COMMUNICATION, COLLABORATION AND CONFIDENCE: EXPLORING THE IMPACT OF A COMMUNITY-BASED SPORT PROGRAMME FOR INDIVIDUALS WITH AUTISM SPECTRUM DISORDER (ASD)

by

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Abstract

There is a growing body of work that outlines the manner in which sport can have a positive impact on the communication, collaboration, and confidence skills of individuals with ASD, from academics and government departments. This approach to psychological and social development through the medium of sport is through what Coalter (2008) labels 'sport plus' programmes. Community sport programmes use non-sport objectives in sport development initiatives to 'hook' participants. Given that national governing bodies, official sport clubs, and government intervention are contributing to the increase in opportunities for people with ASD to participate in physical activity, it is becoming increasingly important to understand these programmes, particularly in terms of productivity, monitoring, and evaluation (Nichols et al., 2019).

This study is based upon the perceptions of eight individuals who are involved with the community sport programme under investigation. Specifically, two players with ASD, three parents and three coaches were interviewed to explore their views on the effectiveness of the sport programme for players with ASD. The research utilised grounded theory to systematically analyse the data generated through interviews. Given that it has been suggested (by Arnell et al., 2018) that there is a lack of empirical evidence for sports assumed appropriateness in the context of ASD in sport for development, this study draws upon various models, including, Teaching Personal and Social Responsibility (TPSR) model to help illustrate the data. This model aligns with best practices for developing social and emotional behaviour and appears to reflect much of what was expressed by the research participants in regard to the psychological and social impacts of the programme, and how coaches and parents contribute to the benefits of the programme.

Contents

List of tables

List of figures

Chapter 1: Introduction

1.1   Positionality

My experience of disability coaching and in particular coaching individuals with Autism Spectrum Disorders (ASD), has come from working as a lead coach within the community departments of official sport clubs in the south east of England. I immediately witnessed the positive way the players were responding to the experiences they had when participating in sessions that go far beyond the physical outcomes. I could see first-hand how inclusive sport sessions were creating social bonds and developing confidence and communication skills. This strong sense of social and personal growth was clear to see. The experiences I have witnessed has encouraged me to rethink disability, which is based on the social model. I strongly believe that society must change to enable people living with ASD to participate in their community, equally.

I have attended various inclusive football tournaments nationwide, where I have coached ASD specific teams. Whilst at these events, I observed participants experiencing the positive psychological effects of inclusive sport. During my time coaching within a disability sport programme, I became intrigued by how sport is currently being used and could be better used as a vehicle to recognise and promote positive psychological and emotional change among individuals with ASD. Following my relocation back to Kent, I continue to work in community based, disability sport, where this research is taking place. It is important to note that I am not a paid employee at the club and do not benefit financially. However, travel expenses are paid.

I am a 25-year-old white male and I reflect on my own positionality as a non- disabled researcher, conducting research with disabled participants. In research conducted by Kitchen (2000) on how disability research should be conducted, and who should conduct such research, it was found that disability research is dominated by non-disabled researchers. This created issues related to representativeness, where non- disabled researchers can potentially misinterpret and misrepresent disabled people's experiences and knowledge as they themselves have never experienced what it is like to be disabled. I intend to present this research in a way that allows respondents to review their true feeling without distortions. Furthermore, it should be recognised that it is not the club's intention to address communication, collaboration and confidence, and this intention sits solely with myself, as the researcher.

1.2   Introduction to the research area

Sport is considered as the social and cultural link between people of all abilities, ages, and ethnic backgrounds (Harada et al., 2012). Sport is increasingly used as a tool for social inclusion, providing more opportunities for individuals with disabilities to engage in physical activity (Kiuppis, 2018). Historically, there have been limited community sport programmes offering opportunities for

individuals with ASD in sport (Taylor et al., 2015). However, since The Special Olympics was formed in 1968, opportunities for people with ASD and other intellectual disabilities to partake in physical activity have increased (Myśliwiec and Damentko, 2015). The Special Olympics provides year- round sport training and competition in a total of 33 Olympic-type sports for adults and children with ASD, delivering an opportunity to develop physical fitness, psychological and social skills, experience joy and develop empathy (Myśliwiec and Damentko, 2015). The Special Olympics movement goes far beyond the sports competition formula: the movement has developed many new global initiatives, which expand its former activities. These include youth volunteer initiatives, coaching excellence, and partnerships with regional sports federations. These initiatives focused on social and developmental aspects of life that go far beyond activities in other sport intervention programmes for people with ASD. Furthermore, The Disability Discrimination Act (1995) challenged discrimination experienced by people with ASD, focusing on employment, physical education and education which helped integrate people with ASD into mainstream society (Thomas and Smith, 2009). The emergence and success of The Special Olympics combined with the introduction of the Disability Discrimination Act (1995) has undoubtably contributed to the development of sport intervention programmes for people with ASD and other intellectual disabilities.

The relative lack of evidenced based literature exploring the impacts of sport for people with ASD within a community-based programme, raises questions regarding the impact of such programmes designed to increase inclusion, reduce barriers, and improve psychological and social skills. Examining the impacts of a community sport programme alongside current literature, will help to obtain a better understanding of the effectiveness of this programme for players with ASD.

1.3   Outline of the study

There is an increase in demand for community- based sport programmes to be better equipped to deliver programmes suitable for people with ASD. This project seeks to examine the impact of Maidstone FC's disability sport programme for participants with ASD, focusing on communication, collaboration, and confidence.

Maidstone FC's disability sport programme was established in 2004. They offer disability football opportunities within a fun and supportive environment, any child or adult that has a physical or mental disability diagnosis is welcome, aged from 5 to 65. Specifically, they claim to have 120 registered players, participating across 13 teams who compete in the Kent disability league. These teams include men's and ladies, as well as girls and boys in their junior section, under 7, under 9, under 11, under 12 and under 16. The junior teams cover 5–16-year-olds. Players 17 and above will participate in one of the adult teams. Currently, players train within their respected team once a week on the official Maidstone United football pitch. Each weekly training session is 2 hours, 15 minutes. In addition, each Maidstone disability team compete once a month in the Kent Adult and Junior Disability Football

leagues in a five-a-side tournament. Each Maidstone disability team is formulated in accordance with players ability and playing experience. All 13 teams are named after a metal, for example, the strongest team is named 'Maidstone Gold'.

This study proposes the use of qualitative research to investigate the effectiveness, on an individual level, of the programme. It is the intention of the thesis that the findings will add to the literature that considers the effectiveness of community sport programmes for players with ASD. Eight research participants were interviewed in total, including three coaches, three parents, and two players. The coaches are registered as volunteers with the sport programme under investigation to deliver football sessions for the disability department to engage intellectually and physically disabled children and adults. In addition, the three parents interviewed were all fathers of male players with ASD, registered and regularly participating within the programme. This thesis will examine their perceptions on the role and effectiveness of the programme. Accordingly, the research question of this thesis is essentially concerned with reporting and interpreting the coaches, parents, and players perceptions of what constitutes 'effectiveness' within the intervention programme, and how they see their role within the programme.

A wide range of literature has discovered psychological and physical benefits of sport for people with ASD (Vetri and Roccella, 2020). Within the context of ASD in community sport, little is known of the exact mechanisms which contribute to any necessary conditions for success (Vetri and Roccella, 2020). Likewise, there is also evidence to suggest that required attributes for coaches in this setting are misunderstood in terms of the available evidence (Crisp, 2020). In view of this, this thesis aims to provide evidence to illustrate what might constitute as real, lasting effectiveness for inclusive sport programmes, and provide an understanding of how sport participation for can be explained, directed and more sustainable for individuals with ASD. The following questions are set as guidelines to fulfil this aim:

- Does the community sport-based programme under investigation have a facilitating nature for gaining collaboration, confidence, and communication skills amongst participants?
- Are participants with ASD better able to develop and maintain social relationships, such as friendships?
- Does the programme contribute to the development of team cohesion and collaboration for players with ASD?

1.4   Introduction to the methodology

Given that the intention of this study is to interpret and report coaches', parents, and players perceptions of effectiveness within the disability programme, a qualitative methodology with an interpretive theoretical framework has been utilised. Given that quantitative research has been the primary

methodology for research on the effectiveness of disability sport intervention programmes, this thesis intends to present a different paradigm of evaluative research to broaden the present data. Thus, the study's potential significance lies in its intention to be innovative and to contribute to what may be perceived as a lack of rich, in depth, lived experiences within the field of ASD in sport.

1.5   Overview of the thesis

Chapter two is a review of the relevant literature that provides a critical overview of key theoretical and empirical research relative to ASD in community sport. More specifically, an introduction into ASD is presented, supported by the work of Kanner (1943) and Baron Cohen et al. (2002). Chapter three delivers a justification of the methodology used, providing a rationale for the qualitative approach taken, along with a detailed overview of each stage of the research process. Findings are discussed in chapter four and evaluated within the context of key theoretical frameworks. The final chapter summarises the research findings and offers potential implications and directions for future research.

2.1   Introduction to the chapter

This literature review aims to present, in the context of sport for development, an analysis of what autism is, whilst also investigating the major themes and arguments relating to ASD in inclusive sport. Previous literature in this area has concentrated on the benefits of physical activity for individuals with ASD (Martin and Vitali, 2014; Klapwijk, 1987; Fitzgerald 2009; Shapiro and Martin 2014; Shepard 1991; Kolt and Mackler, 2007; Winnick, 2011), however this chapter will explore findings from studies examining the relationship between physical activity and psychological, social, and interpersonal skills. Kielofner and Miyake (1981) explored how physical activity can develop the motor and social behaviour, cognitive abilities, attention, and confidence of people with ASD. During the three-year study, it was found that participants developed an understanding of game rules and their ability to follow rules. As such, they were able to engage in more complex games, which was found to increase motivation among the group (Kielofner and Miyake, 1981). A parent commented on the psychological benefits of the programme and stated that their son "appears more alert" and claimed, "this is in stark contrast to the somewhat tired and slow-moving Dan I know" (Kielofner and Miyake, 1981, pg. 2). Kizar et al. (2015) indicate that academic work is still in agreement with these findings, 34 years on. This more recent study found that inclusive sport contributes to solving problems of social adaptation among children and adults with ASD. It was also suggested that sport is becoming more common as a treatment complementary to conventional physical treatment methods (Kizar et al., 2015). These findings offer clear evidence supporting the hypothesis that physical activity intervention is effective in communication enhancement, social behaviour, and social function among individuals with ASD.

2.2   Defining ASD

This section will discuss the characteristics that define ASD by drawing upon Kanner's (1943) influence in the development of understanding the behaviours of autism. ASD was first explored only by the term autism by Kanner in 1943 (Blacher and Christensen, 2011). Kanner (1943) observed 11 children that he described having poor eye contact, being socially isolated and presenting few expressive gestures (Kanner, 1943). Eye contact is integral in effective communication as it enables an individual to focus their eyes, ears, and mind on sources of information (Wang et al., 2014). In a sporting context, it confirms to the coach or teacher that the listener is attentive to what they are communicating. In a study conducted by Madipakkam et al. (2017), the eye movements of 17 people with ASD were analysed. They found that all participants demonstrated evidence for the unconscious avoidance of eye contact. Hadjikhani et al. (2017) found that poor eye contact demonstrated by individuals with ASD is caused by the subcortical system found in the brain being oversensitive to effects elicited by direct eye contact and emotional expression. This suggests that when participating in sport, individuals with ASD are

constrained to look in the eyes of coaches and teammates, where they may experience abnormally high activation in the subcortical system, which could be at the basis of their eye avoidance in daily life.

The World Health Organisation (2006) identify ASD as a term used to signify a spectrum of conditions characterized by deficits in communication, social interaction, restricted interests, and repetitive behaviour. According to Broberg (2016) from the Department of Health and Human Services, each specific diagnosis on the spectrum is representative of varied levels of functioning and often differing manifestations of the disorder that is applied globally. According to Ousley and Cermak (2014), the most widely accepted diagnoses on the autism spectrum are; Classical Autism (commonly referred to ASD), Pervasive Developmental Disorder (PDD) and Asperger Syndrome (AS) (Reid and Collier, 2002). AS is a previously used diagnosis on the autism spectrum, however it became part of the umbrella diagnosis of ASD in the Diagnostic and Statistical Manual of Mental Disorders (DSM) in 2013 (Lai et al., 2013). According to the Department of Health (2010), the most common disability is a form of developmental delay, with ASD being drawn upon to assist in the diagnosis. ASD is more prevalent in males, with a male to female ratio of 4:1 (Loomes et al., 2017). This high male to female ratio is reflective within various pieces of research on ASD, where participants of studies are very male dominant (e.g., Halladay et al., 2015; Baron- Cohen et al., 2011). Baron- Cohen et al. (2011) identified that this could reflect difficulties in making accurate diagnosis, in particular with females. It is suggested that diagnosing any cognitive disability is subjective in some way, which is potentially why females with ASD are regularly diagnosed with other cognitive disorders during their initial assessment (Ratto et al., 2018).

A review by Watkins et al. (2014), discusses the over-representation of males with the diagnoses of ASD. Authors reviewed 600 articles on ASD from 2010 to 2012 and found that 85% of the participants with ASD who took part were male. This provides evidence to suggest that research conducted on ASD could be excluding female autists who are either assumed to be much less likely to have ASD, or do not fit into the preferred diagnostic criteria, and therefore less desired for scientific studies. The research of Reinhardt et al. (2015) and Postorino et al. (2015) on sex differences on a large sample of young children with ASD, identified behavioural differences between males and females, where females exhibited more obvious symptoms that can provide more definitive results. This study perhaps reflects the conclusions made by Sen and Ostlin (2008), who identified a long tradition of placing males before females in medical testing.

Furthermore, it has been suggested by Baron- Cohen (2000) and Kimhi (2014) that individuals with ASD have difficulties with cooperation and teamwork. Arnell et al's. (2018) research on ASD in sport supports this proposal. Researchers interviewed 24 adolescents with ASD, on their perceptions of physical activity. Findings suggested that participants would choose to engage in more structured, solo and endurance activities such as swimming, cycling, and walking, where there was less emphasis on

creativity and interacting with teammates. Likewise, sports with a higher level of predictability were favoured, where participants had become competent in performing a particular skill or movement.

Healy et al. (2013) found that when individuals with ASD participated in mainstream team sports, their movements were often reactive and passive relative to their typically developed teammates. Researchers identified that this was not always due to a lack of physical ability, but rather an inability to predict and interpret the behaviours of others. This was said to cause frustration within the group and would result in some ASD participants becoming marginalised which reduced their motivation and confidence. In line with this concept, Li et al. (2011) used neuroimaging methods to find that people with ASD find it very difficult to, and in some cases, cannot lie. Li et al. (2011) identified that non ASD participants of the study would lie when it was not deemed necessary, for example, just to be nice to somebody, in an attempt to flatter them. A key discovery by Samolat-Rivera and Porretta (2013) in sport found that non ASD participants would often bend the rules to gain an advantage. However, players that displayed more autistic traits were severely impaired in their ability to engage in deception and placed a great amount of emphasis on fairness. The findings support the view that individuals with ASD may be better suited to, and more attracted to individual sports, where there are fewer rules to follow and less emphasis on social interaction.

The significance of early identification and intervention has become particularly crucial in light of evidence that physical activity and other social interventions can affect behaviour and brain mechanisms in young children, such that prevention of the full development of ASD is plausible if children at risk are identified and treated early (Dawson, 2008). Given that parents, pre-school teachers and sport coaches have high levels of exposure to developing children, it could be suggested that more emphasis needs to be placed on educating such individuals to recognise the early signs of ASD. The social model (Oliver, 1996) is essential to this educational approach, as it proposes that society has a responsibility to develop knowledge around ASD that will support the early diagnosis and execution of intervention programmes that aim to promote inclusivity and equality.

2.3   Medical and Social perspective on ASD in community sport

ASD in community sport could benefit from considering the medical and social model to better understand how physical activity can impact the lives of participants, and society at large. Regardless of the setting in which individuals with ASD are considered, definitions are commonly grouped into two categories; medical and social (Kenny et al., 2016). Oliver (1996) identified that through the lens of the medical model, people with ASD were expected to try and adapt their behaviour to 'fit in' with the rest of society. The medical model conceptualised ASD as the consequence of an impairment located with the individual that can only be cured through medical intervention (Oliver and Barnes, 2012; Thomas and Smith, 2009). These dominating medicalised perceptions created the basis for perhaps one

of the most widely cited definition of impairment. Developed by WHO, impairment was defined as "any loss or abnormality of psychological, physiological or anatomical structure of function" (WHO, 1980, pp 27).

