletic identity and the sport of rugby union may be connected to the anthropometric and physical characteristics of a typical rugby union player (e.g., Duthie, Pine, & Hooper, 2003), which makes those individuals highly recognisable. Studies have shown that an individual's social identity is influenced by their physical state (Cash, 1990; Taub, Blinde, & Greer, 1999). The appearance of one's body drives social interactions and the perceptions of others (e.g., Cash, 1990). This may account for the subtle differences in the participants' accounts of how athletic identity affected their adaptation.

Athletic identity has previously been described as an "Achilles' heel" (Brewer, Van Raalte, & Linder, 1993). That is to say that whilst athletic identity enables the persistence and commitment required for a successful athletic career, it may also be a liability, especially when individuals are transitioning out of their sport (e.g., Horton & Mack, 2000; Werthner & Orlick, 1986). Athletic identity therefore, was highlighted as being a double-edged sword of sorts especially as a factor influencing life satisfaction after retirement from an athletic career. In the context of the present study, participants described how athletic identity may have been linked to both decreases and increases in levels of life satisfaction during the time period after retirement. Those decreases were caused when participants' athletic identity no

longer matched their professional status, thus causing incongruence and therefore difficulty in adaptation. Yet in other circumstances, specifically with the retired cricketers, athletic identity facilitated the move to a post-athletic career when it helped kick-start new ventures potentially due to the acquired popularity and personal contacts made during their athletic career (Vilanova & Puig, 2016). These findings link with the research conducted by Shachar et al., (2004) who found that sport coaches maintaining high levels of athletic identity reported higher levels of satisfaction with their lives and with their careers, suggesting that it is a construct that aids a non-athletic career in sport. Finally, the shift in athletic identity reported is supported by studies that have demonstrated role changes following the end of an athletic career as the catalyst behind a reduction in this area (e.g., Kerr & Dacyshyn, 2000; Lally, 2007). Indeed, Lally (2007) reported that athletes appeared to have new roles and identities around a year after sport career termination. Additionally, for individuals who move into a career outside of the sport domain, greater reductions in athletic identity on retirement have shown to be related to greater levels of life satisfaction in general (Shachar et al., 2004). These reductions have been shown to happen in preparation for and after retirement (Torregrosa et al., 2015).

Sport identity.

Of further note was the presence of the sub-theme of a general sport identity. When questioned about their levels of athletic identity and how this impacted on their levels of life satisfaction, most participants (n = 11) spoke of how they no longer felt like an athlete, but that they were still identified with sport. Participant C2 explained: "I'm not an athlete but I do connect with sport. My life still revolves around it, so I have to put a positive image out there. I have to be an ambassador for my business." In some cases, this was held up as a reason for continuing to work in sport: "Maybe because I identify with sport, that's one of the reasons

why I am still working in this industry." (C5). Likewise, this theme was prevalent in the accounts of the retired rugby union players. When asked to explain how they identified with sport if they no longer considered themselves athletes, participant RU7 responded: "I guess it's a sense of belonging in this industry [sport]."

The concept of general sport identity is undefined in the literature, but was labelled in the present study in recognition of the participants' acknowledgement that even though they still identified with sport, they had relinquished the role of the athlete. Research suggests that self-categorisation is dynamic, fluid and context-driven (Turner, Oakes, Haslam, & McGarty, 1994). Since context has such an influence on self-categorisation, the public shifting from an athletic identity to a more general sport identity may have self-protection at its heart. That is to say that projecting a positive public image with a 'new' identity may serve to reduce dissonance and thereby protect the participants' public and private images following retirement from their athletic career (cf. Grove, Fish, & Eklund, 2004). This in turn, may lead to an increase in life satisfaction.

Peer comparison.

Amongst the other themes in the category of personal factors was peer comparison. Peer comparison was a theme relevant to the retired rugby union players when they were accounting for decreases in life satisfaction since retirement. In their interviews, participants suggested that their rugby career had put them at a disadvantage in their post-sport life when they compared themselves to peers of the same age. This comparison ultimately resulted in a decrease in levels of life satisfaction: Participant RU8 explained: "I think I had a few difficulties thinking about starting again, at the bottom of the rung, while people my age were in successful jobs and in their prime. I just felt that I'd taken a backward step." Athletes are often thought to lag behind their non-athlete peers in the development of their careers due to

the all-encompassing focus on sport (e.g., Shachar, Brewer, Cornelius, & Petitpas, 2004), which supports the participants' accounts in the present study. Additionally, the findings in the present study support previous research that has linked high social comparison orientations with low levels of life satisfaction (Civitci & Civitci, 2015). Future research should seek to uncover why retired rugby union players in particular had a greater propensity to engage in peer comparison on retirement.

Physical self-perception.

In a similar vein, a further source of decreases in life satisfaction related to two distinct components of physical self perception (cf. Fox & Corbin, 1989), namely sport competence and physical conditioning. Both groups of participants reported the perceived pressure associated with the expectations of others, which they explained made them reluctant to engage in sport and exercise: "People still expect you to be on top of your game in sport, I do feel very aware when I'm in the gym doing what seems like very easy exercises." (C2). In addition, participant C6 explained the awkward nature of others' expectations in relation to sport competence following retirement:

> I had a few people ask me to take part in matches, friendlies and that. I wonder how they think that's different. I was forced to retire because I had my finger amputated. I haven't miraculously developed an ability to play cricket again in the last 9 years. It's as difficult to play cricket with one hand now as it was when I retired.

In addition, the participants spoke of the pressure of living up to a sporting ideal in terms of physical conditioning when they retired:

> I think I'm a bit of a fraud - still working in sport but not able to be a poster boy for the sport. I guess I should be a warning of what might happen to you if you play rugby for too long. (RU8)

Physical self-perception is part of an individual's self-concept which in most people has many separate domains (Shavelson, Hubner, & Stanton, 1976). Fox and Corbin (1989) proposed that physical self-perception consists of five sub domains: sport competence, attractive body, physical strength, physical condition and physical self-worth. Physical self-perception is an important construct as it is positively linked to physical activity and healthy behaviours (e.g., Ruiz, García, García, & Bush, 2010), negatively related to appearance anxiety and low self-confidence (e.g., Delfabbro, Winefield, Anderson, Hammarström, & Winefield, 2011). In the present study, the participants indicated that both sport competence and physical condition, specifically, were sources of decreases in life satisfaction, which mirrors an association found in recent research on the adolescent population (e.g., Delfabbro, et al., 2011; Videra-García & Reigal-Garrido, 2013). In addition, the literature on athletic career termination includes accounts of distress associated with physical changes to retired athletes bodies as eating habits are deregulated and training regimes are reduced (e.g., Warriner & Lavallee, 2008). In some cases the decreased life satisfaction associated with physical changes may be related to a continuation of athletic identity (e.g., Warriner & Lavallee, 2008), or indeed a sport identity. Individuals may strive to maintain aspects of this identity including their physical self-perception where any deviation from a 'sporting body' may undermine this identity. However, the findings in the present study suggest that there may be more complex relationships underpinning the connection between physical self-perception and life satisfaction in the retired athletic population; namely the perception of the expectations of others given the first career of these individuals, and the connection between athletic injury

consequences and the ability to maintain an exercise regime. Both of these suggested relationships require research attention in the future.

Common mental disorders.

Balanced relatively equally between participants from both sports was evidence to suggest that a quarter of participants (n = 4) experienced common mental disorders after retirement, which impacted on their levels of life satisfaction. Participant C5 explained how he was feeling at certain points during the last seven years, generated by the enduring challenges of a life after sport: "I was also a bit low - I did sometimes wonder whether I'd be able to get myself back up on my feet and carry on." In addition, participant C2, who declared a history of depression explained:

> I'd say that my levels of life satisfaction are always in a state of flux. I guess that's the downside of suffering from depression. I think there are times when it would be, in all honesty a lot lower than this. I think it's a constant battle really. So, I guess that for me, a small change in my average levels of life satisfaction is probably not that big a deal. It probably reflects normality for me.

Both of these examples illustrate that the issue of common mental disorders in sport is a complex one. For example, both the socio-contextual characteristics of sport, and in this case, retirement from an athletic career may generate mental health challenges (Bauman, 2015). In addition, when athletes, or in this context, retired athletes, are faced with stressors associated with elite sport, any pre-existing mental ill-health can become more evident (Bauman, 2015). Additionally, each individual reporting common mental disorders also explained how they were living with the lasting effects of sport injuries. This finding mirrors recent research connecting osteoarthritis, which can be generated through high mechanical stress and

repeated traumatic joint injuries in elite athletes (Tveit, Rosengren, Nilsson, & Karlsson, 2012), and common mental disorders, which may be due to pain, discomfort and functional limitations associated with this condition (Schuring, Aoki, Gray, Kerkhoffs, Lambert, & Gouttebarge, 2016).

The final themes categorised as personal factors are stability and autonomy, both of which were considered to be important in increasing levels of life satisfaction over time. Stability was mostly prevalent in the accounts of the retired rugby union players. For some, stability was credited with being a factor associated with an increase in levels of life satisfaction: "I guess the increase in my satisfaction levels are a measure of how settled I am and happy with a challenging job." (C3). For others, when asked what would enhance their levels of life satisfaction, they responded: "Probably some stability, some certainty and for all of the messiness [divorce proceedings] to be over." (RU4). Autonomy was also deemed important in this context, for these participants it meant having freedom over and flexibility within their lives that was a contrast to their lifestyle during their athletic career. Participant RU3 explained:

> Since I retired I found I could indulge in the little things that a professional rugby player can't do. I can travel, which I didn't have the freedom to do before and when I was playing rugby although I conformed, I felt very constrained - you do have to watch what you're eating, drinking, go to bed on time. In a team environment, there is no flexibility really to do your own schedule. The team does what the team does and there is no scope to change that. Anyway, I've had that now and whether it's travelling or having a few pints on a Wednesday or Thursday, there are certain things that I can do and enjoy. It's quite liberating really!

The theme of stability in the present study referred to a stable family life and a stable work life. Although there is no evidence to support the relationship between a perception of *general* life stability and life satisfaction, links have previously been established between job security and a stable home life and life satisfaction (e.g., Sirgy, 2012). Additionally, to illustrate the counterpoint, there is evidence that life satisfaction can be negatively influenced by one's feeling of insecurity (Green, 2011; Silla, De Cuyper, Gracia, Peiró, & De Whittle. 2009). Autonomy may also be related to employment stability, in that individuals may experience an increase in life satisfaction due to having more control over their work-life balance (Chimote & Srivastava, 2013). However, in the present study, increases in life satisfaction were reported as a result of being free of the structured and controlling lifestyle of an elite athlete.

In summary, there were a number of personal factors that accounted for increases and decreases in levels of life satisfaction over time, with commonalities and differences noted in both groups of participants. For example, subtle differences emerged in the impact of athletic identity on life satisfaction where the loss of the self-identity component was of significance to the retired cricketers and the loss of the social-identity component was the key concern for the retired rugby union players. Furthermore, athletic identity decreased as the rugby players grew older, yet decreases in the cricketing sample were attributed to new non-sporting ventures. A new theme of "sport identity" emerged from the accounts of both groups of participants in recognition that they still identified with sport despite relinquishing the role of the athlete. Meanwhile, rugby players explained how comparing themselves to their non-sporting peers on athletic career termination caused a decrease in life satisfaction as they felt at a disadvantage when considering their next post-athletic direction. Likewise, physical self-perception was described as a common source of decreases in levels of life satisfaction after

athletic career termination in both groups of participants. This finding uncovered what is likely to be a complex relationship which is ultimately tied in to the expectations of others. The unsurprising role of common mental disorders in both groups of participants accounted for fluctuation in the levels of life satisfaction over time and finally stability and autonomy were sought as sources of increases in the ability to adapt over time.

Conclusion

In conclusion, the present study not only adds to the literature on life satisfaction in retired athletes, it provides a new perspective on the causative factors that might lead to its fluctuation after athletic career termination. The findings concur with extant research suggesting that life satisfaction changes over time, and that whilst people do not always bounce back— especially under severe circumstances (e.g., Cummins, 2000; Diener, Lucas, & Scollon, 2006; Lucas, 2007), some generate resilience from challenging periods in their lives (Sarkar & Fletcher, 2014). The findings also illustrate variance and commonalities in levels of life satisfaction between retired athletes from two different professional sports suggesting that experiences beyond an athletic career will share some common features yet with sport-important specific nuances. In summary, the major differences between the two groups of participants can be broadly summarised as the different accounts of athletic injury and its consequences, the role of the sporting organisations in providing and encouraging social support, and the nuanced effects of athletic identity.

To recap, cricketers emphasised the more chronic, cumulative effects of their athletic injuries, whereas the rugby players described their experiences as more acute and reflective of the "brutal" side of the game. This is significant, as the different types of injuries and their ongoing consequences may in turn dictate the manner in which those individuals conduct their lives in the future. In the present study, the cricketers spoke of their propensity and

ability to return to an athletic career after their initial "retirement". They explained how this return, often to a shorter format of the game enabled them to generate a readiness to retire, and a perception of control over the process when they eventually decided to terminate their career for good. This is an important difference between the two sports, as to have control over the timing of your retirement has been demonstrated to lead to a greater ability to adapt. This was supported by the findings of study 2, and by the findings of previous research (e.g., Taylor & Ogilvie, 1994). This opportunity was notably absent in the accounts of the retired rugby union players, therefore illustrating in greater depth, the role of sport type in the career termination experience. In the same way, the nature and consequence of athletic injuries may affect the individual's ability to continue to lead a healthy, active lifestyle. Indeed, the cricketers gave an account of the perceived benefits of maintaining physical activity and exercise in their retirement as a means of enhancing their ability to adapt after retirement. Furthermore, the impact of athletic injuries and their ongoing consequences may also influence physical self-perception which was a personal factor responsible for decreases in life satisfaction.