Although the medical model was effective in terms of developing policy and practice, various academics, including, Owens (2015) and Frank (2013) have identified scope for critique. In response to such apparent limitations, Oliver (1981) presented the social model, which proposed to break the link between impairment and the medical model. Oliver (1981) identified that barriers faced by people with ASD in society needed to be addressed to improve quality of life. Various academics have attempted to explore why, by the 21st century, many barriers have not been addressed (Healy et al., 2013; Lamb et al., 2016; Memari et al., 2015). Most notably, Memari et al. (2015) researched societal and individual factors affecting quality of life and physical activity levels in children with ASD. Findings revealed that only 12 percent of children with ASD were considered to be physically active, while the majority of children preferred to engage in activities related to technology and solitary play, rather than social play activities (Memari et al., 2015). To help understand why solitary play is preferred in individuals with ASD, Must et al. (2015) reported that out of 53 children with ASD, 31 experienced two or more social barriers. The most frequently sited barrier was issues with social skills (77%), relating to communication, collaboration, and confidence (Must et al., 2015).

It may be reasonable to suggest that the social model is a better fit for explaining sport participation for individuals with ASD. The beginnings of a more advanced understanding of autism emerged from the efforts of researchers in the faculty of psychology and psychiatry, which support the recognition to break with this dominant medicalised viewpoint (Aylott, 2003). This was highlighted by a report published by the National Autistic Society (2000), which found that secondary schools need to give better support to staff regarding social and life skills required to better understand the specific needs of people with ASD. Coakley and Pike (2014) have also claimed that this is necessary within sport coaching in order for participants with ASD and other intellectual and physical disabilities to fully benefit. However, Kozub and Porretta (1998) found that out of 400 coaches within ASD programmes, the majority did not feel that their training was adequate enough to coach players with ASD. Similarly, research by Flores et al. (2012) found that the majority of ASD coaches that they interviewed were not sufficiently prepared to coach their players, due to a lack of knowledge and experience. Interestingly, only a few coaches in this study reported learning ASD- sport specific techniques on the job, and expressed positive cognitions and feelings about their experiences. The suggestion that many coaches are undertrained to coach people with ASD was devised from previous research by the National Autistic Society (2000), who discovered that children with ASD contribute to the largest single group of children excluded from school, with one in five young persons labelled with 'ASD' having been excluded from school (Broach, 2002). Interestingly, this is 20 times the national average. The reason for this exclusion

has been explored by a report published by Barnard et al. (2002) in the National Autistic Society *in schools*. They identified that one in three children in special educational needs schools have needs related to ASD, however 75% of schools in the study claimed their teachers, PE educators and coaches were inadequately trained (National Autistic Society, 2002). Thus, it could be suggested that young people labelled with ASD are experiencing exclusion from school not because of their 'impairment' but due to the barriers in place that continue to deny them access to high quality education. It may be that sport coaches of individuals with ASD are subconsciously developing a medicalised approach to disability due to their inadequate training. The medicalised perspective has perhaps resulted in a 'skewed' understanding of ASD in community sport, which tends to focus on deficits, disorders, and impairments (Woods, 2017). That said, a legal framework has now been developed in the Special Educational Needs Code of Practice (2017), to challenge such discriminatory practices associated with autism, that adopts a social model approach to disability.

The medicalised issues discussed above sharply contradict developments in the wider disability movement, which have advocated for a more considered interpretation of ASD from within the social model (Woods, 2017). Aylott (2003) recognises the need to break the dominance of positivist research methodology and to explore ways to actively engage people who have a label of 'autism' within the research process. They use participatory research methodologies to better understand how sport might be utilised more effectively in a developmental context within ASD programmes. The current study aims to adopt this approach and hypothesise that, by actively engaging those labelled with ASD, there will be a gentle shift in the research methodology and process, where new factors associated with the definition of ASD may emerge, derived from the social model.

The phrase 'sport for development' has been discussed by various academics under to social model (Sanders, 2016; Martin et al., 2014; Coakley, 2011). In particular, Hassan and Lynch (2014) recognise that sport's role in society continues to develop and is no longer perceived as a phenomenon engaged with purely for enjoyment purposes. Community sport is being used by policy makers worldwide to identify and address social issues, including the psychological development of people with intellectual and learning disabilities. To obtain a better understanding into the link between disability sport and its contribution to 'sport for development', it is useful to draw a distinction between individuals who have an intellectual disability, and those with a specific learning difficulty. According to the Department of Health (2001, p. 1), an individual identifies as having an intellectual disability if they demonstrate:

> "A significantly reduced ability to understand new or complex information, to learn new skills (due to impaired intelligence) with a reduced ability to cope independently (impaired social functioning) which started before adulthood, with a lasting effect on development".

This definition covers adults with ASD who have intellectual disabilities, but not those with very high functioning ASD who may be of average, or above average intelligence. In order to be eligible for the Special Olympics, the individual must provide evidence that they meet the criteria of an intellectual disability, irrespective of their autistic characteristics (Special Olympics, 2020). Through the lens of the social model, coaches and PE teachers have a key responsibility within this emerging 'sport for development', to draw a distinction between people who have an intellectual or learning disability. This will provide sport educators with a better understanding into how individuals with varying levels of ASD learn and develop (Hassan and Lynch, 2014).

Furthermore, the comments made by Wodka (2014, p.1), in an article published by Sarris (2014) suggests that coaches and PE teachers of individuals with ASD are still not communicating in an autism friendly way, which could be preventing many people with ASD the opportunity to practice and develop their communication, collaboration and confidence skills:

> "Children with ASD tended to discount feedback from coaches when catching the ball. Coaches struggled to get their message across in an autism friendly way".

This indicates that the medical model of ASD could still be dominant among many sport coaches. This is consistent within the findings of a study conducted by Graby (2016) who explored societal barriers associated to ASD. This research indicates that 56% of people with ASD do not benefit from the physical and psychological gains associated with physical activity and will likely adopt feelings of marginalisation. Heah et al's. (2007) study identified that for the majority of people with ASD, their first introduction to organised sport is in school, and many are still being denied the opportunity to fully benefit. Parents in this investigation drew upon a range of social issues including time, and a lack of support workers, which impeded their child's participation in sport (Heah et al., 2017). Parents acknowledged that, although they can work hard and achieve some success at providing social support for their child, it may not be enough to ensure their child has opportunities for meaningful participation in sport (Heah et al., 2007). This hypothesis may have led to the researchers claiming that people with ASD reported significantly lower quality of life compared to non-disabled people. To support the process of developmental change, all coaches of people with ASD within the study identified the importance of developing participants communication and collaboratory skills by engaging them with a variety of activities and working in small groups with new people (Heah et al., 2007). Harvey and Light's (2015) work in this field indicated that ASD coaches should create fitting situations that arise through modelling appropriate responses through their own behaviours.

Furthermore, Leonard (2020) revealed that 41% of people with intellectual disabilities claim that there are insufficient opportunities available to them. Nixon and Cummings (1999) recognise this is due to cultural causes, such as parental overprotection. Although the work of Nixon and Cummings (1999) did

not explicitly draw on themes that emerged from over-protective tendencies, it was claimed that parents of children with ASD felt their vigilance was necessary because of the mental and physical limitations of their child. Conclusions made suggested that parents wanted to preserve their child's confidence, by taking them away from a situation that could highlight their disability and cause anxiety (Nixon and Cummings, 1999). This medicalised approach to ASD within a sporting context has been drawn upon by Peck and McKeag (1994). They found that medical restrictions have been placed on many young people with ASD, and this could simply be the result of inadequate numbers of appropriate and accessible sport facilities and disability specific sessions available that are delivered by appropriately trained and qualified coaches. This could explain why people with ASD are regularly being denied the opportunity to participate in physical activity (DePauw and Gavron, 2005).

Aside from the barriers to sport that have been explored under the medicalised model, various research has illustrated how sport is drawn upon as an effective tool in helping to overcome psychological issues (Black et al., 2015; Kielhofner and Miyake, 1981; Porter, 2012). This is primarily through reducing loneliness and allowing for societies to contribute to the psychological and emotional development of people with ASD, under the social model approach (Black et al., 2015). Kielhofner and Miyake (1981) studied behaviours that individuals with ASD presented in their day-to-day struggle within society. A number of coaching programmes were drawn on to gather data, where sessions were designed to promote inclusion. It was found that participants experienced an increase in cognitive skills, attention, motor behaviours, confidence, and social relationships (Keilhofner and Miyake, 1981). They further studied and compared the social skills and behaviours of the primary participants of their study against individuals with ASD. They found that people who participated in the original study demonstrated a higher level of social behaviours, including better communication and collaboratory skills. Therefore, it may be claimed that in order to provide social adaption among people with ASD and contribute to their socialization, physical education and activity should be used as an instrument to facilitate and accelerate this process (Keilhofner and Miyake, 1981). These findings are consistent with conclusions made by Black et al. (2015), 34 years on, who found that regular physical activity can develop one's interpersonal and psychological skills for people with ASD, that in turn helps to create social support networks, which could increase independence and promote community re-integration. Similarly, Porter's (2001) work indicates that ASD sport programmes should be perceived as an attractive investment to society because of the potential they have in reducing medical costs and increasing productivity.

2. 4   How confidence can be enhanced through participation in sport and reduce social camouflaging for people with ASD

As previously explored, people with ASD tend to have difficulties in social interaction, reciprocity and sharing. Physical activity provides individuals with ASD an opportunity to learn and deepen their own

qualities and skills (Akyuz et al., 2016). This educational aspect of sport allows people with ASD to gain a better understanding of their own characteristics and skills, where they can begin to undertake new roles and duties by obtaining greater confidence in their abilities (Akyuz et al., 2016). Research by Duquette et al. (2016) showed that the awareness of being able to meaningfully contribute to specific activities or situations can significantly influence one's level of confidence. Participating in sport creates an opportunity to migrate into a "free zone" for individuals with ASD (Duquette et al., 2016). This creates an opportunity for people with ASD to overcome barriers such as social camouflaging and increase their sense of self-worth. Research by Cook et al. (2021) revealed that despite personal costs, out of 262 people with ASD, the majority reported to use camouflaging strategies to hide their characteristics. Participants of this study described engaging in four types of camouflaging behaviours: masking, innocuous engagement, modelling neurotypical communication and active self-presentation. Masking behaviours concealed information concerning personal characteristics or circumstances and/or suppressed innate behaviours (e.g., limiting personal disclosures or suppressing hand movements). There is substantial evidence to prove that physical activity is an effective practice for reducing the use of camouflaging among people with ASD (Duquette et al., 2016). It has been suggested (by Lopez et al., 2017) that autism specific sport sessions can provide equality among participants, which encourages the expression of emotions and reduction in the use of camouflaging. In order to help reduce camouflaging and increase confidence for people with ASD, coaches can utilise a range of effective communicatory and behavioural strategies that will aid this process. The work of Vetri (2020) shows that, by coaches taking an interest in participants hobbies, sensory and motor particularities as well as their abilities, it will make it easier to integrate them and maintain their participation in sport. Adopting these behaviours as a coach has also been proven to help build rapport and trust between the participants with ASD and the coach (Ryan et al., 2017). Communication strategies that have been proven to support people with ASD's participation in sport and reduce feelings of anxiety and uneasiness include, limiting ambient noise, supporting the message with gestures, miming, giving one instruction at a time, using concrete known vocabulary and utilising demonstrations (Duquette et al., 2016).

Sport is a vital tool in achieving an optimal level of personal, relational, and social confidence. Having the opportunity to develop communication skills and to grow into an autonomous learner, can greatly enrich the quality of relationships and integrations for people with ASD (Gibson et al., 2021). Therefore, physical activity becomes a key to autonomy and consequently to the growth of self- confidence in establishing and maintaining interpersonal relationships that will be used in different contexts of life for people with ASD.

2.5   Positioning of sport in an uncritically functionalist manner

Burkett (2013) claimed that the consideration of coaching disabled participants may place demands on the skills, practices and knowledge of coaches beyond that which is expected in mainstream sporting contexts. For example, coaching individuals with ASD has been researched to show that coaches must manage a variety of practical and contextual issues, including restricted financial support, a shortage of coaching and support staff, a lack of coaching and training resources, and a smaller talent pool (Taylor et al., 2014). Indeed, a lack of facilities, a lack of information, equipment costs and limited professional training for coaches directly impacts upon the sporting opportunities for people with disabilities (Bush & Silk, 2012; Smith & Sparkes, 86 R. C. Townsend et al. 2012).

Research in disability coaching has acknowledged structural barriers that exclude participants and provides insight into the disabling tendencies of coaching practice (Cregan et al., 2007; Dorogi, Bognar, & Petrovics, 2008; Taylor et al., 2014). Townsend (2012) agrees that very little is known about coaches in disability sport and although a growing body of work exists that has explored coach learning, there is an absence of in- depth sociological research on disability coaching and coach education. Knowledge about disability is often marginalised in coach education, with engagement in the field functioning as the principal source of knowledge about coaching in disability sport. Therefore, disability- specific coach education contributed marginally to coach learning and functioned as a platform for the transmission of medical model discourses about disability.

Towsend (2012) recognises that research on ASD in sport has missed an important human rights issue in relation to barriers and opportunities for disabled people to engage formalised learning structures in coaching. Instead, conceptualisations of "inclusive" and "mainstream" coach education remain undisputed (Bush & Silk, 2012). Understanding exclusion in coaching through the human rights model can be a powerful step in recommending policy change (Townsend, 2012). However, as Labronte (2004) and McConkey (2014) suggested, whilst social inclusion is desirable, it is perched on the very contradiction of including individuals and groups in a set of established social relationships that are responsible for excluding them in the first place. Therefore coaches and disability national governing bodies must challenge the hierarchies that create exclusion.

2.6   Coaching participants with ASD

Regardless of the level in which one coaches at in a disability context (inclusion or elite), the objectives of coaching essentially remains the same; to better understand how individuals with varied developmental disabilities learn (Townsend et al., 2015). Barker (2004) acknowledges that this is a fundamental factor in creating an appropriate learning environment in order to develop personal and physical dynamics. Notably, Cropley et al's. (2012) research on the link between positive athlete

outcomes, and the role of disability coaches, suggested that coaches are responsible for challenging and confronting personal barriers by promoting the development of ASD participants in several ways; physically, socially, psychologically, personally, and technically. ASD participants who perceived their coaches as supporting their autonomy expressed a strong sense of control over their sport involvement and had a positive relationship with their teammates (Cropley et al., 2012). Similarly, participants who viewed their coaches as supporting their desire to be independent demonstrated higher intrinsic motivation compared to participants who perceived their coaches as less supportive (Cropley et al., 2012). Moreover, ASD participants that perceived to have a positive experience in physical activity recognised their coaches displayed effective leadership behaviours (e.g., instruction, social support, and positive feedback) (Cropley et al., 2012). Researchers within this study also examined whether participants who had more favourable perceptions of coaching leadership behaviours were more satisfied with their experience. Participants stated that they were more satisfied with training, personal treatment, and individual performance when they recognised coaches provided sufficient social support, and positive feedback, where democratic behaviour was demonstrated (Cropley et al., 2012). Crucially, autocratic behaviour was unrelated to participant satisfaction with the treatment they received. These findings indicate that democratic behaviour in ASD coaching is positively linked to participant satisfaction, where the coaches influence on team cohesion is particularly important in an environment where players psychological are typically complex (Hatamleh et al., 2009).

Furthermore, Turkington and Anan (2007) highlighted the role that physical activity can play in helping to develop and teach eye contact in ASD learners which. Within their research, various games and practices that involved small-motor skills, such as 'Simon says', and games that required participants to use their playful imagination by imitating sounds and movements similar to animals were identified to increase eye contact, and improve engagement levels (Turkington and Anan, 2007).

2.6.1   Coaching behaviours

Kail and Cavanough (2010) discuss the importance of the coach's role in enhancing the social skills of ASD participants by teaching the fundamentals associated with co-operation and creating a positive playing environment. They claim that these factors are key in developing cognitive and communication skills associated in individuals with ASD. The work of Hassan and Lynch (2014) found that enabling participants to devise new playing strategies, or potentially modifying the rules could aid this process. In agreeance, Harvey and Light (2015) suggest that it is the coach's responsibility to focus on situations that arise naturally, through activities and by asking questions and modelling appropriate responses through their own behaviours. Thus, it may be claimed that it is the coach's responsibility for creating situations that encourage independent learning.