In addition, there were a number of themes that indicated differences between the two groups in the support they received by their sporting organisations and others. Firstly, financial planning and stability was seen to be a key component of the ability to adapt, yet the rugby players expressed regret at not engaging with the financial advice provided to them during their athletic career. Additionally, the sources of social support supplied to each group differed slightly with cricketers obtaining tangible support from the PCA whereas the rugby players reported relying on emotional support from friends to help them through. Moreover, the rugby players explained how their social network narrowed when they retired and that they lost contact with their friends, yet the cricketers spoke highly of the attempts the PCA made to ensure that the retirees had access to people who had been through a similar

experience. It is clear that future research should specifically investigate the culture and the role of the sporting organisation in the career termination experiences of athletes.

The final major difference to highlight is the role of athletic identity in adaptation to athletic career termination. The present study built upon the detailed findings of study 2 that suggested there were interactive effects of sport and time on levels of athletic identity after retirement. In the present study, athletic identity was described as a double-edged sword where adaptation was hindered initially by athletic identity which was subject to different cognitive appraisals between the groups. To recap, the loss of the self-identity component was of more concern to the retired cricketers, whereas the retired rugby union players were more focused on the social-identity element of athletic identity. Yet, both groups were able to use their athletic identity to their advantage in their subsequent job roles, before levels eventually declined with age, or as their new professional identity took hold (e.g., Lally, 2007; Martin et al., 2014). Of interest was the formation of a new "sport identity" which was described as taking the place of the athletic identity one the individuals were able to relinquish the role of the athlete.

These nuances, and their associated drivers require further research attention. At present, the sport-specific nature of the career termination experience, either directly following retirement, or indeed determining how individuals react in the years that follow is not presently fully understood. Therefore, the sport-specificity of the manner in which athletes' expectations are managed during an athletic career, the provision of personal development, career and transition services, the availability and use of social support and the long-term consequences of the most common injuries within those sports should be the subject of future research. Developing awareness and understanding of the sport-specificity of reactions to athletic career termination will help to ensure athletes are offered more targeted, proactive preparation and interventions within their respective sports. In addition,

future research should seek to gain a better understanding of the psychological impact of sporting comebacks, the breakdown of romantic relationships, the potentially positive use of athletic identity to promote a second career in retired athletes. Finally, future research attention should focus on the link between the consequences of athletic injuries, physical self perception, the ability to maintain an exercise regime and adjustment to life after sport.

The present study had a number of strengths and limitations. For example, the relatively small sample size (n = 16) involving participants representing two different sports means that the findings may not be fully representative of those participating in the previous study. However, extreme case sampling was used in an attempt to select the richest cases for examination. Furthermore, design of the present study involved retrospective recall which may have been hampered by memory decay. Indeed, by reflecting on the data collection process, it was clear that it was a challenge for participants to pinpoint the temporal nature of the changes in their levels of life satisfaction, always opting to anchor their discussions with their experiences instead. However, the participants were all reminded of the results obtained from their involvement in the previous study for the purposes of enhancing their recall. Finally, this study enhanced the interpretability and fluency of findings that emerged from the previous study to illustrate in more detail the sport-specific and time effects on adjustment to life after professional sport.

The present study sheds new light on a previously poorly understood phase of a former athlete's life: the period *after* retirement from professional sport. As such, the findings will help applied sport psychology practitioners understand this phase of the retired athlete's life in more depth. In turn, this enhanced understanding may be used to formulate effective intervention strategies to help athletes prepare for and develop adaptive coping strategies to help them through into the next phase of their lives.

In conclusion, this is the first study to examine in detail, the adaptation experiences of retired professional athletes in their lives after the termination of their athletic career. The study revealed critical detail underpinning the sport-specific nature and the effects of time on adjustment, concluding that there is a psychological legacy from an athletic career that may cause levels of life satisfaction to fluctuate over time. Adaptation as a steady state may therefore not be achievable.

CHAPTER 6

GENERAL DISCUSSION

The main aim of this thesis was to extend our understanding of adaptation to athletic career termination in male professional sport through a series of three interconnected studies that addressed: (1) the conceptualisation of the voluntariness of retirement and its impact on adaptation to athletic career termination, (2) the conceptualisation of the outcome of athletic career termination and (3) the temporal nature of patterns of adaptation. This general discussion section will summarise the key findings and explore the conceptual and theoretical implications of the present programme of research. It will then examine the strengths and limitations of the thesis and conclude with suggested areas for future research.

The current programme of research involved three separate studies. Study 1 involved an in-depth appraisal of career termination experiences in professional cricket. The study was carried out in partly in response to the anecdotal reports detailing the high suicide rate amongst its former players (e.g., Frith, 2001) and in part, due to the Professional Cricketers' Association's (PCA) 2014 report that concluded 34% of retired cricketers did not feel in control of their lives two years after terminating their career (Professional Cricketers' Association, 2014). The study was designed to deal with criticisms of the generic nature of the quantitative approach to research on athletic career termination (e.g., Greendorfer & Blinde, 1985), and as a means of addressing the idiosyncratic nature of this experience. Participants were 9 retired professional cricketers from England and Wales who had represented a county cricket club and/or the England and Wales national cricket team. The results of the study indicated that the reasons for retirement from professional cricket were multicausal and sport-specific. Furthermore, the results challenged the long-held view that the voluntariness of retirement is a significant factor influencing adaptation to career termination, as this was not supported by the participants. The contractual pressures of playing for short-term (1 to 2 year) professional contracts, the feeling of being commodified

by the county cricket clubs, and the poor handling and communication of deselection decisions were all highlighted as sport-specific stressors and antecedents to retirement. The participants also described how their autonomy was restricted during their playing career and how coaches and administrators purposefully restricted their pursuit of other interests outside of their athletic career. This was described as having a negative impact on their ability to adapt to life after they retired from professional cricket. Further sport-specific distinctions in retired cricketers' experiences related to the use of the off-season, and how this break in the competitive schedule in domestic cricket offered ideal opportunities for post-athletic career planning, yet in reality it was notoriously underutilised. The participants described how education was something that provided them with the empowerment to adapt post-athletic career, yet other resources such as the England and Wales Cricket Board (ECB) and PCA administered personal development programme suffered from a lack of promotion and engagement at club-level. Finally, the results of this study suggested that each participant experienced negativity and regret for up to five years following their retirement from professional cricket. Furthermore within the population sampled, there was no evidence to support the concept of a healthy career transition (e.g., Stambulova, 2012), nor indeed the concept of a retirement crisis (e.g., Taylor & Ogilvie, 1994). The results therefore called into question this conceptual dichotomy (e.g., Stambulova, 2012; Taylor & Ogilvie, 1994) on retirement from sport. Instead, it was posited that the outcome of the transition experience be further examined, as it seemed more plausible to suggest individuals may in fact fall somewhere on a continuum between these two extremes.

Building on the findings of the first study, the second study set out to further examine adaptation to athletic career termination in professional sport. Adaptation in this study was measured through the variable of life satisfaction - a subjective evaluation of one's overall

quality of life (Diener & Diener, 1995), indicative of self-perceived adjustment (Diener, Emmons, Larsen, & Griffin, 1985), and a key measure of adaptation to athletic career termination (Stambulova, Alfermann, Statler, & Côté, 2009). Whilst a number of studies had previously highlighted several factors thought to have a bearing of life satisfaction on retirement from sport, the temporal nature of their influence on adaptation was unclear. The aim of the second study therefore was two-fold; to examine the predictors and temporal nature of adaptation to retirement from professional sport. To this end, a new sample of retired professional cricketers (n = 86) and retired rugby union players (n = 133) were recruited to complete the Retirement from Sport Survey (RSS; Alfermann et al., 2004) for the purposes of measuring transition-related variables. The RSS measured variables that fell into four general categories: demographic, pre-conditions of retirement, the transitional period and the quality and long-term consequences of athletic career termination. A quasi-longitudinal analysis of the RSS was then conducted at two time points; on or near to retirement, and again six years later.

The results of the second study revealed two key findings. Firstly, that the predictors of adaptation to life after sport differ temporally, and secondly, the single biggest predictor of life satisfaction and therefore adjustment on athletic career termination was sport type. Although the strength of sport type's influence on adaptation to athletic career termination was strong on or near retirement, this effect dissipated as time passed. This finding mirrored the results of the first study that suggested career termination experiences might be sport-specific, and lent support to the notion that socio-contextual factors associated with each sport represented might have the biggest impact on immediate adaptation to a post sport life. Further predictors of adaptation to retirement (at time 1) included a postgraduate education and time to adjust. The variables predicting adaptation on a longer-term basis, both at time 1

and at time 2 included athletic identity, injury and the voluntariness of retirement. Although these findings were supported by previous research suggesting high levels of athletic identity often lead to a longer and more difficult adaptation, and the consequences of athletic injuries present ongoing physical limitations (e.g., Synder, Parsons, Valovich McLeod, Curtis Bay, Michener, & Sauers, 2008), the role of the voluntariness of retirement as a long-term predictor of adaptation was unclear. To this end, it was recommended that future research should attempt to clarify this relationship.

Further analyses were conducted in study 2 to examine the change in other RSS variables over time. Of the most significant were the findings that, in general, life satisfaction increases over time, whilst athletic identity declines. However, there were sport specific differences in health status, the requirement to change identity, career success and career satisfaction. Specifically, cricketers were more likely to report that their health had deteriorated, that they needed to change their identity, were unsatisfied with their current career and experienced a decline in their perception of current career success since retiring. Furthermore, interaction effects of sport and time were found in many of the RSS variables analysed including life satisfaction, athletic identity, coping, change in social network, participants' connection to sport, benefits from the athletic career and elements of the athletic career missed by the participants, indicating that the change in the variable over time depends on the sport represented. In summary, the findings of the second study added further support to the notion that the experience of athletic career termination is sport-specific. However, whilst study 2 provided valuable data on the sport-specificity of adaptation to retirement and changes in levels of life satisfaction over time, what was still unclear at this juncture was why these differences were present, and why adaptation changed over time. This study concluded

with the suggestion that further qualitative research was conducted to complement these quantitative findings.

To follow up the recommendations from study 2, a third study was conducted qualitatively to generate a deeper, more contextualised understanding of athletic career termination. In particular, study 3 examined the sport-specific nature of adaptation to athletic career termination, and investigated the reasons for changing levels of life satisfaction over time. To this end, 16 participants were recruited from the sample that provided data for study 2. The participants consisted of eight former professional rugby union players and eight former professional cricketers who were selected to participate via extreme case sampling based on the highest increases and decreases in life satisfaction recorded over time in study 2. The data gathered from semi-structured interviews with all participants were subject to both within- and cross-case analysis using inductive thematic analysis (e.g., Braun & Clarke, 2006). The findings of the final study revealed three major themes: stressors, coping and personal factors. These themes illustrated sport-specific and common causative factors that caused the fluctuation in life satisfaction and therefore adaptation levels over time.

The major differences between the groups of participants in the final study can be broadly divided into the stress of athletic injuries, the role of the sporting organisations in assisting coping and the personal factor; athletic identity. Taking each in turn, the participants' descriptions of the types of athletic injuries sustained during the course of a cricket and rugby career, and the stress that this generated, differed. Cricketers spoke of an accumulation of the effects of chronic injuries, whereas rugby players emphasised a more acute injury response to a "brutal" game. These differences had a notable impact on the manner in which participants were able to adapt to a life after athletic career termination. For example, although many suffered athletic injuries during the course of their career, some of

the cricketers reported that they were able to make a return to an athletic career, if they felt psychologically unprepared for retirement the first time around. Under these circumstances, the cricketers reported returning to a shorter format of the game (limited overs cricket) for a brief period of time, during which they were able to generate a readiness to retire, and a perception that they were ultimately able to control the timing of their final retirement. This particular sequence of events was reported to help them adapt to life after sport. This option was notably absent from the rugby players' accounts of their experiences, and it is suggested that this is due to the characteristics of their sport. Rugby union is a full-contact collision sport and as such, the incidence and severity of injuries are among the highest of mainstream team sports (Brooks, Fuller, Kemp, & Reddin, 2005). Further characteristics of the game such as the physical size and strength of players combined with long seasons has been previously cited as contributing to the incidence and severity of injuries (Williams, Trewartha, Kemp, & Stokes, 2013). It is suggested therefore, that not only are the rugby players less likely to be able to return to an athletic career after retirement due to the chances of having sustained acute injuries, but additionally, the characteristics of the sport would not support this. In a related fashion, the nature and consequences of sporting injuries may have been responsible for differences between the two sports in the ability to participate in physical activity and exercise post-retirement. The cricketers reported that being able to exercise after athletic career termination enhanced their ability to adapt after retirement. There was no such mention in the accounts of the rugby players.

Additionally, the role of the respective sporting organisation differed between groups of participants. This was a critical observation, as it was explained as being accountable for differences in patterns of adaptation over time. Although it was apparent that both sporting organisations (the ECB/PCA and the RFU/RPA) had offered resources for planning and

support during the participants' athletic careers, these tended to be accepted by the cricketers, yet not engaged with by the rugby players. The reasons for these differences did not emerge during the course of the research, and should certainly be investigated further in the future. The cricketers reported the "phenomenal" work undertaken by the PCA, in particular in providing support to individuals regardless of how long they had been retired. This was particularly evident in the efforts made to ensure retired players stayed in touch with a network of individuals in a similar situation. By contrast, the retired rugby players reported a narrowing of social networks on retirement and their regret and sadness at losing touch with their friends.

The final major difference between the groups that emerged in study 3 was related to athletic identity. The role of athletic identity was highlighted as multifaceted, and provided more context to the interactive effects of sport and time revealed in study 2. The role of athletic identity in adaptation over time was described as conflicting. On one hand, high levels of athletic identity hindered adaptation in two subtly different ways for each group of participants: the self-identity component was the most significant loss on retirement among the cricketers, while for the rugby union players it was the loss of the social-identity component that had the greatest impact on adaptation. However, both groups were able to use their athletic identity to their advantage in their subsequent job roles through recognition, contacts and publicity. Additionally, the participants explained how levels of athletic identity reduced over time and in response to new ventures as participants relinquished the role of the athlete. However, the participants reported the formation of a new "sport identity" in acknowledgement that they still identified with and felt connected to sport, but in a role aside from that of an athlete. The results of this study concluded that athletic career transitions occur within a specific sporting context that influences and informs the potential for

adaptation. In addition, the fluctuating nature of levels of life satisfaction after athletic career termination driven by different barriers and resources at different times in individuals' lives does not support the conceptual and theoretical perspectives of a linear, dichotomous healthy versus crisis transition outcome.