2.7   Effective coaching strategies for coaching ASD participants (The 3 C's: Communication, Confidence and Collaboration)

While dividing the strategies into three areas of communication, confidence and collaboration, there is still some overlap as the three domains are interrelated and directly affect each other (Boyd et al., 2011). For example, improved communication skills can lead to increased confidence (Boyd et al., 2011). This can lead to improved collaboration skills, which can develop participants engagement levels and ability to learn, which directly affects knowledge acquisition (Muchetti, 2013). Similarly, there is a relationship between social abilities and academic learning (Muchetti, 2013). As such, improving participants social skills during extra curriculum activities (e.g., physical activity) has been proven to improve academic performance (Fleury et al., 2014). Ostemeyer and Scarpe (2012) found that the social abilities of students with ASD directly affect how they interact with their peers, which often forms the type of relationships that are established.

Research suggests (Kasari et al., 2013; Kasari and Tager-Flusberg, 2013) that many people with ASD have severe language delays that also include the possibility of not developing language at all. In particular, a study by Chan et al. (2021) estimated that 35-40% of people with ASD do not develop functional use of language, however with appropriate early intervention and support of physical activity, some ASD individuals can acquire language by the age of 5. In a sport coaching context, people with ASD often find it difficult to infer meaning from ambiguous or unclear phrases used by the coach. This can make it hard to follow conversation or understand instructions which is a significant part of health and safety. Tom Morgan is a competitive rugby club player with ASD, and is the National Autistic Society Sports Ambassador (Webster, 2016). He stated, "my coach told me to 'use my head' when going into the tackle. I took this literally and ended up head butting the opposing player" (Webster, 2016, p. 5). Under the social model approach, it could be suggested that coach is responsible for developing their communicative strategies to accommodate for autistic participants, to avoid this misinterpretation.

Research by Milanese et al. (2019) highlighted several effective coaching strategies developed through the implementation of a multi- sport programme for people with ASD aged 10-19. This research drew on multiple observations and experiences of volunteer and paid coaches, as well as PE teachers in schools specifically for children with ASD. Researchers found the need for altering coaching language to reduce sport-specific terminology. For example, prompting a participant with ASD to 'throw the cricket ball at the stumps' was unclear for the majority of the partakers as they did not appear to understand the terminology of 'cricket ball' and 'stumps' (Milanese et al., 2019). However, when the coach instructed the participants to 'throw the ball at the three sticks', participants demonstrated clearer understanding and therefore engaged positively in the activity. Thus, coaching instructions that focused on a more literal interpretation (ball and sticks), were more effective, versus sport specific lingo (cricket

ball and stumps). Research also suggested that each participant gained sensory input through various self- stimulatory behaviours (Milanese et al., 2019). These behaviours included: Visual (covering, closing or rapidly blinking eyes, and flapping hands), Auditory (noisemaking, covering ears, and vocalisations), Tactile (mouthing items, pinching/biting oneself), Vestibular (rocking, bouncing) and Proprioceptive (chewing on things, grinding teeth, and squeezing objects) (Mays et al., 2011). These self-stimulatory behaviours would occur when the participant was not engaged in the activity and interfered with their ability to communicate, learn, and interact. Goodman and Williams (2007) theorized that ASD students engage through their auditory senses, and therefore language should be presented in a song during challenging instructional moments, such as transitions and extended listening. Research from Sevin et al. (2015) suggests that since transitions are especially difficult for individuals with autism, a song that is regularly played or sung during these times helps cue participants to do the desired behaviour, such as changing activities in a multi-sport session. Coaches could select specific songs for common transition so that participants will learn which transition is occurring, meaning that routine can be consistent and predictable (Sandt, 2008). The effectiveness of this strategy has been researched and measured by Simson et al. (2013) who documented the level of prompting required or the length of time needed by the students to complete the transition. Prompts were given at the beginning of the implementation and were slowly faded until the students only needed to hear the song to complete the transition. There are many transitional situations within a sport session (e.g., warm up to main activity, progression within an activity) that are often unpredictable and cause anxiety for ASD participants (Lequia et al., 2015). Therefore, when delivering sport sessions to ASD participants, it could be claimed that coaches should be encouraged to draw upon this auditory technique to encourage familiarity and reduce anxiety within the group.

Meadan et al. (2011) researched various practices using visual engagement supporting student learning with ASD. Visual schedules were used both in the classroom and during PE sessions using drawings, photographs, and words. These were particularly helpful to students with ASD as they indicated "what has been completed and what tasks are to be done next" (Goodman and Williams 2007, p. 56). It was found that schedules in a coaching environment helped to increase independence for the participants as the visual schedule lessened the need for excessive prompting throughout the observed sessions. A visual schedule can portray symbols or pictures of what is expected of the participants (Goodman and Williams, 2007). In one particular example, some participants often played with toys inappropriately which interfered with their inclusion with the rest of their teammates within the session. Appropriate visual schedules provided participants with photographs that demonstrated premade structures of sport equipment they may play with such as a tennis ball and football, that showed the students how they may use equipment during this activity, where less guidance was required. Reagan (2012) claims that individuals with ASD often have difficulty developing original ideas, therefore being provided with a visual allowed them to independently learn and build on a certain skill or movement. Despite their

impressive benefits, use of visual support continues to be a challenging strategy to apply for many coaches, teachers, and parents. Hayes et al. (2010) claims that such tools must be flexible enough to support each unique individual at present and as they develop. Also, caregivers often struggle to create, use, and monitor the effectiveness of such tools (Hayes et al., 2010). Therefore, this strategy must effectively support the individuals for which they are designed, with minimal burden on caregivers, where specialists are able to provide appropriate support to help accomplish developmental goals for young people with ASD (Hayes et al., 2010).

Furthermore, social story interventions are regularly used to promote appropriate behavioural responses in individuals with ASD, used in both physical activity and educational contexts (Rosser-Sand and Frey, 2005; Zimbelman et al., 2007). Coaches can use this practical method to present in story- like format, including both text and illustrations, contextual information regarding social situations to participants with ASD. Baron Cohen et al. (2002) recognise that children with ASD characteristically cannot comprehend social situations or the expectations of others, which often results in behaviours that are disruptive. The social story within sport is designed to provide participants with social information (e.g., social cues) (Gray, 1998). Duncan and Klinger (2010) indicate that in sport, people with ASD may lack the social information to rotate among activity stations and adhere to health and safety rules. Furthermore, Ali and Fredrickson (2006) discussed the effectiveness of coaches writing social stories to help participants with ASD learn a new skill (e.g., throwing a tennis ball), promote desired responses over challenging behaviour (e.g., sharing equipment or working within a team), and adjust to changes (new coach or playing environment). More specifically, Kuoch and Mirenda (2003) found that children who receive social story interventions were better able to maintain the appropriate targeted behaviour after intervention withdrawal and were therefore more likely to engage appropriately in physical activity and make independent choices. This provides support for the work of Ivey et al. (2004), who found that the use of social stories produced a 15-30 percent increase in independent player participation for people with ASD in sport.

2.8   Chapter conclusion

This chapter has attempted to gain an understanding of ASD in the context of community coaching. Evidence has indicated that physical activity is useful in developing and enhancing functionality of typically developing people with ASD. It may be beneficial to engage people with ASD in physical activity, as a means to address communication, collaboration, and confidence as they often pose particular challenges to people with ASD within society (Reid and Collier, 2002). Physical activity has been shown to be a beneficial intervention for the treatment of communicatory, confidence and collaboratory deficits for people with ASD, and evidence suggests that physical activity can reduce stereotypical behaviours of autistic individuals. The following section will outline the methodology adhered to, which enabled the researcher to gain an understanding into how people with ASD perceive,

experience, and reflect on their participation in physical activity with the support of their coach and parent/guardian.

Chapter 3: Methodology

3.1   Introduction to the Chapter

The following chapter will introduce the methodological approach utilised within this research study, provide a rationale for the research methods employed and will outline the stages undertaken to collect, analyse and interpret the data. It will discuss my own experience, alongside the participants' experience and consider potential related biases. Relevant ethical considerations will be explored, and the reliability and validity of the study will be addressed.

3.2   Methodological Paradigm

The act of creating a research question and the manner by which results are constructed is bound firmly inside my ontological perspective on the real world (Smith, 2010). My epistemological perspective decided the focal point of the information gathering process itself and the key presumptions that generate methods for investigation (Aspers and Corte, 2019). This related to my view on the nature of reality, and my perception on what qualifies as valuable knowledge which impacted the research strategies selected in this study (Glesne, 1999). This chapter drew upon my background to help understand my ontological and epistemological views and how they impact the constructivist, interpretivist methodology taken within this investigation. The following section drew on the two dominant paradigms, qualitative and quantitative approaches and its application or rejection to this study. This aims to provide a framework that justifies how the study was conceived, what knowledge it aims to add to literature on ASD in sport, and how the elements of the study design align with the issues identified for the study.

I employed qualitative research to examine the research question regarding the lived experiences of ASD players in a community sport programme. Baron Cohen et al. (2013) explain that qualitative research intends to probe for deeper understanding of constructed realities as opposed to exploring and examining surface features. This approach allowed me to highlight focal areas, and coordinate in depth analysis into a phenomenon (Patton, 2005). A qualitative approach explored the realities of the social world allowing place meanings at a football disability programme to be revealed. This is a key aspect of the study as the principle of understanding how research participants interpret the world in which they live was central to this research. A quantitative approach was rejected as I was interested in gathering and examining information such as thoughts, feelings and experiences from coaches, parents, and players. Therefore, non- numerical measures were collected from the viewpoint of the participants, and interpreted to uncover meaning, inherent of the qualitative approach adopted. Rahman (2020) suggests that quantitative data fails to ascertain deeper underlying meanings and explanations, particularly in this field. A systematic review of the psychological and social benefits of participation in sport for children by Eime et al. (2013) found that only two of 30 publications adopted a quantitative

approach. It was identified that the quantitative publications did not fully explain the reasons for the psychological and social benefits and their meanings in that particular context.

I positioned myself at the fundamental principle of constructivism to facilitate towards that object. That object being a philosophical view that agrees knowledge is constructed from human experience, as opposed to discovered self- evident knowledge. Researchers that utilize this ontological method in disability sport (e.g., Pompilio, 2019; Martin, 2020; Johnson et al., 2020) agree that social phenomena are constructed and continually evolving (Bryman, 2008; Smith, 2010). Pompilio (2019) and Martin (2020) placed significant emphasis on how individuals acquire and develop their knowledge and understanding through their reflective participation in authentic situations with others. Therefore, they rejected the existence of a single reality and instead considered learning to be an active interpretative process. I drew upon an interpretative epistemological methodology as the objective of this research was to comprehend and interpret how the coaches, players and parents under investigation construct the world around them (Glesne, 1999). Feedback from all categories of participants within this current study were required in a collaborative and participatory nature. In this context, it included the players, coach, parents/ guardians, club manager, and support that could extend to governing bodies and institutes of sport.

I agreed that this interpretive study is determined by the degree to which is fits and works with the viewpoints of the research participants (Glaser and Strauss, 1967). This study drew upon in- depth, semi- structured interviews to examine the individual interpretations of the research participants social behaviours. This enabled me to better understand the motivations people have to act in a specific manner in different contexts (Glaser and Strauss, 1967). Instead of constructing a formulaic understanding of society (inherent in positivist research), the researchers interpretivist stance focused on gaining an insight into the unique experiences of individuals and groups within this study. Pulla and Carter (2018) propose that interpretivist researchers are required to gain empathetic understanding with the subject of the research (this relates to individuals and families of people with ASD in this research) to understand the social location of the research group. This interpretivist model assumes realities are socially developed, intricate and obscure into discrete variables. As per Bryman (2008), the subjects included are not inanimate objects, but rather followed up on by a wide variety of external factors. Therefore, interpretivists accept there is a need to comprehend the underlying experiences and sentiments associated with behaviour by acquiring qualities that are not measurable and reducible to numbers because of their multifactored nature (Devi, 2017).

3.3   Ontology and Epistemology

I drew upon Jaffe's (2014) work that explored the relationship between human (social) science and natural science which helped me to make sense of the nature, course, and direction of the study. Jaffe (2014) theorised that irrespective of philosophical differences, there were responses in which agreement

could be reached through a systematic and rigorous application method that revealed a true scholarship. I attempted to make sense of philosophy as the beliefs of someone, or a society, that enabled me to develop my own viewpoint that research philosophy is underpinned by contradicting beliefs regarding how knowledge is acquired, and how reality developed (Saunders et al., 2009). Smith (2010) explains these paradigms through the epistemological and ontological perspectives that will now be discussed.

I adopted a constructionist stance to investigate the impact of the sport programme on players with ASD, focusing on communication, collaboration, and confidence. The coaches, parents and players who participated in this research place meaning that was constructed through the physical and social interactions, developed, and communicated within a social context. Ontology is the belief system that draws upon the nature of reality and can be illustrated through the distinctions of social science and nature through objectivism and constructivism (Bryman, 2008). Objectivism views reality and the world as separate from human meaning, dominated by physical and social rules that are able to be objectively measured (Smith, 2010; Potter, 2006).

The use of constructivism was well suited in my belief, in that the fluidity of ASD sport programmes create differing insights of perception on sport in a developmental context. In essence, the ASD programme under investigation is in a constant state of flux and encompassed within the fundamental nature of social interaction. Smith (2010) claims that constructivism agrees that social phenomena are established through meanings and human interaction, and that the world is only seen through how humans themselves perceive it, which implies that reality is constantly in a state of fluctuation. Therefore, it may be reasonable to suggest that reality is also a method of constructed meaning at the individual level. The perception that individual meaning is constructed when people engage or interact with phenomenon and is not fixed prior to the encounter, was embraced when investigating the research questions about the place meaning of ASD sport programmes. I used an interpretive perspective to gain these insights, and that will now be explored.

An interpretivist epistemology was used within this research as it provides a better understanding of the subjective experiences that came from socially constructed place meaning of the coaches, players, and parents under investigation. I used this approach to collect and understand qualitative data within this study to understand the meaning, values and motives that explain human reality. Lukenchuk and Ulysse (2013) recognise that the epistemological branch of science is not concerned with how the world operates (ontology), yet rather with the acquirement of knowledge itself. Epistemology is viewed through two primary philosophies of data collection, interpretivism and positivism (Fay, 1996). Emphasis on this research regarding natural and social sciences require a positivist approach to acquire knowledge in order to understand and study the world (Denzin and Lincoln, 2008). I recognised that the coaches, players, and parents in this study had experiences, knowledge and values that required interpretation of their constructed knowledge. Specifically, this related to the perceived benefits and

obstacle faced by individuals and ASD programmes that could either impede or facilitate players communication, collaboration and confidence skills.

Positivist research was not appropriate to the present study because I was interested in gathering and examining information on thoughts, feelings, and experiences related to communication, confidence, and collaboration of ASD participants in a community sport programme, all of which are difficult to measure (Denzin and Lincoln, 2008). Liamputtong and Ezzy (2005), explain that this approach only examines that which can be directly observed, and that with respect the usage of positivism within social sciences, is often used in the same sense as the physical sciences that contain physics or chemistry. It could be agreed that this approach follows accurately structured study techniques to discover objective reality and is therefore not appropriate to this qualitative study.

3.4   Rationale for research method- Grounded Theory

Grounded Theory (GT) was chosen by myself as it "constantly opens up on the mind of the researcher to a myriad of new possibilities" (Glaser and Strauss, 1967, P. 6). This approach (see figure 1) is unique in its ability to generate concepts by utilizing the logic of constant comparisons and frequent memo writing, which was draw upon within this study. Generating theory that is 'grounded' in semi- structured interviews was an important principle in this qualitative research because it gathered narratives from interviews, which helped to provide deep and rich data (Pidgeon, 1996). According to Holt (2016), GT is a particularly useful methodology when there is little pre-existing theory on a certain process, or when existing theories do not sufficiently capture the complexity of the process.