Conceptual and Theoretical Implications

This section summarises how the findings of this thesis contribute to the extant research in the study of athletic career termination. The conceptual and theoretical implications discussed below include the sport specificity of athletic career termination, life satisfaction as a measure of adaptation, voluntary versus involuntary antecedents to retirement, healthy career transitions versus retirement crises, injury, education, identity, connection to sport post-athletic career and interventions.

Sport specificity of athletic career termination.

Overall, it is important to note that the present programme of research challenges the conceptual models that form the basis of our understanding of athletic career termination for not being sufficiently contextualised enough to represent the sport-specific reality of the experience. This finding builds on the cross-cultural work of Alfermann and Stambulova (2007), Kuettel, Boyle, and Schmid (2017) and Ryba, Stambulova, and Ronkainen (2016), who used Bronfenbrenner's (1979) ecological model of human development to explain the macro-level influences of socio-cultural and socio-economic contexts on the experience of athletic career termination. The present programme of research argues that Bronfenbrenner's (1979) meso-level influences would take the form of input, structure and norms from governing bodies of sport, sports clubs and their support systems to create a specific environment that dictates many discrete aspects of the athletic career termination process.

The present thesis identified the sport-specific nature of the antecedents to retirement, the factors affecting adaptation and reactions to retirement in professional cricket (study 1). Indeed, sport type was shown to be have accounted for the most variance in life satisfaction on or near athletic career termination and also in the longer-term (study 2). In study 2, hierarchical regression analyses demonstrated that up to 52% of variance in life satisfaction on or near retirement was contributed to by the sport represented. This dropped to 5% six years later but was still a unique predictor of life satisfaction in its own right. These results placed the sport context as more influential than personal factors in adaptation to life after sport. Building on this main finding, study 3 highlighted both variance and commonalities in changes in levels of life satisfaction since retirement in a sample of retired professional cricketers and rugby union players. The results from this third and final study extended the findings of the aforementioned studies concluding that athletic career transitions occur within a specific sporting context that influences and informs the potential for adaptation.

Life satisfaction.

Life satisfaction was used in this programme of research as an outcome measure of adaptation to life after sport. To recap, life satisfaction is a subjective evaluation of overall quality of life (Diener & Diener 1995), defined as a "global evaluation by the person of his or her quality of life" (Pavot, Diener, Colvin, & Sandvik, 1991, p. 150). This evaluation provides insight into any differences between expectations and present life experiences (Diener & Lucas, 2000), which is indicative of self-perceived adaptation (Diener, Emmons, Larsen, & Griffin, 1985). According to Stambulova, Alfermann, Statler, and Côté (2009) life satisfaction is a key measure of adaptation to athletic career termination. They suggest that a healthy career transition is demonstrated by a general feeling of adjustment and an increase in levels of satisfaction with one's sporting career and life satisfaction. The present thesis

quantitatively measured participants' levels and life satisfaction in study 2 in a quasi-longitudinal design spanning six years. The findings suggested that there are numerous factors that predict levels of life satisfaction on retirement from professional sport, some of which alter over time. In direct response to Michaelson, Abdallah, Steuer, Thompson, and Marks' point when they said "it is all very well knowing that someone is satisfied with their life, but the interesting question is why" (2009, p. 56), study 3 involved a qualitative examination of reasons behind changes in life satisfaction from time 1 to time 2. In summary, the findings suggest that life satisfaction is likely to increase after athletic career termination (cf., Shachar, Brewer, Cornelius, & Petitpas, 2004). A detailed discussion of the predictors of life satisfaction, as a measure of adaptation to life after an athletic career, follow.

Voluntary versus involuntary antecedents to retirement.

Theoretically, the voluntariness of retirement from sport is commonly understood to be a significant influence on the resultant quality of the career transition (e.g., Park, Lavallee, & Tod, 2013; Taylor & Ogilvie, 1994). It relates to the degree of control athletes have over their decision to retire. Although the majority of studies that have reported this variable link a voluntary retirement from sport to a higher quality of transition, some researchers have questioned whether this dichotomy acutely represents the reality of athletic career termination. For example, Kerr and Dacyshyn (2000) and Koukouris (1994) suggest that there are elements of the retirement decision that are outside of the control of the athlete. This was illustrated by the participants in study 1 who described retiring through "free choice" despite sustaining career-ending injuries. Likewise, ageing athletes in the same study faced with the end of their athletic career often cited "free choice" as their reason for retirement despite having no other option but to retire. In study 1, individuals reporting such experiences were labelled reluctant retirees. The significance of these findings relates to the

response to retirement, which ultimately affects the process of adaptation. To further elaborate, participants in study 1 reported residual feelings of bitterness and regret up to seven years after their retirement from professional sport, which was evidently driven by the manner in which they retired. The antecedents to retirement, under these circumstances, may be viewed as barriers to adaptation and therefore, it is recommended that this aspect of the sport career lifecycle should be carefully and sensitively managed. The results of the present study provide further support for the assertion that by reducing retirement antecedents to the voluntary-involuntary dichotomy, a complex process is condensed into an overly simplistic one (e.g. Kerr & Dacyshyn, 2000). The result is a failure to capture the highly individualistic and multicausal nature of the causes of retirement, and more importantly, the individual's perception of the retirement process.

In study 2, the voluntariness of retirement was a key predictor of life satisfaction. This was the case both as a combined variable with athletic identity on or near retirement (time 1) and on its own six years or more later (time 2). The interaction effect at time 1 suggested that the effects of athletic identity on life satisfaction was dependent on whether the individual had retired voluntarily or not. The individual effect of the voluntariness of retirement at time 2 was unclear. The results of study 3 however, provided a more in-depth understanding of the role of the voluntariness of retirement on adaptation to retirement from sport, concluding that the lack of control over timing, and the often public nature of involuntary retirement left the participants feeling "embarrassed" and with "regrets and constant wondering about how it all happened". Furthermore, the participants eluded to subscribing to an "unwritten rule" that retirement from professional sport happens in a certain way: specifically, to "have a glittering career and then bow out at a time of their choosing", where any deviation from this is seen as a failure. The most notable aspect of these consequences of involuntary retirement was the

length of time the associated negative feelings persisted for, and the long-term impact this had on the ability to adapt. Additionally, it was concluded that the connection between involuntary retirement and embarrassment may be linked with the social identity component of athletic identity, and should be investigated further.

Healthy career transition versus a retirement crisis.

The findings of the present thesis call into question the way in which the quality of adaptation to athletic career termination is defined. To clarify, in their respective conceptual models, Taylor and Ogilvie (1994) and Stambulova (2003) refer to the resultant quality of the transition as being dichotomous. That is to say that retiring athletes experience either a healthy or smooth transition to a post-sport life, or in the case of a failure in coping; a retirement crisis. A healthy career transition is defined as successful coping with the career termination process and success in life (Alfermann & Stambulova, 2007). Conversely, a retirement crisis is a reaction which necessitates intervention which may then result in a delayed successful transition, or an unsuccessful transition (Stambulova, 2012). However, the research conducted in the present programme failed to find support for either a healthy career transition or indeed a retirement crisis. All participants in study 1 cited difficulties in adapting to life after retirement from professional sport suggesting that retiring athletes' experiences may fall somewhere on a continuum between a retirement crisis and an unproblematic straightforward adaptation. Furthermore, the findings of study 3 highlighted the propensity for life satisfaction to fluctuate after athletic career termination in response to a number of factors or events that act as either barriers or resources to adaptation. These findings call into question the concept of a linear and dichotomous transition outcome.

Injury.

Unsurprisingly, the topic of injury emerged regularly during the course of the current programme of study as a factor leading to a decrease in levels of life satisfaction. As an illustration, one participant reported: "I think I signed over my body to the sport" (study 3) when he was providing an account of how all the injuries he sustained during his career took their toll and affected his ability to adapt. The effects of the associated psychological toll of repeated sport-related injuries were described as being responsible for a decrease in levels of life satisfaction as participants regretted the impact an athletic career had on their long-term psychological and physical health. This finding concurs with the results of previous research in this area (e.g., Kadlick & Flemr, 2008; Malinauskas, 2010; Moreira, Vagetti, de Oliveira, & Campos, 2014). Extant research suggests that injury often leads to physical limitations that impact on work performance or other daily activities and may render individuals unable to fulfil social or personal roles (e.g., Synder, Parsons, Valovich McLeod, Curtis Bay, Michener, & Sauers, 2008). In addition, the pain associated with the lasting effects of sport-related injuries may be responsible for poorer perceptions of well-being (e.g., McLeod, Bay, Parsons, Sauers, & Synder, 2009; Turner, Barlow, & Heathcore-Elliott, 2010), and an inability to engage in an active lifestyle post-athletic career, which may in itself present a barrier to adaptation. Given that there were sport-specific differences in the participants' accounts of their injuries and their associated influence on adaptation, future research should set out to investigate these effects in different sports in further detail.

Education.

Across studies 1 and 2 of this thesis, education was described as the ultimate assurance for maximising the chances of achieving a healthy transition out of an athletic career. Qualitatively, it was labelled a "protecting factor", "a cushion in the background" and something that gave the participants "empowerment" to adapt (study 1). The findings of study

2 revealed the relationship between education and adaptation where postgraduate qualifications were unique predictors of life satisfaction both in the shorter (on or near retirement from sport) and longer-term (six years later). However, there were two novel findings associated with the identification of education as a predictor of life satisfaction on retirement from sport. Firstly, it was education gained before or during an athletic career that enhanced the experience of transitioning to a post-sport life (study 1). Secondly, it appears that it is specifically postgraduate levels of education that are linked to increases in life satisfaction among the male former professional athlete population in Great Britain. Reasons for this relationship may relate to the proposition that high levels of education may provide the individual with the ability to work towards goals, adapt to changes and ultimately therefore influence subsequent occupational opportunities (Diener, Suh, Lucas, & Smith, 1999; Salinas-Jiménez, Artés, & Salinas-Jiménez, 2013), or perhaps an acquired distinction in the labour market (e.g., Waters, 2009). Indeed, research has linked the educational development of athletes to increased security for their post-sport lives (e.g., Aquilina, 2013). However, the pursuit of education before or during an athletic career and the greater effectiveness of postgraduate education in encouraging adaptation to a post-sport life requires further investigation.

Identity.

Previous research has emphasised the key role of athletic identity in adaptation to life after sport (see Park et al., 2013 for a review). In the present programme of research, athletic identity was a factor that emerged at every stage. In study 1, the significance of the loss of participants' personal and social identity was described as a key feature in their transition experience. In study 2, athletic identity emerged as a unique predictor of life satisfaction on or near retirement, and again at time 2. In study 3, the participants described the barriers to

adaptation driven by subtle differences in athletic identity between groups. Specifically, participants described how high levels of athletic identity in retirement caused decreases in levels of life satisfaction. They spoke of how athletic identity levels reduced when they took on a new occupational role, or after the passing of time. However, the findings suggested that athletic identity facilitated the transition from an athletic career, especially when the participants were transitioning to a new career in sport. Under these circumstances, participants described how they were identified as a professional sportsman by other people, and how ultimately this helped get their new career or new venture started. The social component of athletic identity was also reported as being important for participants starting a new career in their late twenties to early thirties. In these cases, participants who were recognised as athletes or retired athletes felt that this justified their starting a new career at that stage of their lives. This is an important new dimension in athletic identity - adaptation relationship that will inevitably assist practitioners working with retired or retiring athletes.

In addition, a novel dimension of identity emerged from the qualitative study examining changes in levels of life satisfaction between time 1 and time 2 (study 3). Participants described how they no longer felt like an athlete, but that they were still personally and socially identified with sport. This concept is new and undefined in the extant literature, yet it fits with the notion that self-categorisation is dynamic, fluid and context-driven (Turner, Oakes, Haslam, & McGarty, 1994). It is proposed that a new sport identity may result from a public shift away from an athletic identity after retirement, reducing dissonance and protecting the individual's public and private images (cf., Grove, Fish, & Eklund, 2004). The findings of the present thesis suggest that this shift in identity led to an increase in life satisfaction after retirement. However, it is recommended that future research investigates this concept further.

Connection to sport post-athletic career.

The relationship that retired athletes maintain with sport after the end of their athletic career comprises three different elements for discussion. Firstly, the present thesis revealed that some athletes returned to an athletic career in order to help them prepare more effectively for retirement. Secondly, 75% of the participants in study 3 reported moving into non-athletic roles in sport following their retirement. Finally, the connections the participants maintained with sport changed as time passed after their retirement. Each finding requires further exploration.

Returning to an athletic career (Sporting comebacks).

The incidences of returning to an athletic career, or *sporting comebacks* as they are often called, are regularly observed in professional sport. However, there is little empirical evidence that has investigated such occurrences. The findings from the current research suggest that by returning to an athletic career, athletes had a second chance at generating a readiness to retire, which for some involved gaining a constructed sense of control over their retirement the second time around. Both aspects associated with retiring after a sporting comeback (readiness to retire and voluntariness of retirement) have been linked to levels of life satisfaction in retired athletes (e.g., Cecić Erpič, 1998; Park et al., 2013). At the same time, further research is needed to better understand the circumstances, sport-specificity and impact of athletic comebacks after retirement on subsequent adaptation in retired athletes.

Staying in sport.

The current programme of research involved a quasi-longitudinal approach where participants were asked to complete the RSS on or near to their athletic career termination (time 1), and again six years later (time 2). Participants were then shortlisted from the cohort

at time 2, and were interviewed a year later (time 3) for the purposes of discovering more about the reasons for the change in their levels of life satisfaction during this time. At time 3, 75% of the participants reported that they had moved into a non-athletic role within sport. This approach to a second career was more likely in the participants that had retired when they were 29 years old or more. There are a number of reasons posited for the high instance of retired athletes remaining in the sporting domain. Firstly, it is suggested that the older an athlete is when they retire, the less likely they are to want to start to pursue a new career path. Participants in study 3 suggested that there was a propensity to compare themselves to their peers outside of sport when they retired, which prevented some from pursuing a brand new occupation. This was especially common in the retired rugby union players as they explained how they perceived their rugby career had put them at a disadvantage in their post-sport life when they compared themselves to their peers. Secondly, identity foreclosure (Shachar et al., 2004) during an athletic career may cause the individual to neglect the exploration of other occupations, thereby leaving a different role in sport as the only option as a second career (Blustein, Ellis, & Devenis, 1989). Thirdly, by continuing to work in sport, the individual may be able to sustain high levels of athletic identity (Shachar et al., 2004) and reduce the difficulties associated with no longer being an athlete (Stephan, Bilard, Ninot, & Deligniéres, 2003). Next, Lavallee, Gordon, and Grove (1997) suggested that retired athletes that stay working in sport after the end of their athletic career experience fewer adjustment difficulties as they rely on the same support system they enjoyed whilst playing sport. Finally, by staying in sport, individuals benefit from the familiarity of the sporting environment, a lack of perceived threat of working in this domain or the avoidance of stress associated with exploring other career options (Torregrosa, Ramis, Pallarés, Azócar, & Selva, 2015). However, the participants also highlighted a drawback of staying in sport after athletic career termination. They mentioned the lack of job security in roles such as coaching. This

perceived role instability ultimately affected their life satisfaction, and was thought to prolong the transitional period. The present findings indicate the influence of staying in sport on the adaptation of retired professional athletes. Future research should examine, in greater depth, non-athletic careers in sport to examine the impact of sustaining athletic identity post-athletic career and the job security issues.

Connections with sport.

The connections the participants maintained with sport were shown to change over time following retirement. Analyses conducted compared participants' continued engagement with their respective sport between time 1 and time 2. The findings suggest that as time passes, both retired cricketers and rugby union players were less likely to exercise, stay in touch with team mates and watch their respective sports as a spectator. These results shed new light on the lifestyle of retired professional athletes. Of special significance is the retired athletes' relationship with exercise. This is particularly critical and requires further consideration due to the links between physical activity, positive affect and self-perception (e.g., Hyde, Conroy, Pincus, & Ram, 2011). There may be a relationship between the ability to exercise after retirement from sport, previous injuries, the physical toll of an athletic career sustained in one's athletic career (study 2) and physical self-perception (study3). Future research should examine retired athletes' relationship with exercise and physical activity in order to fully understand what effect this is having on their ability to adapt and maintain a healthy lifestyle after the cessation of an athletic career.

Proactive and Reactive Interventions.

Research suggests that both proactive and reactive interventions for athletes are effective means of support during career transitions (Park, Tod, & Lavallee, 2012). Proactive

interventions often involve personal development programmes (PDP) and pre-retirement planning during an athletic career. Reactive interventions, by their nature usually take the form of counselling during crisis transitions (Taylor & Ogilvie, 1994). The findings of the present programme of research supported the existence and benefits of both forms of interventions. However, the results suggested that whilst elements of support from PDPs were beneficial to the participants, they were not universally supported or promoted by coaching staff or sporting administrators. Therefore, it is suggested that the current PDPs and related athlete support provision is reviewed to ensure that it is effective as it can be. There are a number of suggestions, based on the present programme of research that may help to improve the support provided to athletes. Firstly, the desire to support athletes with their personal development and preparation for a life after their athletic career should be universally supported at every level within professional sport. Supporting athletes to develop as individuals rather than just sportsmen and women should be a core value firmly embedded in each sporting environment to ensure a consistent approach. Next, different athletes have different needs. The support provided should be fully bespoke to the individual concerned to ensure they can prepare appropriately for their life after athletic career termination. Bespoke support should include, where required, advice on a second career. Not knowing which direction to take was a barrier of adaptation to life after sport for a number of participants. Additionally, it is recommended that professional sports promote and support their athletes attaining undergraduate and postgraduate degrees as a means of enhancing the prospect of employability on transition into a subsequent career. Finally, it is recommended, that sporting organisations start to help their athletes manage their expectations of their athletic and post-athletic careers. Participants in study 3 suggested that sporting organisations needed to help athletes generate a realistic expectation of what happens after career termination to avoid disappointment and secure the ability to adapt.

Applied Implications

There are a number of practical implications that emanate from this research. Firstly, sporting organisations, medical service providers, sport science and sport psychology practitioners would benefit from being made aware of the sport specificity of athletes' retirement experiences. This will enhance the understanding of an athlete's reaction to, and process of adaptation from, retirement. Furthermore, as previously mentioned, it is suggested that any interventions provided to assist the athlete in their adaptation to life after sport, should be fully bespoke to the needs of the individual. The understanding of the sport specificity of retirement experiences will enable practitioners to provide appropriate proactive and reactive assistance, and to identify individuals at risk of adaptation problems.

Sporting organisations and practitioners should be aware that the antecedents to retirement are multifaceted. Therefore, regardless of whether an athlete has retired on their own terms or not, there may be other drivers behind their athletic career termination (age, deselection potential, contractual pressures, injury) which influence that decision. Under these circumstances, it is not correct to assume that those retiring voluntarily will be able to adapt quicker. Certain antecedents to retirement may be viewed as barriers to adaptation and whether they are described as the primary, secondary or tertiary reason for athletic career termination is arbitrary. The findings of the present thesis suggest the majority of athletes will struggle to adapt to life after an athletic career. It is recommended therefore that the retirement phase of the athletic career lifecycle is carefully and sensitively managed in every instance. To this end, communication with athletes approaching retirement needs to be regular, open and honest in order that the expectations of the individual can be managed effectively.

In addition, in order that every athlete has the best possible chance of adapting quickly and effectively at the end of their athletic career, sporting organisations should work to ensure that those reaching the end of their career are able to keep in touch with their friends and teammates after their retirement. This was noted as a barrier to adaptation in study 3 in retired rugby union players. Conversely, the PCA's work in connecting past players was heralded as "phenomenal" by a participant in study 3, and cited as a resource for adaptation. Indeed, the PCA formally organises past player events (Professional Cricketers' Association, 2016) both centrally and locally in conjunction with the county cricket clubs, which is open to all retired players regardless of the length of time since retirement. Work to replicate these arrangements in other sports is likely to bring with it the same benefits.

Finally, for practitioners working with athletes in professional sport, a number of recommendations for applied practice emanate from this programme of research. Firstly, the concept of managing expectations from the outset is key. Sporting organisations and practitioners should be encouraged to be open about the finite nature of an athletic career, where personal development is holistic and athletes are encouraged to plan for a subsequent career alongside their athletic development. Specifically, a focus on the significance of pre-retirement planning in the form of developmental experiences and the acquisition of life skills throughout the athletes' career is key. Additionally, when preparing athletes for athletic career termination, participants reported gaining confidence from understanding that retirement is a difficult process for most individuals. In this case, advising that adverse reactions are normal occurrences and to be expected may help to reassure athletes who feel they are struggling to cope. Furthermore, advice on taking time to adapt was cited as being useful by participants in study 3. Finally, practitioners may wish to explore the reframing of high levels of athletic identity with retired athletes. Participants in study 3 explained how the social component of

athletic identity helped them kick-start new ventures. Exploring how to put high levels of athletic identity to good use in retirement may aid the process of adaptation.

Strengths of the Programme of Research

One of the biggest strengths of this programme of research was the characteristics of the sample of participants recruited across the studies. In an attempt to deal with criticisms of previous research that relied heavily on a North American collegiate sample, the present programme of research recruited retired professional athletes from Great Britain and sampled them in a quasi-longitudinal manner in studies 2 and 3. Sampling this specific group of retired sportsmen has provided a detailed understanding of the experiences of athletic career termination and adaptation to a life after sport; an experience that is open to the influences of the sporting context and fluctuations over time. Additional strengths include:

- The complementarity of the use of qualitative and quantitative research methods throughout the programme of research.
- The quasi-longitudinal design of studies 2 and 3 combined involved the collection of data from participants at 3 points in time over a period of seven years in total, resulting in a high accuracy in the observation of changes.
- The quasi-longitudinal design of studies 2 and 3 were helpful in determining patterns of changes in adaptation to athletic career termination.
- The second study in this programme was the first to systematically examine the predictors of adaptation to athletic career termination, thereby providing valuable insight into a complex process.
- The second study employed PLS to test the validity of scales within the RSS that measured latent variables. This approach helped overcome the issues associated with

using Cronbach's alpha on data sets will small sample sizes (<300) and in scales with only 4-5 items.

Research Limitations

The present programme of research involved a number of limitations that require acknowledgement. Firstly, the selection criteria for participation in the studies were exceptionally stringent, requiring only former professional athletes from two sports in Great Britain, thereby restricting the identification and subsequent accessibility of the sample. As such, the findings are gender and culture specific; therefore, the ability to generalise the results from this study is limited. Secondly, at every stage of the programme, the data collection involved retrospective recall. In some instances, participants were asked to recount details from events from between six (study 1) and eleven (study 3) years prior to interview. Data therefore may have been subject to response or retrospective recall bias. Thirdly, study 2 employed the RSS to collect quantitative data on the retirement and transition experiences of the participants. Researchers (e.g., Stambulova et al., 2007) have previously reported weaknesses in the RSS, amongst which is the criticism of questions requiring only a 'yes / no' answer for the collection of critical data such as the engagement in pre-retirement planning and injury status. Next, as with all quasi-longitudinal studies, the collection of additional data during the course of the participants' transitions would have improved the quality and depth of the information obtained. Additionally, taken holistically, this thesis represents a negative case analysis. There are a number of potential explanations for this including participants seeking out opportunities to communicate their dissatisfaction with the manner in which their career ended and the likelihood of more negative transitional experiences from athletic careers in the 1990s, before the introduction of career assistance programmes and performance lifestyle interventions. Finally, and perhaps the most notable

limitation, is the selection of life satisfaction as the dependent variable, as a marker of psychological adjustment. Previous research in occupational (e.g., Fouquereau, Fernandez, Fonseca, Paul & Uotinen, 2005), military (e.g., Speigel & Shultz, 2003) and gerontological (e.g., Reis & Pushkar-Gold, 1993) psychology has similarly examined levels of life satisfaction in retirees but the question remains as to whether it is the best measure of adjustment to life after sport. For example, life satisfaction as a construct is thought by some to be relatively stable over time, thereby indicating that the major contributors to this may be personality traits (e.g., emotional stability, Reis & Pushkar-Gold, 1993) rather than the characteristics of the experience itself. Furthermore, research indicates that life satisfaction judgements are subject to priming (Suh, Diener, & Updegraff, 2008). Situational priming has the potential to make certain experiences more salient and therefore certain judgment standards more accessible. Additionally, it has been suggested that life satisfaction judgments are vulnerable to mood and ordering effects (Krueger & Schkade, 2008). Therefore, completing the 50-item RSS asking for retrospective recall on issues such as the antecedents of retirement and injury status may skew the subsequently reported levels of life satisfaction, which are asked for at the end of the questionnaire.

Future Research Directions

Life satisfaction is a construct that is commonly used to assess self-perceived adjustment to different types of life transition (Neugarten, Havinghurst, & Tobin, 1961). In the present programme of research, levels of life satisfaction were found to be influenced by many factors, the most significant of which was the sport participants competed in. As the strength of this association is a novel finding, it is recommended that future research should further investigate the role of sport type in the context of athletic retirement for the purposes of building a more complete picture across different sports. Further findings revealed that

postgraduate education was significant and enduring predictor of adjustment, although the reasons for this are subject to speculation. It is recommended that future research seeks to uncover further detail concerning this relationship, including any cross-national differences due to socio-economic and employment issues specific to each country.

The current findings called into question the two distinct and long-held conceptualisations of athletic career termination: (1) the voluntariness of retirement from sport and (2) the outcome of the transition. Focusing on the voluntariness of retirement first, it is recommended that future research focuses on the multicausality of reasons for athletic career termination and their impact on adaptation. In addition future research attention should seek to clarify the relationship between the long-term barriers to adaptation associated with involuntary retirement, athletic identity and individuals' expectations of their own retirement. Secondly, this programme of research has called into question the manner in which the outcome of athletic career termination is conceptualised. To recap, study 1 found no evidence for the concept of a healthy career termination or a retirement crisis and study 3 concluded that levels of life satisfaction fluctuate over time, and in response to a number of factors, some of which may be sport-specific. It is suggested therefore that future research revisits the way in which the outcome of athletic career termination is defined.

Furthermore, as sporting injuries are commonplace during the course of an athletic career, and can have a detrimental impact on adaptation, it is recommended that future research addresses the following: (1) approaches and interventions designed to mitigate the psychological impact of athletic injuries, (2) the relationship between the consequences of sporting injuries and the ability of the athlete to continue to exercise after retirement, and (3) the relationship between sporting injuries and physical self-perception after athletic career termination. Next, it is suggested that future research examines the concept of "sport identity"

in greater depth. The findings of the present thesis suggest that a shift from athletic identity to a more general sport identity led to an increase in life satisfaction after retirement. Investigating this phenomenon further may provide useful information on how to actively counteract the long-term deleterious effects of athletic identity on retirement. Additionally, and with athletic identity in mind, future research should examine, in greater depth, the propensity for retired athletes to continue to work in sport after athletic career termination. Two specific components to examine in this investigation include the impact of a non-athletic role in sport on levels of athletic identity post retirement, and the impact of job security in sport on the ability to adapt to athletic career termination. Furthermore, it is recommended that full longitudinal analyses should be conducted to track athletes' levels of life satisfaction throughout their career, into and beyond their retirement to determine whether this construct is in fact, relatively stable over time. If this is the case, individual differences in levels of life satisfaction should be investigated further to build up a bigger picture of all factors contributing to adaptation to retirement from sport.