Utilising this approach enabled me to refer back to the literature relevant to ASD in sport and qualitative observations throughout data collection analysis.
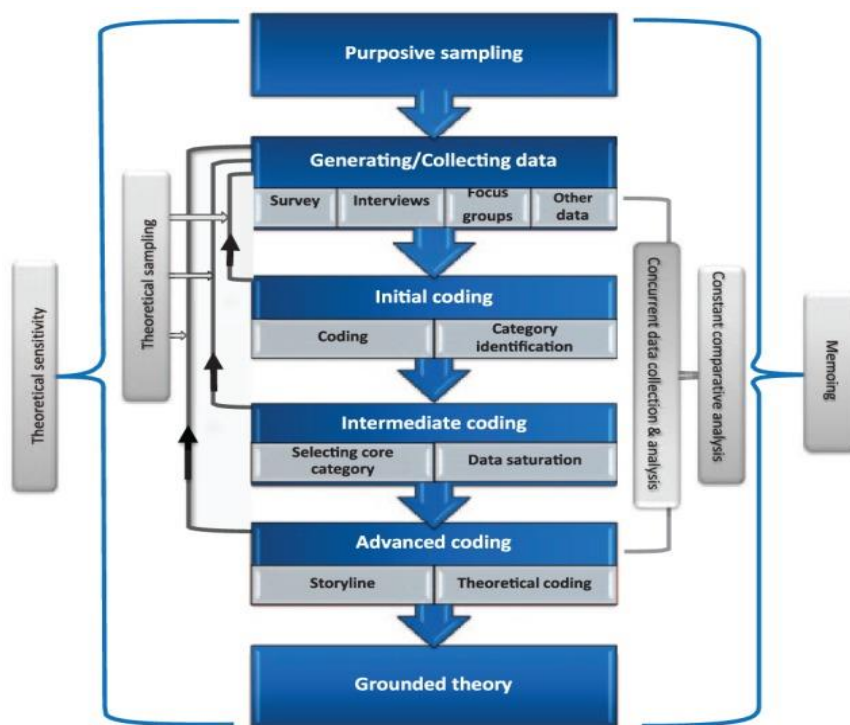
Figure 1- Grounded Theory. (Chun et al., 2019)

Constructivist GT is the methodological framework for this study because this viewpoint assumes that people can construct reality through experience, language, culture, and in a wider sense, social constructs, suggests that people will experience and perceive things differently (Bryman, 2008; Robson, 2002). Therefore, by applying this approach, and considering my viewpoints and the participants, I was able to examine how experiences within disability sport occur, from a variety of perspectives. Schwandt (2000) suggests, that at a basic level, constructivism agrees human beings do not discover knowledge so much as they can construct it. By drawing upon different coaches, parents, and players to recall, explain and clarify their experiences of participating in an established disability programme, this generated different perceptions. Hence, this is my reasoning for utilising the ontological viewpoint of constructivism. Creswell (2011) and Glesne (1999), recognise that such factors are difficult to quantify, and therefore non-numerical measures were collected from the viewpoint of the participants, in a natural setting. Thereafter, I interpreted data in accordance with Glaser and Strauss's (1967) GT, to uncover meaning inherent to the qualitative approach adopted.

Given that existing research on ASD in sport has traditionally focused on how individuals can develop their physical health, using a GT methodology to research the psychological and emotional effects of physical activity has the potential to advance the literature by offering new theoretical insights and explanations. Consistent with the pragmatic perspective, the substantive GT developed in this thesis has been built to explain the shared elements of multiple participant's experiences of learning and application in disability sport. Creating new theoretical explanations on ASD in a sport context could

provide practical information for sport coaches and PE teachers, which is consistent with pragmatic tenants specifying that knowledge should be useful in practice.

GT is central to this study as it helped to express the concept of theory that is grounded in, and involved in, the continual sampling and analysis of qualitative data gathered in concrete settings, in this case, unstructured data gathered from interviews. This is supported by Glaser and Strauss's (1967) work that identified that, historically, sociological practice was mostly dependant on quantitative methods (survey research), and the status of qualitative methods were essentially non- existent. An example of this was a fixation with quantitative testing in propositions created from few highly abstract theories (Glaser and Strauss, 1967). This has potentially resulted in an impoverished theory that has limited empirical relevance to any particular 'substantive' content domain (Pidgeon, 1996). I aimed to create a more contextual theory that would be of relevance to the coaches, players and parents being researched. As per Whittemore et al. (2001), this qualitative investigation seeks depth over breadth and endeavours to learn unobtrusive subtleties of life encounters instead of attempting to aggregate evidence. Hence, it is referred to as subjective and contextual and does not attempt to consolidate or lessen understandings to a norm (Glesne, 1999). I concluded that GT is the most suited method to guide me, as the researcher, in fulfilling my primary aim of obtaining a better understanding into how people with ASD perceive, experience, and reflect on their participation in sport, as it places great emphasis upon participants' own accounts of social and psychological events and their associated local phenomena.

The GT approach is useful for identifying details of constructs. In addition to themes and subthemes related to communication, confidence, and collaboration, I discovered themes capturing perspectives regarding camouflaging ASD, familiarity and trust, and parental guidance and support. This suggests that within GT, when the researcher carefully considers other perspectives and is well versed in the existing literature related to the research topic, the analysis can have an effective contribution in shaping generic theory.

3.5   Bias

Given my ontological and epistemological rationale, it is deemed appropriate to recognise the potential bias within such qualitative research (Patton, 2002). Gergen and Gergen (2000) suggest that in non-positive paradigms such as constructivism, research is often perceived as a research- participate co-production of knowledge, where the division between researcher and research participant is blurred. As I was the primary instrument of data collection during interviews, my background will be recognised as potentially influencing the interaction with the interviewee. In the case of this thesis, the research process is a product of my biography. Put simply, my perceptions and experiences have allowed the formation of this project due to prior knowledge and attitudes. I was coaching within the disability department where the research took place. This current level of interaction and familiarity with the research participants could facilitate the depth, morality, and reliability of the interviews (Fontana and

Frey, 1994). For example, problems of domain specific language and meaning were eliminated as both me and respondent understood the contextual nature of the interview. Patton (2002) suggests that familiarity could also permit greater levels of trust between the researcher and participant, which could increase the richness of the data.

Having said that, I was equally aware that my coaching background, and current position (volunteer for programme under investigation) has developed pre-existing relationships with participants that may be perceived as biasing the findings and affecting the trustworthiness of the study. Karnieli- Miller et al. (2009) indicates that participants may perceive the researcher relative to their current role, rather than a researcher or academic. Karnieli- Miller et al. (2009) recognise that there is no preferred or optimal relationship within qualitative research, however, given the research participants knew me on a personal level, they may be tempted to over identify with me, and in doing so may have given answers that they perceived were expected of them. Onwuegbuzie and Leech (2007) suggest that this could have impacted the thoughts of the research participants on particular issues, which can restrict the effectiveness of data collection and analysis. Although close rapport can lead to more informed research, it was possible that I could have lost my distance and objectivity and given up my academic role (Frontana and Frey, 1994).

Field (2017) discusses the notion that phenomenology brings the observer's equipment to the fore and make it part of the equation of meaningful construction and participation. Therefore, it is necessary to appreciate how my interpretations of the project and applications of methodology (interview questions) have been affected, to allow the reader to gain a better understanding of the objectivity and subjectivity that has been applied to this investigation (Gray, 2004; Oleson, 2008).

In view of this, I will convey some reflective comments on how my life story could have affected the nature of this research. Janesick (2000) has recognised that this is an issue, claiming that the description of the role of the researcher is a key component of the written report of any investigation, and therefore the researcher has a responsibility to honestly probe their own biases. Having had an unsettled childhood in a geographical sense, due to the nature of my father's profession, I have settled within communities that score both high and low on many indices of social deprivation. One particular area of note that has a high indicator of social deprivation, continues to attract significant funding for ASD programmes, when compared to other areas. This is perhaps consistent with findings from Kaku et al. (2017) on the link between social deprivation and ASD. They found that out of 35 participants, one in three young participants demonstrated characteristics typical with having ASD in socially deprived areas, where poor quality of parent- child interaction was identified, and high levels of social isolation that they argued, creates feelings of anxiety. Such findings potentially help explain why I have had the opportunity to engage in coaching on ASD programmes in deprived areas that are perhaps better equipped to provide and manage strategies for people with ASD.

Despite the strong theoretical arguments for the potentially positive contribution on which sport can have on ASD participants (presented in the work of Huseyin, 2019; Jafar, 2017; Kunzi, 2015), I was motivated to recognise how sport is currently used, and might be better utilised to drive positive psychological development (explored in section 2.7 and 2.8) from those with first- hand knowledge; the coaches, parents and players themselves.

With regards to the above framework of the epistemological and ontological rationale, Denzin and Lincoln (2008) identify ethical (axiology) dimensions and methodological principles that are explored in more detail below. Axiology is a branch of philosophy that studies values and guides what researchers consider to be 'good' or 'bad' (Saunders et al., 2009). This focus on the values of the researcher attempts to clarify whether the investigator is attempting to explain, predict or understand the world, as this effects how research is conducted and what the researcher values within their findings (Lee and Lings, 2008). This considers intercultural and moral issues that could arise, and considers how the investigator could conduct research in a socially just, respectful and peaceful manner, to avoid or minimise risk and harm (whether it be psychological, physical, legal, social or other (ARC, 2015)).

3.6   Interviews- rationale for the methodology

Having explored the ontological and epistemological stance, is it deemed necessary to link this to the thesis's design and use of a qualitative methodological approach. Methodologically, the positive paradigm emphasises methods that can provide statistical data to allow for quantitative correlation on large samples to be explored (Chilisa and Kawulich, 2012). Such methods include questionnaires and social surveys. This approach can adopt a deductive logic of enquiry that recognises the importance of hypotheses drawn from theory, and generates conclusions from previously explored constructs (Potter, 2006). Considering the intention of this study is to report and interpret the perception of coaches, players, and parents of what constitutes effectiveness within ASD sport programmes, it is clear that the qualitative perspective is the most suitable methodology. The qualitative perspective undertaken within this approach can apply a more inductive process, where conclusions are found from evidence to "emphasise understanding of human behaviour" (Smith, 2010, p. 10). Various academics (Kaplan and Duchon, 1988; Yilmaz, 2013) have made the assertion that quantitative methods tend to explain what has happened, but not how and why, and this is particularly apt regarding this study, as explored further in the following section.

A constructivist approach to research is based on the belief that the basis for action of humans is in the use of motives, meanings, and understandings (Cleland and Durning, 2015). In order to examine participant's perceptions of sport-based programmes effectively, I deemed it necessary to apply a rationale of an interpretivist philosophy. Due to the fluidity and flexibility of qualitative research, it is suited to understanding the interpretation, meanings, and experiences of participants to help capture pure thoughts and feelings (Jones, 2004). Bryman (2008) recognises that the methods drawn upon in

qualitative methodology consist of interviews and focus groups, which are consistent with this study's philosophy.

Edwards and Holland (2013) identify interviewing as one of the most commonly recognised forms of qualitative research. Previous empirical research in the area under investigation has drawn upon in-depth interviews to gain comprehensive qualitative data from a triad of research participants (Arnell et al., 2018; Payne et al., 2011; Scharoun and Wright et al., 2017; Yessick, 2018). Payne et al. (2011) claim that 'triads' involve three participants that may or may not be familiar with each other, who provide opportunities for the researcher to probe the differing opinions within these small groups and illuminate their various perspectives. Drawing on a multi-perspective lens within this qualitative study provided rich and balanced understanding of ASD in sport from the three primary positions involved: parent, player, and coach (Lisinskiene, 2018). Sivaratnam et al. (2020) explored the perspectives of parent, physiotherapists, and speech pathologists to better understand the link between physical activity and positive psychological and emotional outcomes. This triad of research participants contributed to gaps in knowledge around the applicability of skills learned through community based, disability sport programmes (Sivararnam et al., 2020). Therefore, by qualitatively exploring a multitude of perspectives, research participants developed opportunities for knowledge- sharing, where the clinicians delivered disability- specific information on how coaches and parents could implement certain strategies to help support player development. Considering this, it could be suggested that by employing a triad approach to the study in this thesis, I was better equipped to explore the thoughts and feelings of relevant subjects from multiple angles.

Charmaz (2006) suggests that interviews are created through direct conversation and are appropriate for this purpose given they can provide rich data, as explanation is required rather than description. Recognising that this explanation is expressed in the interviewee's own words, it enabled me to maintain focus on the participant and avoid following their own agenda (DeJonckheere and Vaughn, 2019). Furthermore, Sutton and Austin (2015) acknowledge that interviews allow the researcher to develop a sense of time and history by putting responses into context.

In accordance with Patrick et al.'s (1999) suggestion, semi- structured interviews allow the emergence of significant subjects that may not emerge from a more structured configuration, uncovering insights of knowledge into perspectives and behaviours that may not be evident when responses are restricted. Patrick et al. (1999) also identified that in-depth, semi- structured interviews provide a means to explore how participants themselves view related factors, as opposed to having responses constrained to previously derived categories. Thus, the interview is perceived as a method of creating meaning rather than yielding data (Hiller and DiLuzio, 2004). Typically, within a semi-structured interview, the researcher will be equipped with a list of questions or specific topics to be covered, to which the interviewee will have a great degree of leeway with regards to their response (Given, 2008). Therefore,

rather than attempting to prove or disprove a theory, this questioning allowed me to explore the ways in which participants view and construct their knowledge and social world. Bryman (2008) and Seidman (2006) recognise this is a fundamental principle of the constructivist, interpretive approach to uncovering meaning.

Having discussed interviewing in a broader context, it is now necessary to explore adaptations I made to semi- structured interviews for players with ASD vs parents, vs coaches. Individuals with ASD often experience challenges in recalling specific personal memories (Crane and Goddard, 2008; Goddard et al., 2007; McDonnell et al., 2017). Such difficulties are characterised by over- general recollection, with ASD individuals retrieving fewer of less specific memories, and taking significantly longer to do so. Therefore, I allowed more time for responses when interviewing people with ASD.

A common factor across these contexts is the use of open questions (e.g., "tell me about a time you have felt proud of yourself in training or a match"). This style of questioning elicits more detailed responses, which is particularly appropriate when interviewing individuals with ASD (Norris et al., 2020). However, this style of questioning can be problematic for people with ASD, where performance usually becomes more impeded relative to typically developed individuals (Gaigg and Bowler, 2018). Kenworthy et al.'s (2008) research within this field indicates that this may be due to difficulties with theory of mind, where forming an implicit understanding of the researcher's expectations and executive processing demands are challenged. Therefore, I developed an interview guide for ASD participants that considered task support in the form of cued recall to improve participants ability to recall past events (appendix 1). This method is recommended by Bowler et al (2004) and supports the hypothesis that agrees with more specific and supportive cues, individuals with ASD can recall just as much information as typically developed individuals. Maras et al. (2013) proposes that this support can reduce error reporting and improve the accuracy of information reported. In a study that investigated narrative in ASD, Losh and Gordon (2014) found that ASD participants regularly produced off- topic and irrelevant remarks which departed from the main theme. In line with task support hypothesis, these difficulties were reduced when the interviewer placed more emphasis on task support that suggests provision of cues can help control attention and facilitate memory recall.

Furthermore, I intentionally avoided using metaphors and figures of speech when conducting interviews with players with ASD. Martin and McDonald (2004) and Mitchell et al. (1997) found that people with ASD commonly interpret language in a literal manner, and therefore it was concluded that I should avoid using metaphors and figures of speech as this was thought to have caused confusion and anxiety. Questions that related to players own experiences of participation within sessions were drawn upon. With regards to interviewing parents and coaches, questions focused on perceived impacts of the sessions on ASD participants. For example, "can you tell me of a time when a participant has developed their emotional or psychological state within a session, or over a period of time?".

3.7   Research design

3.7.1   Sampling criteria

Firstly, my objective was to ensure participants fell into one of the following categories: an ASD player registered with the disability club, a parent/guardian, or coach of an ASD team at the club under investigation (Rapley, 2004). Given the impracticalities of exploring every relevant participant from a disability specific club, I deemed it necessary to select a sample. Smith and Sparkes (2019) suggest that there is a limited amount of research on ASD coaching, and by drawing on a range of research participants within a selected programme, my thesis aimed to identify a gap within the field of disability coaching and provide a positive contribution to coaching individuals with ASD. Morse et al. (2002) state that a well-planned approach to sampling can have a significant impact on the quality of a study, given each sample should accurately reflect the desired attributes and qualities of the target population. However, Sargeant (2012) recognised that the sample should also be broad enough to capture the many facets of the phenomenon under investigation. Thus, I identified that the sampling method chosen would be critical for data analysis as my decision regarding who would be sampled would place limits on conclusions that could be drawn upon (Anderson, 2010). Bryman (2008), Leung (2015) and Palinkas et al. (2015) suggest that purposive sampling is conducted when undertaking qualitative research through the method of interview. The primary objective of employing a purposive sample within this study, was to produce a sample that can be logically assumed to be representative of ASD in a community coaching context. This non- probability sampling method involves identifying and selecting individuals that are especially knowledgeable about or experienced with a phenomenon of interest (Cresswell and Plano Clark, 2011). Likewise, qualitative investigations should select their cases purposefully, based on their significance to the research question and ability to offer thorough insight into the study question (Korstjens and Moser, 2017). Thus, the selection of all participants within the study was based on the same non-probability purposive methods alluded to in the majority of qualitative studies exploring physical activity participation in people with ASD (e.g., Akyuz et al., 2016; Duquette et al., 2016). Akyuz et al. (2016) examined the effects of regular sports training in 12 males with ASD, aged between 8-14, who participate in the Integrated Disabled Athlete Support Unit. Their study concluded that purposive sampling was most appropriate as there was a limited number of primary data sources who could contribute to their study, and this method also provided investigators with a justification to make generalisations to the wider ASD population. Participants sought for my study were selected by matching their experience and engagement level against the inclusion criteria. Inclusion and exclusion criteria define who can be included or excluded from a study sample. The inclusion criteria identifies the study population in a consistent, reliable, and objective manner (Meline, 2006). The exclusion criteria include factors and characteristics that make the recruited population ineligible for the study (Meline, 2006). The age range for inclusion within this study for players with ASD began at 16 years, rising to 27, as literature reveals that ASD sport programmes are most effective in teenagers and young

adults (Duquette et al., 2016; Yanaradag et al., 2010). Furthermore, all coaches I selected for the study were required to have significant experience in disability coaching, particularly with ASD participants, in order to reflect upon potential longer-term developments. This selection is required to reflect the philosophy of purposive, or theoretical sampling (Bryman, 2008; Robson, 2002). The manner in which participants of the study were chosen was through the researcher's prior knowledge of, and relationships developed with disability coaches, players, and parents. During the time of conducting the study, I was coaching within the disability club that is being explored, and it is due to this prior knowledge and experience that led to relationships developing with said coaches and players. This non- probability (Miles and Huberman, 1994) sampling technique embodied a term introduced by Bernard (2002, p. 3.) as "the key informant sampling method", where participants possess specific knowledge that enables the researcher to delve deeper.