Furthermore, the concept of athletic comebacks and the impact of this decision on the ultimate retirement from an athletic career deserves research attention. Given that there are no empirical accounts of athletic comebacks to date, future research could shed light on what is currently an untapped phenomenon. Given that the present programme of research has indicated that athletic comebacks helped generate a greater readiness to retire and an enhanced ability to adapt to life after sport, there may beneficial lessons to be learned from such an investigation. Finally, in order to balance the negative case analysis presented in this thesis, future research should seek to identify athletes with positive cases of athletic career termination to further understand these experiences.

Conclusion

This programme of research aimed to extend knowledge of adaptation to athletic career termination in male professional sport through a series of three interconnected studies. Overall, the findings revealed that the experience of and adaptation to athletic career termination takes place within a *specific sporting context*. Furthermore, the thesis determined that levels of life satisfaction fluctuated, yet generally increased over time after the end of an athletic career in response to a number of factors that acted as barriers or resources to adaptation on athletic career termination.

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APPENDIX 1

SEMI-STRUCTURED INTERVIEW GUIDE FOR STUDY 1

Interview Guide

An in-depth appraisal of career termination experiences in professional cricket

Purpose of the study:

The aim of this research is to examine the experience of retirement from professional cricket in-depth. To this end, I will ask you a series of questions about your cricketing career, the circumstances surrounding your retirement, and your reactions to this particular event. You have the right to refuse to answer any question, to stop the interview at any time, and the right to withdraw from the process completely. You also have the right to request that your data is destroyed and not used in this research should you so wish. Additionally, any identifiers mentioned in the interview process such as your name, the names of your teammates and coaches and details of the clubs you have represented will be removed to secure anonymity. I will record the interview on my Dictaphone, and transcribe your answers word for word. I will then return the full transcription to you for checking. To start with, I'd like to ask you a few questions about your background.

Section 1: Demographics

Age	Nationality	Highest level of sporting representation	Length of professional cricketing career
Circumstances of retirement from professional cricket	Voluntariness for retirement	Age at retirement	Time since retirement

Section 2: Reasons for retirement

Can you talk me through the reasons for your retirement from professional cricket?

Probe: What were the circumstances behind your retirement from professional cricket?

Probe: Who's decision was it to end your professional cricket career?

Probe: How timely was your retirement from cricket?

Probe: Were there any additional reasons for your retirement?

Did you plan in any way for your retirement?

Probe: Did you give any thought to what you would do after your career came to an end?

Section 3: Factors affecting the quality of the individual's adaptation to life after cricket

What qualifications or work experience helped you adapt to a life after cricket?

Probe: When did you study for this/these qualifications?

Probe: When did you gain this work experience?

To what degree were you prepared for the transition from your cricketing career?

What resources were provided to you by the ECB, PCA or your cricket club that helped you to prepare for a life after cricket?

Probe: How would you describe the availability of these services?

Probe: How would you describe your engagement with these services?

How would you say that you coped with the transition out of cricket?

Probe: What support did you use during this time?

Probe: What other resources were available to you that assisted you with your transition?

Was there anything else that affected your ability to adapt to life after professional cricket?

Section 4: Reactions to retirement

What was your immediate reaction to your retirement?

Probe: How did you feel when your career came to an end?

How would you describe your experience of retirement from cricket?

How long did it take you to get used to the fact that your cricket career was over?

Section 5: Other information

Is there anything else that we haven't yet discussed that would give me an insight into your experience of retiring from professional cricket?

APPENDIX 2

INTERVIEW WITH PARTICIPANT C: STUDY 1

Interview with Participant C: Study 1

I: Can you talk me through the reasons for your retirement from professional cricket?

P: Well I think it was more why I was retired. Er…I was um…I mean I played for ten years, and I was still playing a lot last year, mainly one day cricket, I got a couple of injuries last year, sort of back problems, which probably started the year before and started getting a little bit worse, and for whatever reason, I think they were probably looking y'know, succession planning, thirty three year old bowler, they probably thought…y'know maybe he's not… You know you get to a stage where you're earning a reasonable amount of money, and maybe you're not playing in all the cricket matches, and suddenly they think, value for money. Maybe we can do something about it so… I think that was pretty much what happened. I was playing and, I'll try not to sound too bitter about this, they er… I got a text message saying we will not renew your contract.

I: By text message?

P: Yeah. Things were done by text message famously at [name of county cricket club]. Because I hadn't heard anything towards the end of the season, I thought fantastic, I'm getting a new contract. Things went on without any news, and then on the last day of the season, I sort of still hadn't heard anything. I wandered up to the chief exec's office and people were sheepish. They reacted weirdly to me. The receptionist y'know? I think they knew what I didn't. So, they said the chief exec would be in touch. They didn't say how he'd get in touch. But, a couple of days later, I got the text: We will not be renewing your contract. Full stop. I mean it wasn't as if I didn't expect it but just when it happens, it's just……it is a shock, I mean that because everything that….. and it's very easy if you're a cricketer to judge yourself by the fact that you're a cricketer and this probably comes down to what you're talking about, you gain a lot of self esteem by the fact that …..y'know, by your job. Then it's gone. In a text. Gone.

I: When you say "judge yourself by the fact you're a cricketer" are you talking about your identity?

P: Yes. I suppose so. My identity. And then that is sort of ripped away from you and within the space of minutes, you go from being a cricketer to being unemployed in a sense. Er, so that was pretty much what happened.

I: How did this fit in with your expectations time-wise?

P: Do you mean was I ready for it?

I: Yes, and had you planned to retire around this time?

P: Oh god no! If I look back now, I probably could have read the signs, but when you're right in the middle of it, convincing yourself that things are going well, that you're in it for the long term, that not hearing anything about your contract for next season is normal...things can appear fine. So, I wasn't ready. Nowhere near ready. It was a big shock to me.

I: Had you given any thought to what you would do after your career came to an end when you were playing cricket?

P: Er……well I always felt that I would play rugby more than cricket actually. Um…and I sort of went…my whole aim was really to play cricket to get…play sport to get somewhere else. Whether it be University….. I mean I managed to get to [name of University] on a sports scholarship um y'know, which I would never have done otherwise, as I'm not bright enough to go, so to be able to experience that was fantastic. And then really, I was going to play cricket for a couple of years, meet some interesting people and then maybe move out into a little bit more of a real job. Yeah, I think that's what my Dad had planned for me anyway. It coincided with a really successful period at [name of county cricket club] so y'know, things sort of run away with you. I mean I think, I'm not a massive one for goal setting, but I think what I did was er, um…when you start playing well, it's all about the next obtainable goal, whether that be if you're playing in the second team, and you want to be in the first team, and then you want to be a first team regular and then win things, and then you want to play for England or whatever, and y'know, I probably got to the top but one rung on that ladder. You know, I probably might have been given some consideration for England in the one day stuff, but for whatever reason, I probably didn't quite have the four day skills to back up the one day selection. I know that sounds a little bit ridiculous, but that's the way it works. Yeah, and I think probably after having two really good years, y'know, breaking one day records and things, and then not getting selected I probably started thinking it's not going to happen so started to y'know…probably at that stage my goals became get a longer contract, see it as a job more, which is disappointing but it's the commercial reality of professional sport.

I: So going back to your plans to "play sport to get to somewhere else". Where was that "somewhere else?" What was your next move intended to be after your retired?

P: I think probably, a couple of years ago I started thinking about what I wanted to do and I kind of thought about y'know the law and how that might be quite interesting so I started that recently [a law degree] with the intention of doing something with that, becoming a solicitor or something along those lines er…..y'know, and I guess that's probably my far reaching career goal. At the moment really I'm just trying to get a fast track into organisations and the business environment. Um…..y'know, your pretty shielded from that when you're playing cricket.

I: When you say you're "shielded" from that, can you describe what you mean?

P: Hmm……yeah……yeah sure….. it's interesting because at [name of county cricket club] there was an embargo on me reading law books at the ground. You know [name of team mate]. He did a law degree and he's far more studious than I. But, he would come off the field, he'd immediately have a shower and he'd get his books out. And I guess they thought that there was a lack of participation on his part…y'know a senior player….played for England…, if he's just reading his books then, he's not really adding an awful lot [to the game in progress]. So really, there was an embargo on me reading stuff which I thought was pretty unhelpful. Y'know 'cause people were reading the Sun some people were reading things less salubrious than that. Y'know, and what difference would it really make if I'm reading the odd paragraph here and there? So that was pretty disappointing I think. Y'know they paid a certain amount of lip service to um the fact they're gonna help people out. You go to a PCA meeting and they say all the clubs are really behind getting people back into studies, but the reality of the situation is the opposite…..certainly my experience at [name of county cricket club].

I: What made you choose law to study?

P: I'm just interested in it really. I just wanted to do something…It's partly because I can do it part time and do it in the winter and it's partly that it's quite high brow and interesting er…. But mainly it's something I felt could be useful even if I decided not to do it. It's a challenging subject and it would be…I mean it's funny because at the moment I'm working in the environment where it's very much results orientated. And er….I never thought of myself

as particularly competitive when I was playing cricket. I clearly am, and it drives me nuts when y'know things don't go right in the office. Y'know I think that's why I fell into doing this role, y'know the fact that it enables me to retain my quality of life I had before retiring [from cricket]…it pays quite well and the competition actually…I wouldn't say it drives me but it's part of who I am. But....it's just a job where I turn up, do my work and go home, y'know without having any real buy in. It's not cricket y'know.

I: Just going back to your retirement, were there any additional reasons behind your retirement from cricket?

P: Well y'know towards the end [of the participant's cricketing career], I never had a particularly good relationship with [name of the coach]. We just didn't really get on. We didn't have an awful lot of common ground. Which is fine, I mean that's no problem at all. And I'm not a desperately fantastic communicator and neither is he so you probably end up there with a bit of you know….. I felt that I had a reasonable relationship with the chief executive. I was a PCA rep…but at the end of the day it's probably y'know, that relationship became strained when I realised what was going on. My wife worked in employment law and was giving me all sorts of hints when I came to my mid season appraisal. You know mid season I think I got accused of certain things that were completely fictitious like feigning injury and things like. At that stage I knew what was happening and that made it even more obvious and probably strained the relationship further um…..but in a way it gave me a heads up as to what was coming and so it was just a case of preparing myself mentally in terms of finding another role. So in answer to your question, I'd say yeah absolutely but what you also find is…. you're like a wounded animal that gets left alone. I think definitely people…cricketers….don't want to talk about the end of their careers and if you're in a position where it looks like you're coming to the end of yours…..men aren't very good at talking anyway so they don't want to talk about your problems, but they also don't want to talk about a problem that's going to affect the atmosphere. So you do get yourself into a situation which is like being in a vacuum where nobody wants to talk about what's happening, but they all know it is happening. So there's that ostracism as well, although y'know if you've got good mates in the game, it's no problem you can talk about it which is fine. But definitely people didn't want to talk to me about that.

I: We've talked about the embargo on law books, but was there anything else that affected your preparation for retirement from cricket?

P: I guess cricket is more professional than before. Previously you used to go in, in April and then in September it was like we'll see you next April. Now, guys are in and have a month off and then they're back in, so nobody is allowed to drift in terms of fitness, or maybe they had a drinking situation or what have you. It's not really like that um, I think probably it's difficult y'know. It's definitely a lot more professional now. I just think that people don't have a chance to drop off the rails or do anything in the winter.

I: So are you saying that you felt unable to use the off-season during your playing career?

P: Obviously it's changed massively over time, but I think now there is definitely more control exercised over cricketers. It's weird because there are things they control and some things they don't. You know I played rugby for [name of rugby club] and we were given diet plans, and things like that, and there was nothing like that at [name of county cricket club]. But, I was saying to somebody in the office the other day, y'know we live in this constant environment that if you're playing abroad on a pre-season tour, and you've got your passport, it's taken off you like you're a child or something and you're not trusted to hang on to your own passport as if you're going to gamble it away. If anything you're only really playing for six months and then the other six months you're… y'know an awful lot of people don't do an awful lot in that time. But now the training is introduced into the off season to such a high degree, you are effectively just another person with a full-time job, and you haven't got six months to play with at the end of the year.

I: You mentioned previously that you were a PCA representative during your playing career. Can you explain a bit more about what resources were provided to you by the ECB, PCA or your cricket club that helped you to prepare for a life after cricket?

P: Yeah, the PCA were great. I was the PCA rep so I think I probably knew the people I had to speak to. They were pretty good. I think you've got a sort of a career goal which is fairly focused and narrow like getting into law, then there might not be much help [from the PCA]. There might be a point where they know a solicitor's firm where they could organise work experience or whatever. I mean I guess a lot of it is a bit different to that. The guys at the PCA offered legal help in terms of they felt I'd been treated badly and probably had a claim.

Which I didn't pursue only because I thought there's no point burning my bridges because you never know when those people [at the participant's former cricket club] may be in a position to help you. I mean I know that…I do a lot of business development in my role at the moment and I'm hoping that I'll be able to take a group of senior execs to cricket in the summer. There is no way I would have been able to do that had I gone along and sued them you know. Er, and this way you know I'll still have a certain amount of kudos when I go there and if I'm there with a group of senior solicitors then I…then that will only reflect well on me. Um, so you know…the PCA, they paid for my degree….you know it's quite an expensive course. It's part-time, but it's three grand and they paid half of that so, and I think they're prepared to be ongoing with that, so that's fantastic. And actually, they've um…..just contacted me about a um….. I think somebody….a head hunter, spoke to the PCA, and they put him in touch with me. I mean I'm not saying anything can happen with that but …… it's probably best not to y'know….. y'know just because your name is in their head they might put forward something I think they're pretty good like that. People like [name of PCA member] have played [professional cricket] and they understand what it's like to finish playing, it's not that long ago, and it's not a remote period of ancient history, and they understand how hard it can be. They're brilliantly proactive in getting people away from the situation that y'know is detailed in this book [participant makes reference to Frith's (2001) book].

I: OK, I'd like to ask you a bit more about your reaction to your retirement from professional cricket. Can you tell me a bit more about that?

P: I'm reasonably pragmatic probably on the verge of being a little pessimistic. Um, [name of county cricket club] sent me to a sports psychologist. I mean they recognised it. You know, I probably didn't see myself as a success sort of thing, y'know. I was constantly a bit negative about cricket. They wanted me to be a bit more positive about it. But I think that was almost like a defence mechanism against the inevitable [retirement]. Er……maybe not for the first five years I was playing, but after that it definitely was I was thinking it was going to end sooner or later. If you enjoy it too much, it might become something that you….you almost become addicted to that success and lifestyle and then when you finish….it won't be there anymore and if you judge yourself…..or you have your self esteem judged by what you do. I think the books that you've talked about and the reports you mentioned about cricketers, and young men …..y'know, it's a classic demographic …higher suicides in much younger men. I think I probably didn't take notice of it in that oh my God….I'm going to kill myself but took

notice in it as that's how people react. You know I played at [name of cricket club] with a couple of guys. I won't name names but they left cricket and I could see the depression. They were friends of mine. Not clinical depression, just their self worth was virtually nil. You know I didn't want to be in that situation.

I: How about your own reaction though? How did you in particular react?

P: I mean I'm not a big drinker or anything anyway so; the one thing I did do was to stop training. And that's it, instead of playing cricket; I'm doing another job so I stopped training. I mean I think I'd have to be a fairly sad individual to y'know. I mean having a new born at home and going out and getting hammered y'know it doesn't tie in, that's not real life.

I: OK, can you describe how you felt then when your career came to an end?

P: I guess I looked at the sort of positives out of it. I don't have to go running on wet nights or things like that. I guess you have to look at it like that. I guess that in the summer when I'm sat in the office and it's a beautiful day outside I'll think I'll pine after being out there running around. I mean I was pretty convinced that the best way for me to move on…to move on quickly was to…start this job that I'm doing now. Within a month of finishing. I mean literally I was….looking for roles in the middle of the summer. I thought I knew what was coming. So I started within a month. And y'know I was stewing about it, thinking about it and as soon as I started a new role, that I'd never done before…you know I'd never worked in a y'know business environment really. Um, there hasn't really been time. I know it sounds like I'm storing a lot of problems in later life or something…I don't know…..but er, yeah. I mean I think I'm a pragmatist and a realist and it doesn't do you any good to worry about it. And also I mean my wife and I had a baby last summer. It doesn't fill the void exactly but you can see there is a bigger picture. And it's not really worth worrying about.

I: OK, is there anything else that you would like to talk about that would provide me with information on your retirement experience?

P: Yes! Definitely! I want to talk about [name of county cricket club]. I think they dealt with it incredibly badly – [name of county cricket club] that is. You know everyone playing cricket knows that they're not going to…… you know apart from [name of cricketer] who played

until he was forty, but nobody else manages to um, and you've got to be realistic to know that it's coming to an end. I think they put in place you know, appraisals to try and make everybody realise what's happening and if it could be a bit more transparent….. but what actually happens is nothing's particularly said because they're in a position where they want everybody to still play and do their best for the team, especially if you've got a small squad like [name of county cricket club] have. Um, so, er…..y'know, it's er so it's negative in so much as I was treated pretty poorly and I've tried to move on, but it still gets me sometimes.

I: Can you tell me a bit more about how it "still gets" you?

P: Um, it's a good question, I think probably I'm…..I'm disappointed it ended the way it did. I mean I think, y'know even if you're a tea lady you might get y'know a bit of a send off, but I wasn't even in a position y'know where I could say to my team mates at the end of a game, thanks guys, it's been fabulous playing with you. Um, so I'm pretty pragmatic about it, y'know, you can't play forever, it's a transient business and you know that sooner or later...and I've come to the stage where if they haven't talked to you by the end of the season, you sort of know. Even [name of county cricket club] aren't professional enough to let you know where you're going. Um, so in terms of unfinished business, I still felt I was good enough to play but I think I probably attained all my goals at that stage in terms of achievement, and then after that it would have been just playing for as long as I could….maybe y'know. I guess the next thing I would have been almost holding on for would have been a benefit so…I think I was probably just unlucky in terms of the timing of it. I came along when a lot of other guys had started playing and er...y'know, it didn't work out. You know I might have had to play for another couple of years and then I might have got one [a benefit match].

I: How do you think your transitional process could have been made easier for you?

P: Um….well I think probably a certain amount of weight should be dropped at the door of the cricket club, you know I don't think they handled things particularly well….and I think that's across the board. But I mean from my point of view, I just felt y'know…a bit traumatised. Then after, I just had to get my head down and get on with it y'know. Get on; move on and er you're not a cricketer anymore so it's difficult to know how to make it any smoother. It's a big life change and the clubs could definitely do more to make it smoother. I guess it's a case of you're gold dust when you're playing and then you're just dust. Y'know you're no longer their problem.

I: How often do you find yourself reflecting on your cricketing past?

P: Um, occasionally. Again, I'm sure I'll think about it in the summer when it's on television and mass media, on the back of every paper. I still dream about cricket y'know. Whether it be the classic of walking out to bat without your clothes on or whatever I still have those, and it's pretty sad, but it's not something that really I can do anything about…. I mean there's so much going on at the moment, but I really do miss it [cricketing career].

I: Which part of your cricket career do you miss the most?

P: The camaraderie I think, but I guess everyone says that? I don't miss any of the training (laughs). Yeah I mean you've got a group of blokes you've probably grown up with and you have a group of friends before I left the game and I'm still in contact with them, and they're still my friends. Outside, the game cricket has become less and less of the conversation. Y'know as we've had kids or whatever y'know, new careers…and obviously there are still some guys I want to keep in contact with and when I'm speaking to them, our common ground will be, to a certain degree….cricket.

I: What role did that social support play in your adaptation to retirement?

P: Um, well I mean I've got a wife who didn't particularly like cricket anyway and didn't like me being away so she was trying to hide her…..she was hiding the fact she was actually quite happy that I wouldn't be away y'know for weeks on end in the summer. And lots of my friends aren't cricketers so….we discuss at length about finishing playing and actually one of my better friends is actually a ballerina in the International ballet and she finished about a

month after me…but knew it was coming and so we had some really common ground on that in terms of just being able to talk through things and she was quite a good sounding board. And for her, even more so 'cause she'd been a ballerina full time since she was in the English ballet school ….twelve or something so a lot of her self worth was bound up with what she did, coming off stage and being asked for autographs and now she's nothing….not a ballerina, so what is she? A lot of my friends saw cricket as a bit of a joke anyway. They didn't see it as a real job so, I think that's probably quite grounding really. They would take the piss out of me nonstop.

I: Going back to something we spoke about earlier - we talked briefly about the 'athlete' identity and how that affects your self worth when you retire. How much do you think you identified with the athlete role during your career?

P: Um, it's difficult because unlike any other jobs. Y'know it encroaches on your entire life….your diet, your social life…..your ability to go on skiing holidays with the family, all these little things that add up to being y'know a massive part of who you are. I think….I've always thought you know it's really dangerous when someone asks you who you are, and you come back with I'm so and so….I'm a cricketer. I think that's a pretty dangerous situation and you know one I tried steered well clear of. Um, and I guess that's why I made sure that a lot of my mates were not involved in cricket. You spend all your time with these people on tour and at away matches, your whole life is bound up with it um, it probably shows how pessimistic I was about my future in cricket. I just felt that it was a sensible way of going about it. Any also it's nice to talk about things that aren't cricket, y'know 'cause it can get fairly dull. Y'know…tell me how well I did again!

I: One last question, is there anything further you'd like to say?

P: Um, I think you know for me, my life changed massively, I moved house, had a baby y'know, lots of other little changes that probably meant that the cricket part of my life being removed wasn't such a big deal. I think that probably without that element of support um, and other things to take your mind off it and the ability to move quickly onto something else I think that's where all the trouble starts. You've got a lot of time on your hands and nature creates a vacuum. It's a classic case in footballers, they train in the morning, and what do they do in the afternoon? Cricketers are not blessed with the financial ability to go out and gamble or whatever, there is a lot of time on your hands and you finish playing and you're

not really doing much and it's very easy to float somewhere you don't want to be. I've seen it with guys I've played with probably six years on, seven years on, they're still not really doing an awful lot. They're thinking about a grown up career um, and I think that is so sad. I would advise, moving on quickly, having something to take your mind off it, and something to focus on, that's what I'd tell people to do.

APPENDIX 3

THE RETIREMENT FROM SPORT SURVEY (RSS)

Retirement from sports (Alfermann, Stambulova, & Zemaityte, 2004)

1. Participant number:

Part 1. General Biographical data

Please, answer some questions about yourself:

2. Your age (in years):
3. Nationality:
4. Gender:
5. Your level of education (no education, GCSE, A-Levels, Undergraduate degree, Postgraduate degree):
6. Your current profession:
7. Your marital status:

( ) Single
( ) Married
( ) Divorced
( ) Separated
( ) Co-habiting
( ) Widowed

8. Have you got children? ( ) Yes (specify how many _____) ( ) No

Part II. Sport Biographical Data

Please, answer some questions about your athletic career:

9.Your main sport specialisation (with the highest success):
10. At what age did you start your main sport specialisation?
11. What the highest level of competitions did you achieve during your athletic career?

( ) Regional
( ) National
( ) International

12. What was the greatest success in your athletic career?
13. At what age did your achieve your greatest success in sport?

14. Are you satisfied with your achievements in sport?

( ) Satisfied completely
( ) Rather satisfied
( ) Difficult to answer
( ) Rather dissatisfied
( ) Completely dissatisfied

15. How old were you when you retired from your athletic career?

Part 3. How did your sports career termination happen?

Please, recall in as much detail as possible, what were the reasons for your retirement from sport?:

16. Did you plan to retire from sport in advance? ( ) Yes ( ) No

17. Was your decision to retire from sports voluntary or not? ( ) Yes ( ) No

18. How opportune was your sports career termination?

( ) Too early
( ) Before the proper time
( ) Quite opportune
( ) Slightly late
( ) Too late

19. Below you can see the list of possible reasons of sports career termination. Please, give them ranks (1= the least important group of reasons, 6 = the most important):

Groups of reasons	Ranks
1. Job-related reasons (finding good professional position, graduation from University)	
2. Sport-related reasons (decrease or stagnation in sport results, sense of accomplishment, age)	
3. Relationships-related reasons (relations with coach, teammates, officials, family members)	
4. Health-related reasons (physical or mental exhaustion, consequences of injuries, diseases)	
5. Family-related reasons (desire to create own family, to have children, family duties)	
6. Financial reasons (necessity to increase your income)	

20. Please, state any other reasons of your sports career termination, if these reasons were not mentioned before: _____

Part 4. Transitional period and Coping

Please, remember as in as much detail as possible transitional period after the end of your sports career.

21. Did you have the impression that you needed to adjust anew to life after athletic career termination? ( ) Yes ( ) No

22. **If yes:** How long was the time period (in months) between your sport career termination and your feeling of adjustment to the life after sport? _____

23. What of the following emotions characterised your typical emotional states during the transitional period?

Please, use 5-point scale, where 1=not at all; 5=very much:

1. Relief	1 2 3 4 5
2. Sadness	1 2 3 4 5
3. Happiness	1 2 3 4 5
4. Anxiety	1 2 3 4 5
5. Joy	1 2 3 4 5
6. Uncertainty	1 2 3 4 5
7. Relaxation	1 2 3 4 5
8. Emptiness	1 2 3 4 5
9. Freedom	1 2 3 4 5
10. Aggression	1 2 3 4 5
11. Please, add what else	1 2 3 4 5

24. Did your health conditions change after athletic career termination?

( ) Yes ( ) No

25. **If yes:** please, specify how:

( ) Better ( ) Worse

26. Did you have sport injuries?

( ) Yes ( ) No

27. **If yes:** do you still feel any consequences of sport injuries?

( ) Yes ( ) No

28. Did your financial conditions change after sports career end?

( ) Yes ( ) No

29. **If yes:** please, specify how:

( ) Better ( ) Worse

30. Did you experience difficulties or problems after retirement from your sport, in the following areas (please, use 5-point scale, where 1=not at all; 5=very much):

1. Professional career	1 2 3 4 5
2. Studies	1 2 3 4 5
3. Family	1 2 3 4 5
4. Communication (relationships, social network, friendship)	1 2 3 4 5
5. Entertainment (hobbies, leisure activities)	1 2 3 4 5
6. Other (please, specify)	1 2 3 4 5

31. What coping strategies did you use, and to what extent did you use them in solving problems after the end of your athletic career?
(Please, use 5-point scale, where 1= did not use at all; 5 - used this a lot):

1. I've been refusing to believe that my sports career is really finished	1 2 3 4 5
2. I've been taking action to try to make the situation better	1 2 3 4 5
3. I've been trying to come up with a strategy, or plan, about what to do	1 2 3 4 5
4. I've been using alcohol or other drugs to make myself feel better	1 2 3 4 5
5. I've been giving up trying to deal with the situation	1 2 3 4 5
6. I've been saying things to let my unpleasant feelings escape	1 2 3 4 5
7. I've been spending time, or talking with other people to make me feel better	1 2 3 4 5
8. I've been expressing my negative feelings	1 2 3 4 5
9. I've been trying to see the situation in a different light, to make it seem more positive	1 2 3 4 5
10. I've been doing something to think about it less - like going movies, watching TV, reading, daydreaming, sleeping, shopping, etc.	1 2 3 4 5
11. I've been accepting the reality of the fact that my sports career is finished	1 2 3 4 5
12. I've been making jokes about the situation I was in	1 2 3 4 5

32. Who supported you financially and to what extent after the end of your athletic career? (1= did not support me at all; 5 = gave me very significant support):

1. Parents	1 2 3 4 5
2. Other relatives	1 2 3 4 5
3. Friends	1 2 3 4 5
4. Sport Organizations	1 2 3 4 5
5. Various funds	1 2 3 4 5
6. Please, add who else_____	1 2 3 4 5

33. Who supported you psychologically and to what extent after the end of your athletic career?

(1= did not support me at all; 5 = gave me very significant support):

1. Parents	1 2 3 4 5
2. Spouse	1 2 3 4 5
3. Other relatives	1 2 3 4 5
4. Friends	1 2 3 4 5
5. Coach	1 2 3 4 5
6. Sport officials	1 2 3 4 5
7. Psychologist	1 2 3 4 5
8. Please, add who else_____	1 2 3 4 5

Part 5. Profession, Family and Social Network

Please, answer the following questions about your life in sport and after sport.