Qualitative research regularly depends on smaller sample sizes or case studies to provide rich and abstract information, where the researcher acts as the primary data collection mechanism (Polit and Beck, 2010). Polit and Beck (2012) claim that too many research participants may produce superficial or unwieldy volumes of data, however a researcher with a clearly defined research topic, and small numbers of well-selected participants with adequate experience of the phenomenon, are likely to produce highly relevant information for analysis. Further justification on the projects sample size is drawn upon in section 3.12. I then developed a hypothesis following observations from an alternative viewpoint. This methodology could typically be said to apply an indicative approach to reasoning where some form of interpretation was made through observation (Flyvbjerg, 2006; Patton, 2005).

3.7.2 Participant demographics

I recruited two players with ASD for this study, whilst one parent/carer for each participant was also interviewed. Additionally, three coaches were recruited, that Alase (2017) would refer to as having the necessary experience to recognise and explore psychological changes and developments amongst their participants.

Parent/ guardian Number	Disability of participant of interest	Parent/carer	Total number of years the participant (of interest) has been registered with the disability programme
1	ASD	Parent	5 years

2	ASD	Parent	6 years
3	ASD	Parent	8 years

Table 1- Parent/ carer participant information

Coach Number	Sex	Coaching Qualification(s)	Number of years coaching at the disability programme
1	M	FA Level two	2
2	M	FA Level one	3
3	M	FA Level two	6

Table 2- Coach participant information

Player Number	Player age	Sex	Functional level of Autism	Number of years participant has been registered with the programme
1	27	M	Level 1	8
2	18	M	Level 2	2

Table 3- Player participant information

3.7.3   Ethical considerations

Mason (2002) and Robson (2002) recognise any research involving people carries with it a variety of ethical issues concerning protection from consent, harm, deception, right of privacy, withdrawal, and confidentiality of data. This study was conducted in line with ethical guidelines designed by Canterbury Christ Church University (CCCU) Code of Practice for Research. Ethical approval was granted for my study by CCCU Ethics Committee prior to the commencement of data collection (appendix 2).

Initially, eighteen potential participants were contacted via email and invited to partake in my research. The email contained a brief outline of the aims of the research and what was expected of participants. A detailed participant information sheet and informed consent form was also sent as an attachment (appendix 3). Eight coaches and six parents expressed their interest in participating in my research via email; a follow up email was then sent to all potential participants to further explain the purpose of the

study and to arrange a time and venue for the ensuing interview. Consent forms were completed prior to each interview, to satisfy the 'informed' part of the consent process, as per Bryman's (2008) suggestion.

Gaining informed consent from vulnerable people with ASD warranted particular consideration. Jordan (1999) explains whilst people with ASD have the intellectual capacity to give informed consent; some may not understand the full implications of their participation in this research. As such, it was deemed necessary for me to obtain parental consent as well as consent from the player with ASD (appendix 3). If the parent/ guardian showed willing for their vulnerable person to partake in this study, I provided the parent/ guardian with an information sheet that outlined the purpose of the study. Thereafter, the parent/ guardian was asked to read the consent form and sign if they were still willing to allow their vulnerable person to participate.

When conducting research interviews with people with ASD, there is potential for acquiescence (Preece and Jordan, 2010). Some young or vulnerable people could feel obliged to agree to partake, due to either the power imbalance with the adult researcher or because their parents have already given consent (Beresford, 1997). Therefore, in line with similar research conducted by Corti (2000) I drew upon a secondary indicator of consent to help reveal the level of engagement that the ASD participant displayed towards the researcher during a brief, initial meeting. During this meeting, all ASD participants appeared relaxed, as they were in familiar surroundings, with familiar people and thus appeared happy to participate in the study. I asked parents/ guardians to comment on their child's behaviour and eagerness to share experiences with myself, which helped gain a clearer understanding of their willingness to contribute. Both myself and parents/ guardians did not recognise any potential 'danger signs' during this initial meeting. Potential signs included but were not limited to; the ASD participant refusing to speak to the interviewer or attempting to remove themselves from the situation. This occurred once within the interview process, and such behaviour was interpreted as a lack of assent from the ASD participant, and the initial meeting was stopped immediately. Therefore, I did not go ahead with any further arrangements to interview. Furthermore, the vulnerable person (with ASD) had the right to disagree with their parent/ guardian by not giving their consent. This could have been done at any time during the recruitment process or interview and would have been accepted in the form of written and/or verbal communication.

Furthermore, it is necessary to discuss issues of conducting interviews with parents and coaches. The aim of interviewing parents was to illuminate their son or daughters' experiences. Interviewing parents was an ethically delicate process as sensitive information was discussed. I was responsible for ensuring a safe environment during the interviews, in which I created a delicate balance between the needs of the participants, using nonconfrontational techniques that foster equal and neutral but dedicated attention to the subject area. Dickson-Swift et al (2007) suggested that developing rapport with parents when

interviewing on a potentially sensitive topic concerning their son or daughter will enhance the researcher's access to the child's life. Booth (1994) believed that the method to developing good rapport involves giving as well as receiving information in a two-way process between participant and researcher. In the current study, the process of building rapport with parents started with recruitment. In all cases, a phone call or email discussion occurred with the parents before the interview took place, which initiated the building of rapport.

Having explained the nature of the ethical considerations, the subsequent section of the chapter will discuss how the grounded theory method was used to determine the theoretical framework and the structure of my data collection.

3.8   Data collection process

In total, I interviewed two playing participants (with ASD), three parents and three coaches over a two-month period. All participants of the study took part in semi- structured interviews which were conducted at the training facility. I determined this venue as being most convenient for the interview participants. A review of literature by Krieger (2018), which drew upon 5528 studies on supporting and hindering environments for the participation of adolescents with ASD, found that a familiar environment provides security and helps people to connect. Each coach and parent responded to myself by method of either email or phone, where I was able to explain the nature of the study, before they had agreed to participate. Before the interviews commenced, the participants (parents and coaches) read an information sheet related to the study. Parents/guardians of the ASD participants were asked to read a parental consent form to allow their vulnerable person to partake in the study. I reminded them of their right to withdraw at any time, and thereafter they signed a consent form as per Canterbury Christ Church University ethical procedure.

I used a digital tape recorder, and full transcripts of interviews were undertaken. The data was recorded in Microsoft Word files, and then stored on a password protected memory stick. Previously presented in section 3.6, the practise of using interviews allowed the research participants to expand on their own experiences and observations. I drew upon semi- structured interviews which allowed for a standard set of questions to be adapted according to the position of the interview. Qu and Dumay (2011) explored the intermediate space of the semi- structured interview and found that it is capable of disclosing important and often hidden facets of human and organizational behaviour. I found the results of my interviewing technique agreed with Bryman's (2008) claim, that a semi- structured method allows perspectives and themes to emerge, where ideas and participant reflection on the research subject were discussed. Questions asked were established from the central ideas of what constitutes developmental change for ASD participants, focusing on collaboration, communication, and confidence skills. These were perceptual categories, in the same way Butler-Kisber (2010, p. 52) claims that interviewing can be used to study not just the "what, but more importantly the 'how' of life's experiences", interviews

within this study intended to draw out accounts from the view of the coach, parent and ASD players. These three main areas were placed in an interview guide (appendix 1), and dialogue and discussion developed around them. I ensured that the interviewees had the opportunity to address any possible questions, and oftentimes, to further explore a focus area.

The first two sets of interviews were approximately 40 minutes long.

During this time, a more informed theoretical viewpoint and initial coding was developed.

The first set of interviews (player, parent, and coach 1) took place on 27th March 2021. Interviews took 30-50 minutes.

Following careful consideration of data, and after following protocols related to grounded theory, the second set of interviews (player, parent, and coach 2) took place on 10th April 2021.

The final two interviews took place on 7th May 2021. This had to be delayed due to the limited availability of coach 3 due to their professional commitments elsewhere.

The interview process for parents and coaches increased in duration almost every time. This was due to uncovering more evidence supporting psychological benefits of physical activity for people with ASD across multiple areas of functioning: improved communication skills, independence, confidence, self-regulation, and cognitive performance.

Figure 2 provides an overview of the interview schedule

3.9 Grounded theory methodology in data analysis

This section will draw upon GT and its use in the data analysis. Woiceshyn and Daellenbach (2018) state that a deductive approach to a study is one that has developed its findings primarily from existing knowledge and theory. In contrast to this approach, when drawing upon GT, research is conducted with no attempt at using theory to direct the study (Chun Tie et al., 2019). This direction of research underpins the manner in which GT is used to systematically analyse qualitative data. Significant here, is the fact that the data collection, analysis of data, and generation of theory are closely related and build upon the agreement that the data itself will produce the theory (Carmichael and Cunningham, 2017). This method, utilised within this study, sits in opposition to the deductive method that begins with a theoretical model, or hypothesis, which is then applied to the phenomenon under investigation. Strauss and Corbin (1990) support this proposition by claiming that GT is "inductively derived from the study of the phenomenon that it represents" (p. 23). Fundamentally, their proposal states that the theory resulting from a GT approach has been discovered, generated, and developed through the research process itself (Cresswell, 2009). Effectively, GT requires an iterative approach to generating data.

I made an informed decision, based on allowing the stories of coaches, parents and players to surface. In order to not influence the data, no specific theory was drawn upon within the literature, relating to the thoughts of research participants on how physical activity might develop collaboration, communication, and confidence in people with ASD. This stance is recommended by Glaser (1978, p.3) to reflect the researchers desire to "enter the field with as few predetermined beliefs as possible", to better allow the perspective of the research participants to take prominence. That said, there is an element of deductive analysis within this research, due to my pre-determined desire to explore the communication, collaboration, and confidence skills of players with ASD in community sport. This suggests that there is a clear tension in the use of GT within this study, given my pre-existing concepts and experiences of ASD in sport. This concurs with the thoughts of Kelle (2010), who recognised that research could never be totally free from theoretical influence because seeing is already a theory- laden undertaking. In agreement with this, Glaser (2005) suggests that researchers should possess prior knowledge for the purpose of enhancing their theoretical sensitivity around the subject area.

As mentioned above, the initial interview enabled the construction of different questions for the following interview. The coding process within GT allows the researcher a "condensed, abstract view with scope and dimension that encompasses otherwise seemingly disparate phenomena" (Holton, 2007, p.266). This enabled me the opportunity to conceptually categorise and allow for the construction of data. Memoing was drawn upon to help refine the various categories, identify thematic links, establish relationships, and begin to recognise pertinent areas for attention in the discussion session of the study. Essentially, this helped to make connections between codes through a methodical process and structure (Charmaz, 2006). Given this, and considering that GT methodology is associated with allowing theories to emerge in an inductive fashion, it is perhaps unsurprising that memos are considered to be a crucial part of GT (Chun et al., 2019). Appendix 5 provides an example of one such memo which I created after the first interview to help refine my thoughts, which also helped reshape the way in which I approached subsequent interviews.

This use of a memo served to facilitate and enable the empirical data to be utilised as an informant to the conceptualisation process of the data (Miles and Luberman, 1994). Initially, the approach to data analysis within this research was intended to be indicative in nature, where the data would contribute to evolving theory. I was also aware that my pre-existing knowledge and comprehensive literature review on ASD in sport would inevitably inform the data analytical process (Côté et al., 1993). Therefore, a deductive approach to data analysis must also be acknowledged as a process that occurred. During this development, the extent to which the emerging categories and themes found resonance with my pre-existing knowledge and existing literature in the field was constantly evaluated as the data analysis advanced. This has been referred to as an abductive way of knowing by Bourdieu and Wacquant (1992).

Strauss and Corbin (1990) identified three categories of coding: open, axial, and selective. In addition, Charmaz (2006, p. 63) makes a distinction within the coding categories by outlining initial coding: constructed codes, focused coding: a more conceptual categorisation, axial coding: developing coherence through the data, and theoretical coding: developing theories to explain and identify "relationships between categories". This chapter will now discuss the open, focused, and theoretical coding that was undertaken within the interview process. Appendix 6 demonstrates how discussions were interpreted to arrive at the constructed codes from the interview with parent 2. An overview of the process undertaken for the generation of data through GT is then presented.