34. Is it true that during the culmination stage of your sports career (please, use 7-point scale, where 1= not at all; 7= it is exactly the truth):

1. Sport was the most important part in my life	1 2 3 4 5 6 7
2. I needed to participate in sport to feel good about myself	1 2 3 4 5 6 7
3. Other people saw me mainly as an athlete	1 2 3 4 5 6 7
4. I started to feel bad about myself when I did poorly in sport	1 2 3 4 5 6 7
5. I considered myself mainly as an athlete	1 2 3 4 5 6 7

35. Did you feel difficulty in changing your identity after sports career end?

( ) Yes ( ) No

36. Did you have unemployment period after your sports career end?

( ) Yes ( ) No

37. **If yes:** please specify the duration of unemployment period in months:_____

38. Are you satisfied with your current professional choice?

( ) Yes ( ) No

39. Do you think you are successful in your professional career?

( ) Yes ( ) No

40. Did your social network change after sports career termination?

( ) Narrowed, but did not renew
( ) Narrowed and renewed
( ) Did not change at all
( ) Widened
( ) Widened and renewed

41. When did you start a family? Before or after athletic career termination?

( ) Before ( ) After ( ) No family

Note: Please, answer questions 42-45 only, if you created your own family (or started to live with permanent partner) before sports career end.

42. Is (was) your spouse an elite athlete?

( ) Yes ( ) No

43. Were there any changes in your relationships with your spouse after sports career termination?

( ) Yes ( ) No

44. If yes: please, specify how:

( ) It worsened significantly
( ) It probably worsened
( ) I do not know
( ) It became slightly better
( ) It became significantly better

45. Did you divorce or separated from your partner after the end of your athletic career?

( ) Yes ( ) No

Part 6. Sports career effects

Please, answer the following questions about an impact of your athletic career upon your life career in general:

46. What did you miss just after your sports career termination?

Please, use 5-point scale, where 1=not at all; 5=very much:

1. Competitions	1 2 3 4 5
2. Success	1 2 3 4 5
3. Financial rewards	1 2 3 4 5
4. Opportunities to travel and to see the world	1 2 3 4 5
5. Training routine	1 2 3 4 5
6. Physical exertion	1 2 3 4 5
7. Communication with teammates	1 2 3 4 5
8. Communication with coaching staff	1 2 3 4 5
9. Feeling of competence	1 2 3 4 5
10. Feeling of progress in the development	1 2 3 4 5
11. Social recognition and glory	1 2 3 4 5
12. „Sports atmosphere“	1 2 3 4 5
13. (Please, add what else)_____	1 2 3 4 5

47. Which of these things do you still miss today? Please use the same scale:

1. Competitions	1 2 3 4 5
2. Success	1 2 3 4 5
3. Financial rewards	1 2 3 4 5
4. Opportunities to travel and to see the world	1 2 3 4 5
5. Training routine	1 2 3 4 5
6. Physical exertion	1 2 3 4 5
7. Communication with teammates	1 2 3 4 5
8. Communication with coaching staff	1 2 3 4 5
9. Feeling of competence	1 2 3 4 5
10. Feeling of progress in the development	1 2 3 4 5
11. Social recognition and glory	1 2 3 4 5
12. „Sports atmosphere“	1 2 3 4 5
13. (Please, add what else)_____	1 2 3 4 5

48. What benefits did you take from your sports career? Please, use the same scale:

1. Goal setting skills	1 2 3 4 5
2. Coping skills	1 2 3 4 5
3. Ability to self-control and self-regulation	1 2 3 4 5
4. Self-confidence	1 2 3 4 5
5. Will power	1 2 3 4 5
6. Good physical conditions (fitness)	1 2 3 4 5
7. Health	1 2 3 4 5
8. Friends	1 2 3 4 5
9. Social ties	1 2 3 4 5
10. Spouse (partner)	1 2 3 4 5
11. Some knowledge and skills for my current profession	1 2 3 4 5
12. Fortune	1 2 3 4 5
13. Please, add what else	1 2 3 4 5

49. How is your current life is connected with sports?

I exercise for myself	( ) Yes ( ) No
I take part in competitions for veterans	( ) Yes ( ) No
I keep in touch with my former coaches	( ) Yes ( ) No
I keep in touch with my former teammates	( ) Yes ( ) No
I work in sport	( ) Yes ( ) No
I am a sport spectator	( ) Yes ( ) No
I advise young athletes on the informal basis	( ) Yes ( ) No

50. What is your personal opinion about your life now? (Please, express your agreement or disagreement with every statement below, using 5-point scale, where 1= completely disagree; and 5 = absolutely agree):

1. I am satisfied with my life	1 2 3 4 5
2. This is the happiest time in my life	1 2 3 4 5
3. I am just as happy now as when I was participating in competitive sport	1 2 3 4 5
4. I have gotten pretty much what I expected out of life	1 2 3 4 5
5. I still consider myself to be an athlete	1 2 3 4 5

Thank you for your co-operation!

APPENDIX 4

SEMI-STRUCTURED INTERVIEW GUIDE FOR STUDY 3

Interview Guide

Changes in Levels of Life Satisfaction after Retirement from Professional Sport: A comparison between cricket and rugby union

Thank you for completing the second questionnaire in my study of the retirement experiences of former cricket/rugby union* professionals. In your responses to the second questionnaire you indicated that your levels of life satisfaction have increased / decreased* from when you first retired. *Life satisfaction* is quite simply an overall assessment of feelings and attitudes about one's life at a particular point in time. It also gives us an idea of how well you may have adjusted to your retirement from cricket/rugby union*. When I first contacted you to take part in this study you indicated that your levels of life satisfaction were [insert here]. Your more recent responses suggest an increase/decrease* by [00] points. I would like to explore with you what may have accounted for this change in the last 7 years:

As you know from our previous discussions the information gained from this interview will add to our research into transitional experiences in elite sport. The results may appear in scientific journals or material used by National Governing Bodies, coaches etc..

Today, our interview should take around 60-90 minutes. We can move on from any question you're not comfortable answering and can stop at any time. Open and honest answers about your own experiences will help us get the most from this interview. At any point during the interview, feel free to ask for clarification on any points you're not sure of.

Finally, your anonymity will be maintained at all times during this process. The interview will be recorded and subsequently transcribed. Quotations from the interview may be used in the writing up of the research, however you will remain anonymous.

Do you have any questions before we start?

Questions

Section 1. Events surrounding athletic career termination

I appreciate it some time now since you retired from sport, but are you able to tell me a bit about the events surrounding your retirement?

Probe: What in particular influenced your decision?

Probe: How well did you cope with the process?

Probe: Explore what helped / what didn't.

Probe: What impact did this have on your levels of life satisfaction at that time?

Section 2: Events during the time since retirement

Can you talk me through what has happened in the last 7 years since then and how your life has changed?

Can you explain what has happened in your personal life during this time?

Probe: What role has sport played during that time?

Probe: And in terms of your identity as an athlete, how has that changed over the 7 years?

Probe: What challenges/ issues have you faced in this respect?

Probe: How have you coped / dealt with this?

Probe: What impact did this have on your levels of life satisfaction at that time?

Section 3: Second career choices

Can you confirm which career you pursued after your retired from playing rugby / cricket?

Probe: Can you explain why you made that choice?

Probe: How do you reflect on that choice now?

Probe: What impact has this had on your levels of life satisfaction?

Section 4: Factors affecting levels of life satisfaction since athletic career termination

I am really interested in life satisfaction and how that has changed since your retirement. [Use their previous score and the latest – in terms of the increase/decrease to prime this question.] Was there anything else that has happened in your life during the last 7 years that may account for this increase/decrease?

Probe: What do you feel are the main reasons behind your increase / decrease in levels of life satisfaction in the last 7 years?

Probe*:* In terms of the key factor that contributed to/detracted from life satisfaction, you mentioned [recap] are there any others?

Probe*:* To what extent have any of these adequately replaced what sport previously provided?

Probe: To what extent have these given you the same sense of fulfilment as sport?

Probe: Was there anything else that they would have been helpful in helping improve life satisfaction during this time? Explore who / what / why.

Section 5: Changes in athletic identity between time 1 and time 2

I would like to ask you about the degree to which you still consider yourself to be an athlete and how has this changed over the last 7 years.

Probe: What specifically leads you to think this?

Probe: What impact did this have on your levels of life satisfaction at that time?

Closing question:

Do you have anything further to add that may help us understand how and why your levels of life satisfaction have changed since you retired from cricket/rugby?

APPENDIX 5

INTERVIEW WITH PARTICIPANT: STUDY 3

Interview with Participant RU6: Study 3

Thank you for completing the second questionnaire in my study of the retirement experiences of former rugby union professionals. In your responses to the second questionnaire you indicated that your levels of life satisfaction have decreased from when you first retired. *Life satisfaction* is quite simply an overall assessment of feelings and attitudes about one's life at a particular point in time. It also gives us an idea of how well you may have adjusted to your retirement from sport. When I first contacted you to take part in this study you indicated that your average levels of life satisfaction was ***4.00.*** Your more recent responses suggest an decrease by -0.33 points to ***3.67***. I would like to explore with you what may have accounted for this change in the last 7 years:

As you know from our previous discussions the information gained from this interview will add to our research into transitional experiences in elite sport. The results may appear in scientific journals or material used by National Governing Bodies, coaches etc..

Today, our interview should take around an hour. We can move on from any question you're not comfortable answering and can stop at any time. Open and honest answers about your own experiences will help us get the most from this interview. At any point during the interview, feel free to ask for clarification on any points you're not sure of.

Finally, your anonymity will be maintained at all times during this process. The interview will be recorded and subsequently transcribed. Quotations from the interview may be used in the writing up of the research, however, you will remain anonymous.

Do you have any questions before we start?

P: Nope. Let's go!

I: I appreciate it has been some time now since you retired from rugby union, but are you able to tell me a bit about the events surrounding your retirement?

P: Well, yes. It was a difficult time. I mean, I'd been playing professional rugby for a good 15 years and the time came to hang my boots up. I think it was a combination of factors really. Like, the club not wanting to renew my contract, and I just kept getting injured. Same old story for us [rugby players] as we get older. The body becomes less reliable and this is the thing you rely on the most. I think, like, rugby union is such a physical sport. It really takes

its toll, and it did on me. Such a physical game week in week out, you know you're not going to last as long as other sportsmen. Sad but true.

I: Can you tell me a bit more about how the end of your career came about? You said the club didn't renew your contract, and you were injured frequently...?

P: Oh. Yeah. Ummm....well I think it had been on the cards for a while. I just wasn't featuring in the first team for a couple of seasons really. If it wasn't one thing, it was another. The body wasn't as resilient as it used to be, so I found recovery more of a challenge. I think that at the time, the club had quite a few players vying for my position, so there was no reason why they should keep me on. I think, looking back on it now, I was probably more of a liability to the club than anything else. I was taking up the doc and the physio's time, I was always in with them. If it wasn't one thing, it was another. I mean I think I was in denial for a while 'cause I kept telling myself I'd play [in the first team] again, but I was warming the bench for a while, or playing in the reserves. It's funny really - all the time you play sport, you condition yourself into setting goals and working towards them. So I guess I just used to look at injury recovery and things like a goal. And because I was so dead set on playing first team rugby again, I never really stopped to look at my career as a whole and to anticipate what was coming. I just kept ploughing on blindly. I think that I could have er....you know, come to the decision myself but...that didn't happen. The coach had to sit me down and say [participant's name] "we're going to release you".

I: How did you feel when you learned that you were going to be released?

P: It was weird....ummm...yeah, strange. Weird because I kind of knew it was coming, so it must have clicked somewhere. Strange because I knew it was going to happen, I guess it had been at the back of my mind, but I'd not allowed myself to think about it or consider my options. I was in denial [laughs]! I think maybe I felt a bit betrayed. I mean, I was a loyal servant to club for so many years, why wouldn't they reward that? They'd had the best years of my life... Don't get me wrong, it wasn't a hardship or anything, playing professional rugby. It's just sometimes I feel like [name of rugby club] took the best of me and left me on the scrap heap a bit. So, I supposed it was mixed emotions really. If I was honest with myself, I would have pre-empted it a bit, but you do convince yourself that you can turn a corner and you'll be back in the first team again. So, betrayed, I think. A bit betrayed. I mean, look it was a privilege to play for so long with so many great people, but it is always going to be difficult

when it's over. Especially when someone has to tell you that, and you haven't come around to that decision yourself. It was pretty difficult to hear. It's like when I was called in [to see the coach], my heart was racing. It's weird because I knew, but I hadn't admitted that to myself.

I: You said that you might have been able to consider your options if you'd have thought about the end of your career at [name of club] consciously, but.....

P: Yep! I would have maybe considered my next option. Probably looking at other clubs or things like that.

I: How likely would a move to a different club have been at that time?

P: Hmmm...you know there are a few clubs in the Championship that would have taken me probably, and I could have played on for a bit longer. I mean, I think the Championship is an exciting league as there are always a handful of clubs that are vying for promotion to the Premiership and that gives you an opportunity to be back up there. But I have to stop myself from thinking like that, I think I know what you're trying to say. I probably would have found it a bit of a challenge to adapt as I'd been so used to playing at Premiership level. Anyway, look, it didn't happen. My contract ended and I had to move into the next phase of my life.

I: Can I just go back to something you said before? You said that retirement is difficult when someone has to tell you that your career is over, and when you haven't come to the decision yourself. Can you tell me a bit more about how this affected your levels of life satisfaction then, and now?