3.10   Saturation

GT addresses the question of when researchers should stop collecting data (Bryant and Charmaz, 2007). Saturation was described within GT by using the analogy: "like a sponge which can hold no more water" (Bryant and Charmaz, 2007, p. 167). I identified that any additional information gathered through continued research would neither continue to contribute to existing categories or develop newer categories (Bryant and Charmaz, 2007). With regards to the responses and their consistency for this research, the commonalities within the range of coaches, parents and players were made clear during the final two sets of interviews. A critical analysis of this statement would suggest that saturation cannot be proven (Charmaz, 2006), however I identified that further participants within the research study would not have produced any new information. Due to the significant similarities in the experiences and perceptions of the coaches, players, and parents in the link between sport and communication, confidence, and collaborative skills of players with ASD, I agreed that no new interpretations would be likely to develop. Figure 8 is adapted from Bryman (2008), and provides an overview of the process undertaken for the generation of data through GT:

```
┌─────────────────────────────────┐
│ 1. Research area- An investigation │
│    into the perception of coaches, │
│    parents, and players on ASD in  │
│    community sport                 │
└─────────────────────────────────┘
        ↑              ↓
┌─────────────────────────────────┐
│ 2. Theoretical sampling- coaches,  │
│    parents, and players at the     │
│    disability programme            │
└─────────────────────────────────┘
        ↑              ↓
┌─────────────────────────────────┐        ┌──────────────────────────────┐
│ 3. Data Collection                │        │ Concepts e.g., Coaching       │
└─────────────────────────────────┘        │ strategies, barriers to sport, │
        ↑              ↓                     │ developing trust/              │
┌─────────────────────────────────┐        │ relationships, parental        │
│ 4. Open Coding                    │ ─────▶ │ support, role-modelling,       │
└─────────────────────────────────┘        │ long and short-term            │
                       ↓                     │ confidence boost, and social   │
                                             │ camouflaging.                  │
                                             └──────────────────────────────┘
                                                        ↓
┌─────────────────────────────────┐        ┌──────────────────────────────┐
│ 5. Constant Comparison            │ ─────▶ │ Categories/focused             │
└─────────────────────────────────┘        │ coding: Social identity and    │
        ↑              ↓                     │ confidence, sourcing of        │
┌─────────────────────────────────┐        │ confidence, adapting the       │
│ 6. Theoretical coding:            │        │ instruction, collaboration,    │
│    relationships between focused  │        │ and social relationships.      │
│    coding explored                │ ────┐  └──────────────────────────────┘
└─────────────────────────────────┘     │              ↓
        ↑              ↓                  │  ┌──────────────────────────────┐
┌─────────────────────────────────┐     └▶ │ Hypothesis: Empower ASD        │
│ 7. Data Collection                │        │ participants- give players     │
└─────────────────────────────────┘        │ the opportunity to take        │
                       ↓                     │ more responsibility and        │
┌─────────────────────────────────┐        │ engage in prosocial            │
│ 8. Saturation of categories       │ ─────▶ │ behaviour to develop their     │
└─────────────────────────────────┘        │ communication,                 │
                                             │ collaboration, and             │
                                             │ confidence.                    │
                                             └──────────────────────────────┘
```
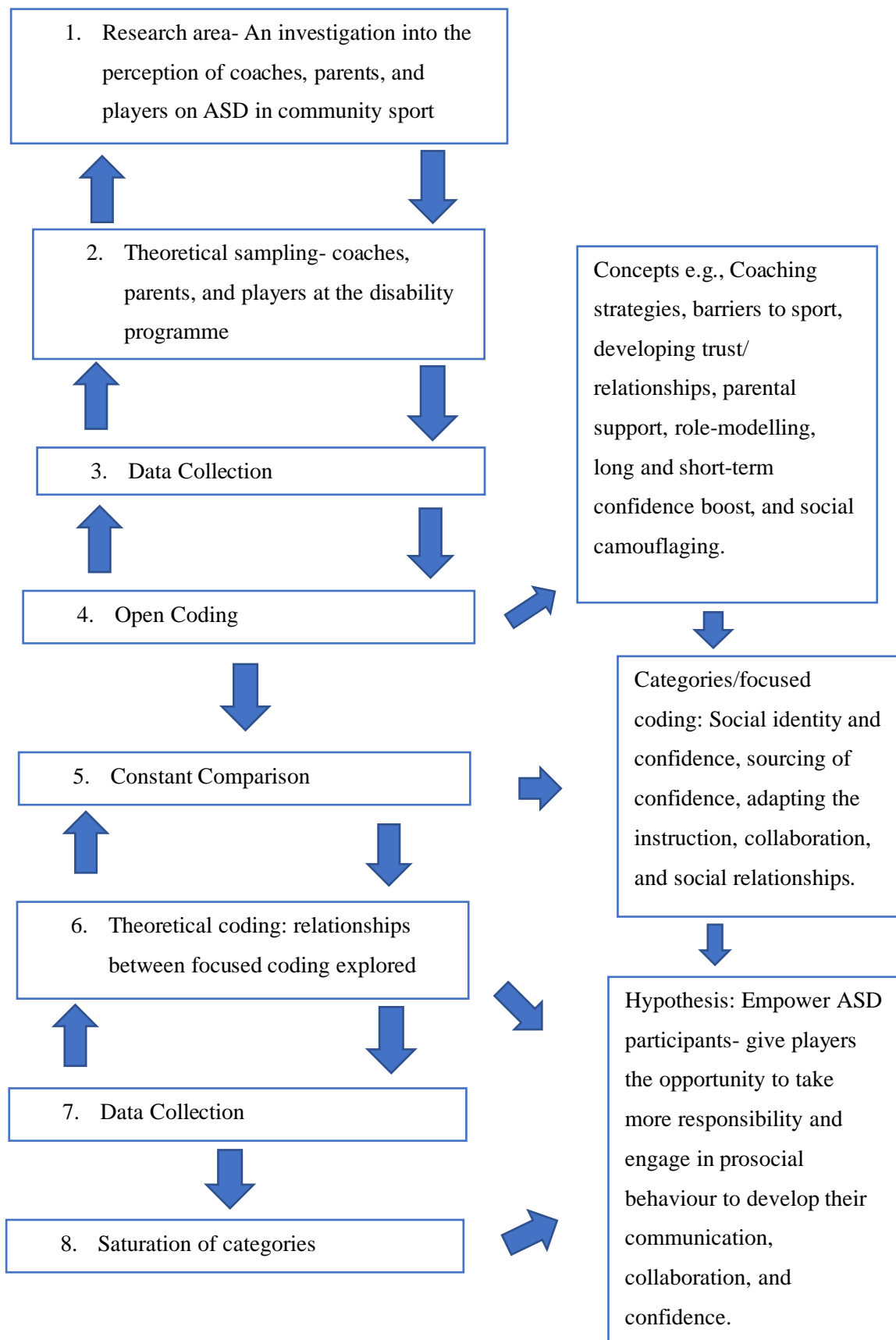
Figure 3- Overview of the data collection process

3.11   Reflexivity

Reflexivity is a process of self-critique by the researcher to examine how their own experiences may have influenced the research process (Dowling, 2006). Thus, reflexivity has been defined as "the constant awareness, assessment, and reassessment by the researcher of their own contribution/ influence/shaping of inter-subjective research and the consequent research findings" (Salzman, 2002, p. 806). This therefore alerts the researcher to the nuances of the research process and promotes understanding of how the process of conducting the research has shaped its outcomes (Patton, 2002).

Hammersley and Atkinson (1995) claim that rather than engaging in futile attempts to eliminate the effects of the researcher, reflexive researchers aim to understand these effects. To ensure a critical self-awareness of my own perspective within this study, I maintained detailed memos during each interview. As per the suggestion of Bryman (2008), I also produced reflective notes on how the interview had progressed, immediately after each interview (Marshall and Rossman, 1999). These notes acted as a reflexive journal by identifying any personal subjectivities or assumptions that could have been unduly biasing the participants. This confessional style of reflection lends a tone of realism to the research, as it makes the reader aware of the complex nature of qualitative interviews, particularly when interviewing people in their natural settings (Fontona and Frey, 1994).

The process of data analysis is clearly linked to my specific theoretical interests, which would have shaped the initial interview guide (Rapley, 2004). A key initial motivator for my study was the opportunity for the research to inform the manager of the community sports programme under investigation, and parents/carers of participants with ASD of the psychological and developmental impacts of physical activity for people with ASD, and specific coaching strategies associated with this. Indeed, Berg and Smith (1985) indicated that a researcher's motivation to initiate a research project often includes fulfilling their professional interests. Therefore, the reflexive process undertaken allowed for any such motivations that may have unintentionally biased the research process to become explicit to myself, as the researcher.

3.12   Judgement criteria

Qualitative researchers tend to employ the terms 'reliability' and 'validity' similarly to that of quantitative researchers (Golafashani, 2003). However, it has been suggested (by Guba and Lincoln, 1994; Whittemore et al., 2001) that as qualitative research is based on entirely different ontological and epistemological assumptions, it should be evaluated according to different criteria. An approach which was found in the work of Lincoln and Guba (1989) proposed the notions of dependability, confirmability, transferability, and credibility. These constitute the trustworthiness criteria that can be used to determine the quality of qualitative research in this study.

3.12.1   Dependability

Lincoln and Guba (1986) claim that 'dependability' is a more appropriate term than reliability concerning qualitative research. Dependability is parallel to the conventional measure of reliability, as it is referring to the stability of data over time (Lincoln and Guba, 1986). Given that I was the primary instrument of data collection, in order for an interview to be a reliable research tool, an experienced and skilled interviewer was required. During my undergraduate degree, I undertook a similar, small scale qualitative study, using semi-structured interviews, which allowed me to develop my interview technique and work on my style of questioning, particularly focusing on effective probing of answers. According to Sparkes and Smith (2010), for a study to be judged as dependable, it must be consistent and accurate. Therefore, I provided detailed descriptions of the research process and the decision making that had occurred in the methodology. This will guide the reader through the research process and make their own judgment on its dependability. This detail allows for other researchers to repeat the same process in a consistent manner, even if the findings would be replicated (Jones, 2015).

3.12.2   Confirmability

Confirmability is closely linked to the dependability of the research process. Confirmability is concerned with establishing that the researcher's interpretations and findings are clearly derived from the data, which requires the researcher to illustrate how conclusions and interpretations have been reached (Nowell et al., 2017). Therefore, perhaps crucial to confirmability, is how the researcher has acknowledged their impact. Thus, it was important to recognise that I fully acknowledged my role in the creation of the data. As noted in section 3.3, *Ontology and Epistemology,* I appreciated my experience of having lived my formative life within a setting not too dissimilar to those where the coaches in this study had worked. Therefore, it was necessary to be aware of how this lived experience might have influenced my attitudes and values relating to emotional and psychological impacts and barriers associated to ASD participants, in a community sport setting. In essence, I recognised the need to acknowledge sympathy with those ASD players and parents that might be considered to be marginalised and disenfranchised. Furthermore, it is important to appreciate the rather long lifespan of the project. As the research was conducted over a 12-month period, I was able to gain a better understanding of the subtleties of the research and the field under investigation. Caruana et al. (2015) identify that longevity of fieldwork is considered to positively influence the 'authenticity' of research. Thus, it is reasonable to agree that whilst this research has truthfully adopted the principles of trustworthiness, it is not totally absent of some subjectivity. Again, similar to the notion of dependability, the researcher's decision-making process is made available for inspection and confirmation by outside reviewers of the study (Guba and Lincoln, 1989).

3.12.3 Transferability

The qualitative notion of transferability is parallel to the quantitative notion of external validity (Sparkes and Smith, 2010). Although external validity allows results to be generalised and expressed with statistical confidence, transferability provides rich description which enables others who may wish to apply the study to situations in which they have an interest (Lincoln and Guba, 1989). I collected the rich descriptions within this study through semi-structured interviews. The contextual nature, flexibility and conversational style offered by this data collection method can be used to provide others with the deep understanding necessary to enable someone interested in making a transfer to reach a conclusion on whether such a transfer may be contemplated as a possibility.

3.12.4 Credibility

It is typically agreed that credibility explains how conventional good practice has been undertaken (Nowell et al., 2017). In a simultaneous manner, confirmation of the researcher's interpretation of the social world they have explored is searched from those within it (Roulston, 2010). During section 3, *Data collection* outlined how contact with parents, players and coaches in this study was made via an initial meeting or email/ telephone contact to explain the scope and nature of the research. This section stated that the research participants had the opportunity to discuss the interviews after they had taken place. This implies that the participants acknowledgment of the representation of their feelings could be considered to have been an accurate and fair portrayal, suggesting that results had a sufficient level of credibility.

Furthermore, credibility relates to how believable the findings and interpretation of a study are (Jones, 2015). To ensure that this study was credible, the data collection methods were chosen to accurately reflect the participant's experiences. For example, semi-structured interviews were used due to the flexible approach that allowed participants to discuss their experiences freely as opposed to being kept to a series of rigid questions. This also enabled me to probe for clarification and elaboration on a particular point. This is supported by Jones (2015) who stated that the most important questions a researcher can use are not the initial questions, but the questions used to follow up the initial response. This allowed participants to freely discuss and reveal in their own words the meaningful experiences that they had at community-based sport programme.

3.12.5 Generalisability

Generalisability is a crucial criterion for evaluating the effectiveness of the results of a study for a broader group of people (Burchett 2020). Therefore, if the results of a study are broadly applicable to many different types of people and situations, the study is said to have good generalisability. In terms of this study, when considering the population, results can be applied to male children and adults with ASD. If looking beyond considerations of population and looking at setting, I may conclude that the

intervention is generalisable to urban settings in high- income countries, where specific disability football sessions are commonly available. In an ideal world, I would have sampled a larger population of people with ASD, with the inclusion of females. This was not feasible; therefore, a single community sport programme was chosen to reflect the whole population.

Chapter 4: Results and Discussion

4.1   Introduction to the chapter

The following chapter will outline and investigate emerging themes following the analysis of semi-structured interviews. Quotes will be utilised to illustrate the views of the research participants, aimed to enable the reader to appreciate the context from which the themes emerged. Emergent themes will be compared to previous research and theoretical frameworks related to ASD in sport. The perception of the coaches, players and parents of the factors influencing communication, collaboration and confidence will be addressed and potential implications for the creation of effective coach behaviour and strategies will be analysed. The following themes and quotes are presented in table 4.

Table 4- Themes, sub- themes, and quotes

Themes	Sub- Themes	Sub- theme examples
Social identity and confidence	Social camouflaging	"I know players with autism that do drink and drugs because they say it hides their autism and makes them feel normal" (Coach 3). "Sometimes parents are in denial, and they encourage their children to hide their autism" (Coach 3). "He tries to mask his autism, something that I don't encourage" (Parent 1). "I feel that it is necessary (to hide my autism) when I am getting to know someone" (Player 2). "In new situations that I'm not really sure about… I will stay quiet" (Player 2).
	Sourcing of confidence-coaching strategies	"Playing on the pitch each week in front of family definitely makes (hidden name) feel proud" (Parent 2). "Representing the club gives him so much confidence" (Parent 2). "I absolutely love playing for Maidstone FC, it makes me feel good you know" (Player 1).

		"This provides a great opportunity for players who perhaps wouldn't usually talk in front of a group" (Coach 1). "I can just be myself at football, everyone knows me. It's easy to make friends here because most people are so nice" (Player 1). "I look to praise wherever possible. I probably overdo it sometimes" (Coach 1). "Because we don't get moaned at or told off, makes it fun, it's nice and relaxed here" (Player 2). "Whenever (hidden name) doubts himself now, I always refer back to his football, and how much he has come on here as an example that he can do it" (Parent 2).
	Long- and short-term confidence boost	"I think that playing here has helped him to keep his confidence up because the playing standard is equal" (Parent 1). "No one would feel a lot worse or better than someone else" (Parent 2). "Football has helped me so much, I wouldn't be the person I am today if it wasn't for my football" (Player 1). "After playing football today, (hidden name) will have more of a bounce" (Parent 3). "I can tell you now that he will be happy to go to the shop on his own because of the confidence he will take from today" (Parent 2). "I know that because I'm good at football, it makes me feel confident" (Player 2). "I can think of at least 10 people right now that have got employment through the club because they have developed their confidence with us" (Coach 3).
		"If an activity is too confusing, and I don't know what to do, I will zone out" (Player 2).

Communication	Receptive and expressive communication	"It has taken me a while to realise that some players just really struggle to communicate how they feel" (Coach 3). "Some players will talk themselves through the session" (Coach 3). "They kind of spell it out to themselves what they are going to do while doing it" (Coach 3). "Sometimes when the coach talks a lot, we find it hard to listen, we just want to play" (Player 1). "When we are doing a drill, I find easier to get if the coach shows us what to do. When the coach explains it, sometimes my head goes" (Player 2). "If they have one ball and five players for example, they all ignore each other, and won't listen when someone asks for the ball, they just shoot on goal" (Coach 2).
	Adapting the instruction	"I try to use the players' names as much as I can, as this helps me to get their attention" (Coach 3). "Using positive phrasing helps to improve their focus and reduce anxiety… so I might say what to do, rather than what not to do" (Coach 2). "Sometimes I don't understand the activity, and this isn't just me, so the coaches put a lot of emphasis on demonstrations. Seeing it is a lot easier for us to understand than the coach just explaining it" (Player 2). "The coaches give warning to the players when they are about to move on to another activity" (Parent 2).
		"When the players are on the pitch, they don't have anyone to communicate for them" (Coach 3). "As football is a team game, they have to get outside their comfort zone and find ways to communicate" (Coach 3). "When they have been playing together for a little while, their understanding of each other improves" (Coach 2).

	Developing communication on the playing field	"Some players understand that others struggle with communication and will often help them to communicate their point" (Coach 2). "(Hidden name) is happy to talk and express himself on the pitch, which he definitely wouldn't do at school" (Parent 1). "Everyone knows each other's names, and we're not afraid to speak up and use them" (Player 1). "At school I never use to speak, here you can't shut me up" (Player 2). "I sometimes ask players to explain an activity to a player that doesn't understand. They get each other, probably better than he would understand me" (Coach 2).
Collaboration and social relationships	Sense of community	"We have players that have been coming for 10 plus years, they really feel part of the club" (Coach 3). "Even though we have five different teams in terms of ability, we are like a big family" (Coach 3). "All the players are from around here, they all support the club, their families do…" (Coach 3). "Us, the parents, the players, and coaches really feel part of the club when we are training there (at the stadium)" (Parent 2). "When I moved to the area, the first thing I wanted to do was to join a football team. Not just to play football, to make friends too. It's helped me settle into this area, and I feel part of this community now" (Player 1). "We watch from the stand, it's chance for us to get to know other parents" (Parent 2). "Some of the players usually help with stewarding for the first games in the afternoon, this builds a sense of community within the club" (Parent 2). "He's contributing to the community, he feels like an important part of the club's family" (Parent 2).

	Conflict resolution/ de-escalation	"There are so many different personalities here, so we do have some clashes that we have to manage" (Coach 1). "Some people get annoyed with each other and it can kick off, I don't get involved though, I stay away from it" (Player 2). "Autism affects everyone differently, and everyone comes from very different backgrounds, so players do have disagreements" (Coach 1). "We are very competitive, and in training sometimes we can lose it, and the coaches need to step in" (Player 1). "I let the players referee and resolve any conflict. This usually works, and I'm there of course" (Coach 3).
	Encouraging empathy on the playing field- emotional and social development	"Players have intentionally pushed an opponent or even teammate out the way to the get the ball… they don't mean to hurt anyone" (Coach 3). "A child might be upset or frustrated, I'll often ask another player to go over to them and see if they are ok" (Coach 2). "I like how at the end of the session the coaches get us to compliment a teammate on something they did good" (Player 2). "We (the coaches) all take a genuine interest in our players, we really care about them. Players start to think, 'oh, maybe I should ask how they are today'"(Coach 2). Where he used to just goal hang to score goals, he will do a bit of everything now to help his team" (Parent 1).