P: Oh. Er...well, it's like...I think you lose a bit of face when someone has to sit you down and say "it's time". Nobody wants to be in that situation. All rugby players...all sportsmen want to be able to have a glittering career and then bow out at a time of their choosing to save face I suppose. I think it's like an unwritten rule. Everyone wants to play on for as long as they can, at the top of their game, and then suddenly, they have this epiphany...oh look..it's time for me to go now. I will bow out with my head held high and retire on a high. You know...there's few of us that actually manage that! The reality is so much more harsh.

I: So how did the club's decision to release you affect your levels of life satisfaction?

P: Well, I think the way I thought about it, was that I was so injured, they had no choice. It wasn't like I was having a run of poor form or that I was out of favour with the coach or

anything. Everyone could see that my body was just giving up, and while I would have wanted to stay on for as long as I could have done...which maybe I did, thinking about it...there were real reasons for me to retire. Really, I couldn't keep recovering from injury and surgery and things so that was that. There was no debate. So, when I was told "we're releasing you", I guess my life satisfaction would have been very low, but you pick yourself up and sort yourself out.

I: Can you tell me more about how you picked yourself up and sorted yourself out?

P: It took time. Without a doubt it took time. I think I was helped by [name of sport psychologist]. He helped me understand that I was allowed to be down about it. But, my family were also great, my wife, my kids. I think they had the benefit of seeing it [retirement] coming, although they said they could never talk to me about it. But they knew. So they were prepared, and they were great in trying to keep things as normal as possible. We went away for a while, we just did stuff as a family, and chatted through some of my options. What happens next. What does the next phase of my life look like?

I: OK, so the next phase of your life. What happened at this point?

P: I suppose it was all a bit of blur really. I definitely would have liked to have carried on for longer but when someone tells you, you can't carry on at that level, you do take it a bit personally. Anyway, look, I knew I just needed to get on with things. There's no use in bogging yourself down in the mourning of your career. Look, I was OK. Still alive. Nobody died, I just had to move on.

I: Can you tell me what you did next? How did you move on?

P: [Laughs]....oh yeah. Sorry. Er...it's all a bit of a cliché really but I went into coaching and I set up a little coaching business for kids where I get together with some of my old team mates and deliver a few days' worth of rugby coaching for lots of different age groups.

I: And what made you decide to go into coaching?

P: Well, I guess I always thought that this was the right option for me. I'd dedicated so much of my life to rugby that it seemed silly to start again, from scratch on something else after so many years. Although when I first retired, I did spend some time wondering what else there

*was to my life. I don't mean that in a negative way, but whether I wanted my life to continue to revolve around rugby or not. I went on to think about it and I thought "f**k it", why not? Why would I kiss all those years go by. You know, I love rugby, I really do. I could handle retirement, but could I handle not having rugby in my life at all? I didn't think so. So, coaching was the best option for me.*

I: What preparation had you done during your career to set you up for a coaching job?

P: Oh well I did a sport coaching course at [name of university] and obviously my rugby coaching badges and things while I was still playing. I mean, I think everyone's on the same page here. You know you won't be a rugby player forever, so you need to plan for the future. Plus when there is the opportunity to do things like coaching badges and stuff, you just take it. Everyone gets involved anyway. It's not like you're committing to something by doing them, it's a nice to have or a just in case I need them type thing.

I: OK, so with your coaching qualifications and badges under your belt, how did you cope with the transition from professional rugby player to rugby coach?

P: Well, it took a bit of adjusting really. 'Cause I started coaching at [name of rugby club] which is quite different in terms of standard from what I'd been used to. That adjustment was hard. I made all kinds of assumptions about how things worked 'cause I wasn't used to anything like this really. I think I took a lot for granted during my rugby career. It's a bit of a shock when you get involved the reality of how the other half live if you know what I mean. Anyway, I had a few times when I was questioning what I was doing, and whether I was using my skills properly and that but now, I love it. When I started working with the [name of rugby club] the players, although they weren't the level I was used to, really inspired me. It took me back to the days where rugby wasn't all about trophies and stuff, but it was about enjoyment. Don't get me wrong though, we're all about making sure we get promoted and to get as high up the league as we can, but there's a different atmosphere in a place like this. There isn't anything I think that I don't get involved in - from the clubhouse to player recruitment to promotions and parties and everything. I think it's really humbling to work now with really fantastic athletes who also do another job! I know rugby union used to be like that, but not in my day. It's so over-professionalised now. These guys are a testament to our club. They do "normal" jobs and they play rugby. I've got such respect for them. Really.

I: It sounds like you are relishing this challenge. How much of your moving into a career in coaching do you think is associated with your desire to still be associated with sport?

P: Oh yeah, I definitely think so. I don't think I could ever really see myself outside of sport full stop. That's who I am inside - I am rugby through and through. If I'd gone into a different environment, I'd have been a fish out of water. I'm confident that I would have struggled more with a move like that. Plus, I'd have started at the bottom -wasting all of those years I'd invested in rugby. That's it I think - a career in rugby is a big investment, emotionally and physically. I would have been awful to have kissed all of that goodbye.

I: If you are unable to see yourself outside of sport, and that's "who you are", to what degree do you still identify with the role of the athlete?

P: [Laughs]. Athlete? No. Sport, yes. Of course people remember me for my rugby career, but there is no way I am an athlete anymore. The body isn't up to it! I do identify with sport though. Like I said, I am still rugby through and through.

I: That's very interesting. Can you tell me a bit more about when this changed? I mean, when you stopped thinking about yourself as an athlete?

P: I'm not sure I can really put my finger on it. I suppose it's when you're not training anymore, your body condition starts to go downhill, you've got other things taking up your time - a different focus. You haven't got anything more to prove. I mean, the other thing is that, in the end, I was so injured that I couldn't actually be an athlete anymore. I suppose that is a bit of a blow, but you do stop thinking about yourself like that. Really....I think it was a whole number of things. I couldn't tell you exactly when that happened.

I: One more question about identity: How did the move away from seeing yourself as an athlete affect your life satisfaction?

P: I'm not sure that I could tell you. Er...I guess because there wasn't a day when I woke up and thought, right, that's it, I'm not an athlete anymore....I can't really say. I think you just get carried away by the demands of day to day life, and all of a sudden, you look back and you think, oh yeah...I used to be a professional rugby player. I don't think that I thought about it consciously.

I: There's one thing I want to go back to if you don't mind. Previously, you said that you had an awareness that you needed to plan for the future, because you're aware that you wouldn't be a rugby player forever. Where did that attitude come from?

P: Hmm...well I would have to stop myself saying that it's an internal feeling, but thinking about it now, I think probably from being aware of the experiences of other sportsmen and some other rugby players who have retired and been left high and dry. I know more and more now that the RFU and the PCA and things are getting quite hot on player welfare, but it wasn't always like that and it takes time to filter down to the clubs and things. Yeah, I think probably from my own experiences of seeing others struggle.

I: So, what preparation and planning did you do for your future?

P: Er...well, you've got me there [laughs]. I guess it was only really the coaching badges and things. Taking the opportunity to do those when they came up. Looking back, I think I could have definitely done more.

I: OK, let's go back to talking about your coaching role if that's OK? I want to ask you how you now reflect on your choice of second career?

P: Well, you're only as good as your last win as a coach [laughs], but I've been here for 7 years now and we're making such great progress. I think people like the fact I am who I am, it brings a bit of prestige to the club and maybe some novelty [laughs]. Look, no job is secure, I do think I'm under a bit less pressure here than I would be if I was coaching at a higher level. I'm sure that if, for whatever reason it didn't work out here, that I could reasonably find myself another role somewhere else. Plus, my little business side line is ticking along nicely so I'm doing OK. I think that if there's one thing that a career in rugby has taught me - it's to expect the unexpected. Nothing is sacred. I don't have a god-given right to this job, so I must work hard to keep it. I will do everything I can for this club until that's no longer enough. And then I'll move on. No hassle. Could I see myself doing something else? I don't think so. I think it would be a real waste to chuck everything I know about rugby away. Without sounding arrogant, because I am who I am, this club has got a bit more publicity, support and backing that it would have otherwise done, so I'm happy to have had such an impact.

I: And on reflection, how would you describe your satisfaction with your coaching job?

P: Hmm....satisfying, not a job for life....but keeps me on my toes and keeps me in the game [rugby union].

I: "Not a job for life"?

P: It's like I said before - you're only as good as your last result. But that's fine.

I: OK, so let's look at the changes that you've experienced in your life in the last seven years. How might you account for a slight decrease you reported in your levels of life satisfaction?

P: Well that's interesting. I had no idea that I would have reported a reduction.

I: Yes. When you first participated in the research back in 2008, you reported a score of 4 out of 5. Shall we start with that? What would have accounted for a 4 out of 5 in life satisfaction back in 2008?

P: Well... that's so interesting! I think maybe, just after my retirement, I was probably embarking on my coaching challenges, and had a new project to get my teeth into. I know it's all unknown but really that didn't bother me in the slightest after the initial hiccup when I retired. I guess I knew which direction I was headed in and I was happy to take the plunge. There are lots of people out there who have no idea what they want to do when they retire, so I guess I was really lucky that I didn't really have an option [laughs]. I mean, look...I couldn't have reasonably done anything else. I mean you wouldn't have had [participant refers to himself in the 3rd person] walking into an office or whatever y'know? So, I think that before I completed the survey for the first time, I would have already been through the phase where I was considering my options and wondering whether I should branch off...er...I mean start from scratch [laughs], so I would have had it clear in my mind. Now, I think I'm quite established. I'm happy, pretty content, my life (as much as it can be) is mapped out for me, I know where I'm going and that's it, I feel like I belong where I am now, I get time to see my family. We live down the road from the club, it's at the heart of the community, everyone knows everyone else. There's a great sense of community.

I: OK, great. So, when you participated in the research again in 2014, you indicated that your life satisfaction levels were a little lower. This time, they were 3.67. Could you tell me a bit more about why they would have reduced over those 6 years?

P: Hmm....well, that's really interesting thinking about that now. I think if I'm pushed, you're right, I probably am a little less satisfied, and I think it's the old body giving up. Even though I'm still relatively young, in comparison y'know I guess I feel a bit older than my years some days. There are bits that creak and ache. Of course that doesn't get any better. In fact, it will, in all likelihood get much worse. I suppose sometimes that overshadows things a little bit, 'cause in my head you know, I'm still working in sport and sometimes I find it a bit odd that sport is supposed to be good for you, but actually in some ways, it totally finishes you off physically. I'm so out of condition now, and am probably not a good poster boy for the sport! So yeah. The aches and the pains, they do get me down. Sometimes, I have to have some more surgery, and I'm laid up again, and that restricts me, and that gets me down. I suppose it's all up and down a bit really.

I: Ah, OK. Well that's understandable. You said that you're out of condition now. To what extent do you exercise these days?

P: Well no, not at all really. I put the gear on for work. I walk a bit you know, from home, to the club and back. Sometimes I pick the kids up from school but I think that's an area that is a bit deficient in my life at the moment. Maybe I think I'm a bit of a fraud - still working in sport but not able to be a poster boy for the sport. I guess I should be a warning of what might happen to you if you play rugby for too long.

I: I am sorry to hear that. Can you describe to me what it is preventing you from exercising regularly to keep yourself fit?

P: Yeah, well I suppose it's a couple of things really. I mean there's no motivation there really. I think I probably had a bit of a skin full of it when I was playing and when you finish you just want to be able to do all of the things that you never could do before, or give up the stuff you didn't want to carry on with. I think I felt that about training really. But it's also the pain and discomfort. I think "do I really want to put myself through that?". It's the best option for an easy life. I do sometimes feel a bit of a fraud for making others go through it and not living those values myself. Hey.....it's hard, but in the grand scheme of things, it's nothing really is it?

I: Can you tell me a bit more about the impact that your rugby injuries have on your ability to be active and exercise these days?

P: Oh yeah, definitely they are the reason I'm not doing tough mudder or any of those things y'know. That's so far away from what's possible these days. I think the years of injuries, of rehab of more injuries, of operations. It's just not possible to continue with sport. The body is shot. I realised that some time ago. I do feel a fraud, but that's what happen to most retired players isn't it?

I: OK, thank you. One final question then, do you have anything further to add that may help me understand how and why your levels of life satisfaction have changed since you retired from rugby?

P: Well, it's all really interesting that you don't actually ever get to sit down and think about these things. Well...I don't anyway! I was quite surprised that the scores were different you know, but I guess with the crumbling old body, I do think that might account for the difference. I don't by any means, want to make it out that I'm a victim here. I think immediately after I retired, they [levels of life satisfaction] would have been low. Then they probably went up a bit when I figured out what I wanted to do, and then maybe down a bit when I had to have more operations, or when an old injury was playing up, and then up again when things got a bit easier. Y'know?

I: Well that seems logical. Could you tell me a bit more specifically about those factors that meant your life satisfaction increased?

P: In an ideal world, not have had to retire! Not have suffered the injuries. I suppose when you think about it, you're sort of cast away really [from the rugby club] and life carries on without you. That's difficult to get your head around. One minute you're part of it, and the next you're not. That's a shock. But then, you sort yourself out, you dust yourself down and you make the best of what you've got. I think I've been lucky because I played for [name of club] for so long. I got a bit of insurance money and that helped ease some concerns really. Being able to be around to spend time with the kids and to see them grow up, that's been a great distraction. But then you have times where the old injuries start reminding you that things aren't so good and that there's a reminder of a tough period of your life. The aches and the pains and the operations and things like that mean I feel a bit older than I actually am. It's up and down, most of the time really. But then you have a chat to yourself and are reminded of what you've got. It gets easier, then a bit harder then a bit easier again. I'm sure it all evens out somewhere along the line.

I: Can you tell me a bit more about how your insurance monies made things a bit easier for you?

P: Well, it's another thing not to worry about. It's not always guaranteed that you'll get an insurance pay out as an injured player, but all of my injuries were caused by playing rugby, and the club had the records to prove it. There was nowhere to go. I was told I couldn't carry on, so I did get a payout. Those monies meant a bit of security really. Of course, my coaching role doesn't pay me anything like what I was earning at [name of rugby club], but if you're smart and invest it, it will help you along the way.

I: That's great, thank you so much for your time.

P: Thank you!