4.2   Theme A: Social identity and confidence

The first theme suggests that ASD is likely to negatively impact an individual's ability to develop a positive social identity, thereby reducing self-confidence (Cooper et al., 2017). Parents within the study recognised that their children face the challenge of maintaining a positive sense of self, due to their involvement in a stigmatized group. With that said, this is being addressed by coaches by using identity management strategies, such as developing a sense of positive distinctiveness within the group.

4.2.1   Social camouflaging as a coping mechanism

Social camouflaging is a process through which individuals mask autism traits (Jorgenson et al., 2020). Wing (1981) first described strategies involved in camouflaging, with motivations being to appear more 'normal' and to 'pass' as neurotypical. Findings within the present study indicate that players unique behaviours and interests meant that they stood out from the crowd during social situations. Coaches and parents identified that the general population perceived this as inappropriate, which encourages players to change their behaviours in order to appear 'normal enough'.

> "He tries to mask his autism, something that I don't encourage. I know he gets frustrated with the way he responds to things sometimes, and the fact that it takes him longer to do certain things. I know that he doesn't want to draw attention to himself" (Parent 1).

Player 2 expressed similar feelings, where their motivation for camouflaging was to increase connections and relationships with others. Camouflaging was drawn on to overcome initial obstacles to allow for social relationships to develop:

> "I feel that it is necessary (to hide my autism) when I am getting to know someone. When they get to know me, I can let my guard down more" (Player 2).

> "In new situations that I'm not really sure about… I will stay quiet" (Player 2).

These finding supports research by Cage and Troxell-Whitman (2019) who found that 70% of autistic adults reported that they consistently camouflage, and this is experienced as an obligation, rather than a choice. Head et al. (2014) found that camouflaging can have benefits for individuals, including a greater ease of maintaining employment, which was found to have economic benefits to society. While this may be true in cases where individuals have gained independence and have become less reliant on the social care system and support networks in place for people with ASD, camouflaging has been reported to have detrimental effects. It has been described by autistic individuals as physically, mentally, and emotionally draining (Baldwin and Costley, 2016; Livingston et al., 2017). Cage and Troxell-Whitman (2019) found that there are gender differences in the reasons for camouflaging. Females appeared to be more motivated to camouflage for functional purposes such as education and employment, whereas males were more inclined to camouflage for relational reasons which serve to ease everyday social interactions and relationships (Cage and Troxwell- Whitman, 2019). Interestingly, Parent 2 drew on the psychological impacts of camouflaging on their child:

> "Depending on who (hidden name) has met with and socialised with, he often comes back exhausted. He's normally on over drive, constantly assessing the situation to make sure he doesn't slip up if you like. It's more of a social thing than anything else" (Parent 2).

This quote indicates that males are more likely to camouflage for relational reasons, in social situations. Attwood (2006) observed the social movements of children with ASD during their free time in secondary school and found that social difficulties of males with ASD are more noticeable in

comparison with autistic females, who were better able to "fit in" with the rest of their classmates (Attwood, 2006). This provides evidence to suggest players with ASD within this study are likely to camouflage their autism to help them manage social situations.

Furthermore, participants within this study highlighted the need for autistic specific social and sporting opportunities, and indicted the benefits of interacting with people that experience similar challenges in maintaining and navigation social relationships:

> "I have noticed when he is playing football, he can be his true self. The standard is equal, everyone has their own struggles so I think they can relate to each other. His quirks come out and it's good to see" (Parent 2).

> "Some teachers I have had at school didn't really listen to me much, they say that we are doing it like this, even when it causes me stress, and that's what it is like, you have to adapt to try and fit in" (Player 1).

This suggests that when participating in disability specific sessions, the act of camouflaging is reduced which helps to enable close relationships to be formed. This gives players a space to experience emotional reciprocity, to express their emotions, exchange ideas, cooperate, and practice interpersonal skills (Cresswell et al., 2019). There is an emerging literature highlighting feelings of ease and comfort with other autistic people (e.g., Calder et al., 2012; Petrina et al., 2016; Sedgewick et al., 2015). A supporting theoretical model termed the 'double- empathy problem' by Milton et al. (2018) has helped researchers analyse how autistic people transfer information with both neurotypical people and other autistic individuals. Crompton and Fletcher-Watson (2019) drew upon this model within their research to find that people with ASD felt better understood by their autistic peers, than their non-autistic classmates. These findings support the hypothesis that autistic people transfer information more efficiently with other autistic people, and therefore experience higher interactional rapport. The findings in this present study suggest that camouflaging is driven by a desire to fit in with a neurotypical social world, and when participating in sport with other autistic people, players are less likely to feel the need to conceal overtly autistic aspects of their behavioural style. Furthermore, players with ASD within this study reported less psychological distress and improved temporary and long- term confidence when camouflaging efforts were removed or reduced.

4.2.2   Long and short-term confidence boost- the link to developing employability skills

The participants in the study indicated that committed engagement in the club is a significant theme in influencing the long and short-term confidence of the players. This is consistent with previous research across a variety of autism sport settings, which has established consistency as crucial to, or even causative of, the development of short and long-term confidence in players with ASD (e.g., Barak et al., 2019; Cei et al., 2017; Hayward et al., 2016).

Player 1 perceived their physical ability and competencies in football and self- confidence as important factors that have affected their willingness to consistently engage with the disability programme over a prolonged period of time:

> "I have been playing for quite a few years now, at first I had problems with understanding some parts of the game, like the offside rule and where to position myself. I stuck with it, and in the past few years I have improved a lot, and I am a lot more confident now compared to a few years ago" (Player 1).

For long- term confidence boosts to be achieved, coaches reported that players and parents become autonomous and take ownership and responsibility for their own, or their child's, psychological development, rather than becoming completely reliant on their coach and/or others:

> "It's up to the players themselves, and their parents, to really take charge of their own development. We give them opportunities to practice their social skills in a safe place, but it's really up to them to stay motivated, come every week and take these opportunities and on top of this, find other opportunities. The players that come every week for a long time, have gone on to employment… and other great things. But I have some that turn up once in a blue moon, and even though they might go to the shop with a bit more of a bounce that day after training, I don't really see any…. any longer-term changes to their lifestyle or confidence" (Coach 2).

The whole sample also implied that players capacity for taking control and ownership of their own psychological development was, to some extent, linked to their motivation for developing themselves as a footballer. Coaches used phrases and words such as 'desire', 'resilience', 'bravery', 'commitment', and 'work ethic' to describe what was essentially the persistence of a player in continuing their participation to promote independence and long- term confidence. These findings are consistent with those of Eime et al. (2013) who associated commitment and motivation as behaviours that were observed when players choose to engage in sport programmes for longer, and continued to participate, rather than 'dropping in and out' of inclusive sport. These findings also corroborate the findings of de Geef et al. (2018) who concluded that longer term sport programmes for people with ASD have positive effects on players executive functions and social outcomes, such as improved self- confidence, and fewer anxious/depressive symptoms.

The coaches in this study claim that self-motivation is an important factor in players reaching their potential in terms of social and psychological development, which agrees with the findings of Arnell et al. (2018). Their conclusion suggests that athletes with ASD perceived enjoyment and meaningfulness as two primary factors that influenced their motivation to maintain interest in an activity or programme (Arnell et al., 2018). This could indicate that both self- determined extrinsic and intrinsic motivations are key ingredients for optimal psychological functioning in players with ASD. Research within the

present study proposed self- determined individuals fully endorse the clause underlying their sport programme, and volitionally engage in the programme. In contrast, non-self-determined extrinsic motivation occurs when the individual feels obligated and pressured to engage in the programme by external (e.g., coach, parent, friend) or internal (e.g., feelings of guilt) factors.

From the responses in this study, it could be implied that self-determined, intrinsically motivated participants are more likely to engage in the programme long-term and will be more likely to benefit from social functioning and psychological benefits discussed. Research participants also highlighted the importance of creating an effective motivational climate if players are to maintain a high level of engagement in the disability programme, and develop their confidence:

> "The coaches constantly praise the players, and I know this helps their motivation. They feel like they are making progress. The coaches recognise my sons progress and will highlight that with him at the end of each week. He is so keen to come back every week and carry on playing and improving" (Parent 3).

It should be noted however, that coaches also recognised that motivation can be innate rather than developmental in nature: "I have had new players just turn up, and they are motivated and confident" (Coach 3). Indeed, limited research has been conducted on the motivational environment and the factors that support the necessary motivation, commitment, and persistence for the effective psychological development of people with ASD in sport (Arnell et al., 2018). Therefore, further research in this area is needed to ascertain the optimal motivational activities within inclusive sport programmes.

Furthermore, data analysis revealed a relationship between an increase in confidence and improved employability skills and opportunities for players:

> "(Hidden name) has been coming for two years. Over that time, he had gained the confidence to apply for a cleaning job. I helped him a little with the application process and told me the next week that he got the job. He was clearly so proud, and I was so proud to see how he has blossomed. He's had the job for 6 months now, and it's going really well, it's so much more than money, it has made him more confident and independent" (Coach 1).

> "I completed my FA level 1, and I am on a football coaching degree at the moment, and I hope to complete my level 2 soon. It has been hard of course because of my disability, but the support I have received has been great, so it is possible to follow your dreams" (Player 1).

This quote supports research by Smirni et al. (2018) who found that playing football in an inclusive environment over a period of time activates a set of 'frontal' and 'fronto- limbic' structures and neuropsychological competences involving attentional maintenance, concentration, working memory, flexibility, problem solving and relevant emotional control. These are key fundamentals associated with employment and life skills among people with ASD. Velti and Roccella (2020) claimed that passing

the ball to others is not simply kicking a ball. Rather, it is a complex activity at a neuropsychological level that requires a diversified "motor vocabulary" (Velti and Roccella, 2020, pg. 1). Coaches agreed that players practice coordinating with each other, and in more advanced phases, become more strategic and elegant, while they also have to manage the presence of teammates and previously perceived stressful situations:

> "Having coached autistic players for a long time now enables me to observe the players under a microscope. These players have all had to adapt to playing in a team. It certainly doesn't come naturally as they really struggle to put themselves in another person's shoes. The players in the Gold team especially, that play at a competitive level, have learnt that to be successful, they have to consider their teammates, and work as a team. This sort of thing doesn't just happen overnight, it's a process that involves time and persistence from everyone involved, and they use these skills in all walks of life… to develop confidence at work or college" (Coach 3).

This narrative again supports existing research by Krustrup et al. (2018, pg. 1), which highlights the idea that "football is medicine" and that it can produce positive confidence and training- induced effects that can increase employability and productivism among people with ASD. The belief that "football is medicine" has been questioned by Vetri and Roccella (2020). They recommend that before proposing a sport programme as a model of rehabilitation, more robust evidence is required to clearly define the optimal protocol of the training programme. Currently, it is difficult to establish an appropriate training regime for people with ASD; the literature gives fragmentary evidence about this point which proposes an inclusive approach, which enabled peers to interact and cooperate with each other, supported by qualified assistants in sessions, could be a good place to start. There are dangers of unquestionably assuming this position that "football is medicine" for people with ASD. Research by O'Connell (2017) found that some parents of children with ASD did not know how to manage their child's anger, upset and frustration when their child lost. This agrees with Ryan et al. (2018) who found that competition in sport is problematic for children with ASD. They found that if competition is used in a positive manner, it can help players to maintain focus and motivation, however, too much competition and pressure is a problem as players were becoming anxious about their performance. Therefore, it may be reasonable to assume that the term, "football is medicine" should be used with great caution, and sport programmes for people with ASD should prioritise enjoyment, learning new skills, socialising, and working together at shared tasks.

In addition, it is important to appreciate who is excluded from the position "football is medicine". Many sports require players to demonstrate a level of coordination. Given that people with ASD experience lowered muscle tone and coordination deficits, participating in football sessions can prove very challenging. Likewise, given that people with ASD tend to experience sensory challenges, it can often result in loud noises, background noises, and bright lights being very difficult to handle, which can lead

4.2.3 Sourcing of confidence- coaching strategies

The evidence collated within this section identifies how coaches within the sport programme work with the players and parents to create a fitting coaching environment to maximise psychological benefits for their participants. During data analysis, the researcher identified that participants responses related to player confidence were in assent with Vealey's (1986) model of self-confidence. Therefore, this model will serve as an organisational framework to elicit meaningful interpretations of the responses from research participants regarding achievement, self- regulation, and social climate. Firstly, coaches indicated that there is a clear link between productive achievement behaviours and increased self-confidence:

> "I found that players are not as confident approaching a task if they are learning a new skill. So, it is up to the coach to take things very slowly, step by step. If they feel like they can perform the skill, they will generally show more resilience" (Coach 3).

This finding provides some support for Eysenck and Calvo's (1992) Processing Efficiency Theory which proposes that a strong sense of confidence is associated with the setting of challenging goals, and the expenditure of maximal effort and persistence of those goals. Therefore, it could be suggested that players who demonstrate competent achievement behaviours are more likely to develop their self-efficacy.

Each coach stated that in order to build players confidence, it is essential to develop a good level of rapport and trust within the group. It was also suggested that activities should be personalised and cooperative rather than competitive in nature as they are more likely to be adhered to if they are enjoyable and meaningful, where players are able to achieve some measure of success:

> "One of the most important things is to coach the players based on their needs, I feel it is up to the coach to identify the individual needs of players. I have some players that struggle with confidence, but as I have a good relationship with their parents, I can talk to them about ways to improve their confidence and reduce anxiety. I have found that visual maps and visual activity schedules help these players to understand the activity and recognise their progress, which improves their confidence and keeps them motivated" (Coach 1).

The quote above suggests that people with ASD respond well to visual supports and cues, which supports Trembath et al.'s (2015) suggestion that sport performance improved when pictures were available as it enhanced player understanding which reduced frustration and increased confidence (Trembath et al., 2015). This implies that the use of visual supports and cues could be an effective tool

for coaches to draw on when delivering instructions. However, Erdodi et al. (2013) has recently cast doubt on the notion that people with ASD respond better to visual cues, on the grounds that they found no benefit of pictures during a delayed recall task. Although Preis (2006) indicated that visually presented information may not directly help to build confidence, it can facilitate their recall of previously learned information. While this may be true in some cases where individuals with ASD have a propensity for visual learning over auditory learning, the benefits may be due to the capacity of this system to provide an efficient and familiar communication mode supporting the development of symbolic communication. Therefore, there needs to be a more sophisticated understanding of the comparative benefits of visual and auditory strategies in people with ASD, and its link to increasing confidence, particularly in the coaching setting.

Interestingly, when discussing visual interventions, coach 3 emphasised the importance of using visuals to structure the environment:

> "The sessions are set up before the players arrive. I normally set up two or three activities, so the players can see what we are going to be doing, so they can prepare themselves for this. When I haven't managed to do this, I can tell that some are a little on edge, and not as relaxed and confident" (Coach 3).

This suggests that structure and predictability creates ordinariness in the coaching environment for players with ASD, providing a sense of stability and assurance. Goodson et al. (2007) identified that during initial teaching phases in ASD PE classes, students are highly dependent on prompt reinforcement, and there is an increased student reliance on adult cues compared to more structured lessons in the classroom. This was recommended to reduce the student's level of confidence and ability to complete the physical task. Therefore, results in this present study indicate that coaching strategies at the disability programme are being used to promote independence, and as such the importance of good planning and preparation should not be underestimated. In addition, each parent identified their child's desire to 'help', or have certain responsibilities, as it was understood to give their children a sense of purpose and increase their confidence:

> "My son is always keen to give the coach a hand packing away or helping the coach with a demonstration. He likes to feel needed and having that sense of responsibility definitely helps his confidence. I have recognised that it's not only him that is happy to help the coach, most of them are very keen to help" (Parent 2).

This finding contradicts a growing body of evidence suggesting individuals with ASD tend to shy away from social responsibilities (e.g., Richman, 2017; Schriber et al., 2015; Wilson et al., 2017). This begs the question, to what extent were the coaches aware of this, and do they intentionally create fitting situations to accommodate and promote such pro- social behaviours? With that in mind, each coach stated the importance of building rapport, before they recognised a change in participants pro- social

behaviour. Coach 2 provided an example of this by describing improvements in players ability to show empathy and take responsibility when he offers praise.

> "I find that praising really helps players to stay motivated and focused. It helps to put them in a positive mindset…. They start to listen more and take more interest in the activity and what's going on around them" (Coach 2).

Minimal empirical evidence (exceptions include Vella et al., 2011) exists on the role of coaches in developing pro- social behaviours in ASD sessions; however, all 3 coaches in this study identified strategies they use to build confidence and rapport. Given that coaches in the present study are not drawing on research within ASD in sport to support their coaching, it could be suggested that they are unknowingly developing the players ability to recognise when they have an opportunity to take responsibility, and demonstrate empathic behaviour:

> "I try to do practices that will encourage the players to plan tactics and come up with a strategy to win. They have to communicate together, and problem solve" (Player 1 when coaching).

> "The players have such a good level of trust and confidence within the group, that they will often recognise when another member of the group isn't quite following the instructions correctly, or struggling with doing a task, like kick ups for example… I have seen players put their own ball down and go over to help someone else" (Coach 2).

Likewise, Coach 2 stressed the importance of providing players with an opportunity to share their thoughts, and any personal achievements with the rest of the group:

> "We have the same little routine, where I start the session off by bringing the players into a circle, they have a chance to talk briefly. I try to get the focus around personal achievements, because not only does that help players confidence, but it helps the other players to recognise their teammates achievements. At first, everyone was quiet, but now they are more comfortable speaking out, they are asking questions, and most of them take a genuine interest. Some players still aren't confident in doing this, so I will take lead and talk with them to the group, for example, I might say "Jack played amazing last week, scoring two goals, today I want you to score three" (Coach 2).

Perhaps crucial to the coaches understanding of their role in equipping the players with the tools to increase their confidence, was the realisation that it was essential for them to be aware of individual autistic behaviours and characteristics to appropriately tailor conditions for players to develop their confidence. This proposal strengthens conclusions made by Muchetti (2013) who suggested that coaches of people with ASD should be aware of the participants individual circumstances, behavioural patterns, and culture itself that they are living within in order to make a positive difference. It could be suggested that Coach 2 understands the core of what the disability club is attempting to achieve. In

effect, each of the coaches and parents explained that much of the success in increasing players confidence came down to allocating time to each player, and the coaches desire to understand their players autism. This is key to building relationships in people with ASD, and once achieved, coaches can allow participants to take incrementally given levels of responsibility during the session itself, which was found to be a reoccurring theme.

Within this section, it was found that the disability programme provides an inclusive environment which places emphasis on ability rather than disability. It may also be concluded that ASD specific sessions aim to establish and reinforce self-confidence by building on natural strengths, interests, and abilities of participants. Nonetheless, given the lack of sport specific literature on ASD in sport, future research might explore or question the moral obligation of various governing bodies in sport to facilitate and support the inclusion of people with ASD in mainstream sessions.

4.3   Communication

Communication deficits are one of the core symptoms of ASD (Paul, 2009). It is evident that people with ASD benefit from intervention that focuses on increasing frequency, form, and function of communicative acts (Parsons et al., 2017). According to Iovannone et al. (2003), when coaching individuals with ASD, it is the coach's role to communicate with players in a manner that makes them acknowledged, valued, and significant. In this second theme it was found that coaches purposefully provided opportunities to raise the level of communication in a natural environment. There is evidence that coaches purposely increase certain useful and meaningful elements into the programme to create more opportunities to enhance participates level of communication. In particular, less coach- directed activities were found to increase players communicative initiation and improve their ability to carry over learned communicatory skills to new settings.

4.3.1   Receptive and expressive communication strategies

Receptive language is based on auditory stimulus, and is often seen to lag behind expressive language, however this could be due to a lack of social reciprocity (Rutter et al., 1992). Parents 1 and 2 discussed how their child tunes out of conversational exchanges, and tend to ignore voices around them, though they do respond to other non- vocal stimuli:

> "When (hidden name) is talking to someone he will often come out with things that might be off topic, or he won't fully listen to the other person, so it's hard for him to hold a proper conversation" (Parent 1).

The difficulties identified here in the players ability to provide an appropriate amount and type of information, and to maintain a balanced, back and forth conversation can be related to presuppositional

skills (Horn and Ward, 2004). Presupposition involves the ability to predict what listeners wish to know, when choosing information to convey in the conversation (Paul et al., 2009).

Furthermore, quotes from coaches recommended the use of various interventions that could support the subset of skills encompassed under the broader domain of receptive communication for individuals with ASD. Coach 2 drew upon auditory discrimination as a strategy to develop players receptive language skills:

> "As a warmup, we might play a game where the children name an animal, and they have to run around and impersonate the noises and movements of that animal" (Coach 2).

The effectiveness of this strategy in developing receptive language in people with ASD has been well documented (e.g., Chesnut et al., 2003; Pelios and Sucharzewski, 2004). In particular, Grow and LeBlanc (2013) provided a set of basic implementation guidelines for coaches to follow when planning activities to develop players receptive language. These strategies included auditory discrimination which was found to decrease the likelihood of encountering common difficulties associated with receptive language development in children with ASD. Interestingly Parent 2 recognised an improvement in their child's ability to understand instructions from the coach (receptive language) when participating in the programme:

> "He seems to understand what he has to do here. I think at school he is more self- absorbed, and he can get lost in his own world. It's credit to his coach, he knows how to communicate with him and most of the other players. They get given hand outs and other ways of doing things that I know really helps him to understand certain drills" (Parent 2).

This implies that coaches use multi-sensory techniques to modify communication between themselves and the players to provide additional avenues to reach players who may not understand mere verbal or visual directions. Rink (2001) recognised that although there is not one particular method of coaching that increases participant learning for people with ASD, modifying communication may allow players to understand instructions more thoroughly. Communication is not a 'one-size-fits-all' tactic when coaching people with ASD and depends on unique characteristic behaviours and other situational variables in the learning environment (Leatherland, 2018).

Active recall was another multi- sensory technique that Coach 3 regarded as an essential method in developing players receptive and expressive communicatory skills:

> "At the beginning of each session, we discuss what the focus was the week before, and the skills they would hopefully have learnt. I try and make sure that the warmup activity will refresh their memory on the topic from the previously learnt skill" (Coach 3).

Active recall is a principle of learning that differs from "regular" passive recall learning methods, which typically includes reading and listening (Cowan, 2008). Active recall in sport for ASD has been researched by Roberts and Joiner (2007) and Gately (2008) and conclusions made suggest that this technique can activate prior knowledge and help individuals create connections with new content. Similarly, O'Connor and Klein (2004) found that active recall improved engagement levels, activity completion, and enhanced individuals' ability to respond appropriately. Therefore, since individuals with ASD tend to focus on irrelevant or inaccurate information, it could be agreed that strategies such as active recall could help clarify relevant details such as previously learnt techniques and game rules.

The description of pragmatic skills that have emerged for this section adds weight to the notion that difficulties in computing others' states of mind in real- time exchanges play an important role in the communicatory deficits of players with ASD.

4.3.2   Adapting the instruction

Having outlined the receptive and expressive communication difficulties experienced by players, and strategies used by coaches to address this perceived deficit, this section will present some of the coaches' descriptions on how they adapt the instructions to optimize the player's experience of sport within the programme. Data analysis reveals that the research participants drew on a number of recurring themes that embraced the necessity for coaches to adapt certain communicative elements within the session, rather than reinventing core coaching principles of a mainstream session. Reid (2003) acknowledges that sport programmes for people with ASD should be "more about adaptation than a special, or different programme" (p.21). Ravet (2018) states "without such adaptations, people with autism can feel adrift in environments that feel unpredictable and chaotic" (p.715). Whilst this has been covered to a degree in section 4.3.1, it is interesting to further explore some of the coaches' methods on how to achieve this.

Coach 2 expressed his philosophy and reasoning for adapting the instruction when delivering sessions to ASD players within the programme:

> "I have found that using positive phrasing helps to improve their focus and reduce anxiety… so I might say what to do, rather than what not to do. They seem to respond well to that, because I think they have always been spoken to in a patronising, telling off way which just doesn't help their motivation. It's about trying to teach players how to think, but not what to think" (Coach 2).

Positive phrasing can play a significant role in making people with ASD more conscious, engaged, and committed to their tasks (Huang et al., 2017). Within the realm of community sports coaching, a growing body of research has provided evidence for the influential role of positive phrasing on perceptions of competence, enjoyment, and intrinsic motivation (Nicaise et al., 2006; Reinboth etl al.,

2004). In particular, Reinboth et al. (2004) found that positive phrasing promoted players sense of competence, encouraged players to problem solve, and develop a strategy in their own way. These findings are consistent with the thoughts of coach 3 (illustrated in the quote above), who emphasised players need for autonomy that could be developed by coaches adapting their communication style to give players choices and options. While this belief could be present among coaches, the comments of Parent 2 disagrees the idea that instructions should be adapted to encourage self-regulation for players with ASD. Alternatively, a harsh discipline approach was recommended:

> "You have to be pretty straight with them. When I used to help coach, they would know who was in charge. I think that instructions have to be super clear... if you give them a choice, they will take advantage and push the boundaries... I'd say, "today we are doing this, and this is how it's going to be done" (Parent 2).

It must be acknowledged that parent 2 is not FA qualified, and therefore we need to be cautious about these findings. However, it may not simply be a case of the qualification being the difference here. McCullick et al. (2005) indicate that although coaching strategies can be effectively modelled by educators and tutors, coaches develop a method based on their own attitudes, beliefs, and cultural perspective.

Findings also indicate that the coaches have adapted their coaching style when delivering instructions to the group, in order to maintain an appropriate distance:

> "I quickly found that out that the players don't like you up close and personal, and they don't like me looking down over them, so I have adapted... I won't coach standing up, I'll sit down, and we'll all give each other space, that seems to work well" (Coach 2).

This quote implies that coach 2 recognises that personal space is important for establishing effective communication. This finding is supported by research from Perry et al. (2015) who identified a relationship between preferred interpersonal distance and a reduction in social anxiety experienced by people with ASD. This was posited not only from a coaching perspective but also from a parent and player perception:

> "The coaches recognise that the players need their personal space. My son won't make eye contact if you are too close, the coaches normally keep a short distance away, and that helps them to make eye contact" (Parent 2).

This finding agrees with conclusions made by Kleinke (1986) and Asada (2016) who found that individuals with ASD make less eye contact and are less engaged when they are closer together than at a distance. While it may be overly simplistic to suggest that the presence of others at a close distance can cause heightened tension for people with ASD, it is clear from the data that the coach's ability to

recognise this and develop a strategy for positioning can help convey the spoken message, so that players are better able to comprehend the instruction.

Similarly, player 2 discussed the impact of the coaches positioning when delivering demonstrations:

> "Quite often I can't even see the demonstration. It might be like over the other side of the pitch, or other people sometimes get in my way. Then I don't know what I'm doing, and I panic" (Player 2).

It could be suggested that the positioning of the coach when delivering demonstrational and verbal instructions is a crucial part of conveying information to the players. The primary reason for using a demonstration is to provide the players with a visual template or criterion model for the desired movement pattern (Hodges and Franks, 2002). The comments of player 2 support the hypothesis that coaches should consider their positioning, and the positioning of the players. Jones and Potrac (2008) propose that the coach should always be central to the group of players when performing a demonstration, and consider potential distracting factors, such as sun light, traffic, and other sessions in the same vicinity.

Likewise, three research participants discussed the effectiveness of demonstrational- based learning, with each participant suggesting that demonstrations have a powerful influence on developing players understanding if executed effectively:

> "Sometimes I don't understand the activity when they just explain it, and this isn't just me. I think the coaches have realised this and they are starting to put more emphasis on demonstrations. Seeing it is a lot easier for us to understand than the coach just explaining it" (Player 2).

> "I find that when I am playing, too much information can confuse things, so when I am coaching I try to keep things simple. I always explain the activity and sometimes the players have blank faces, so I walk through the activity so they can see this as well" (Player 1 when coaching).

This implies that demonstrations serve to enhance the memorial representation of the required sequence. This theme concurs with research by Martens et al. (1976) and Kohl and Shea (1992) who found that individuals with ASD may be predisposed to focus attention onto the mechanics of the movement, thus hindering acquisition. Therefore, it is recommended by Hodges and Franks (2002) that the amount of explicit verbal instructions should be kept to a minimum, and demonstrations should be considered as the primary learning strategy. Interestingly, coach 3 discussed their strategy for conducting a demonstration:

> "I don't normally talk through the demonstration because it's easy to overload them with information, but instead I'll emphasise the key parts" (Coach 3).

This suggests that absorbing both verbal and visual instructions simultaneously can exceed one's cognitive processing capacity. Janca (2019, p.1) describes how an autistic brain can "shut down like an overloaded computer" if loaded with too much information. This understanding is consistent with research by Oliveras- Rentas et al. (2012) and Lerner et al. (2013) who found a link between slower processing speeds and impaired measures of social cognition when two or more information styles were presented to students with ASD. In addition, Faja et al. (2009) identified slower processing speeds and reduced retention levels in adults with ASD, compared to neurotypical adults. Interestingly, a range of studies (e.g., Lerner et al., 2013; Russo-Ponsaran et al., 2015; Worhsam et al., 2014) found that processing abilities were associated with poor communication and reciprocal skills in individuals with ASD. Given that Coach 3 has identified difficulties in the players ability to process two forms of information simultaneously, there is evidence to suggest coaches are adapting their delivery to meet the demands of players with ASD, and therefore engaging in excellent coaching practice.

4.3.3   Developing communication on the playing field

Thus far, this chapter has discussed creative methods in which coaches draw on to adapt their sessions to maximise the inclusive and quality components of their delivery. This part of the chapter will present some of the research participant's perceptions on the effectiveness of these approaches on the playing field.

Parent 2 explained that the sport programme under investigation serves as a training ground for the players, not just for honing their physical skills, but also for developing their communication skills:

> "Their communication skills are really tested when they are on the pitch. I personally just offer my encouragement from the side-line, so I won't support (hidden name) in helping to communicate. This is his time to do things by himself, and actually he does well" (Parent 2).

This quote supports the view that inclusive sport programmes can provide a 'safe space' for players with ASD to practice their communication skills, unsupported. Martin (2018) and Fitzgerald (2009) found that participation in regular team sports within a community-based programme encourages players to take more responsibility in finding ways to communicate within their team, both verbally and non-verbally in pursuit of a shared goal. However, Attwood (2007) and Pan (2009) have opposed this suggestion by implying that people with ASD disregard themselves as team members and feel misunderstood when given the opportunity to communicate in such an environment. Pan (2009) proposes that people with ASD find it difficult to work at the same pace and in the same strategic manner as their teammates. While this may be true in cases where people with ASD are participating in mainstream sessions, quotes illustrated within the present study suggest that within the disability programme under investigation, players are more inclined to engage in communicatory behaviour.

There was a general agreement among the coaches to support the idea that the disability programme provides players with an opportunity to independently develop communicative traits and strategies:

"When they step over that line, they are independent for an hour or so. They don't have anyone to speak for them and that can be tricky for some players at first, but their quirky personality traits quickly shine through. I think we need to be sensitive and understand the idea that people with autism have got their own unique ways of communicating and doing things, that I think we must encourage" (Coach 3).

The above quote is illustrative of the role that sport can play and in particular coaches, in creating an appropriate environment for players to practice and develop their communication. Coach 3's comments on 'being sensitive' are in alignment with the recommendations of Bishton and Lindsay (2011) who claim that coaches must develop a degree sensitivity and consider theoretical perspectives that allow the voices of people with ASD to be accentuated. It could be hypothesised that ASD sport programmes should place importance on developing coaches' behavioural characteristics to ensure they are well prepared to provide players with an opportunity to acquire and improve their communicatory skills, while enhancing the inclusive value of the programme. Interestingly, player 2 commented on how he has struggled in communicative and relational areas before playing sport:

"I used to get so frustrated, and I used to find it hard to listen to other people in my team… I didn't want to know… it was my way or nothing. Having played for a while now, competitively… I have realised that it's a team game and I really try to listen to other people in my team, encourage them as much as I can. If playing football has taught me anything, it would be the importance of listening, and just talking in your team so that everyone is on the same page" (Player 2).

In this instance, player 2 is commenting on how he had previously struggled with deficits in the linguistic, reciprocity and communicative areas. Clearly, there is evidence to suggest that playing sport has allowed for favouring and supportive relational and communicative benefits, that, as have been mentioned previously, show themselves as deficiencies in subjects with ASD. The comments of player 2 could also lead us to believe that communication is a dynamic process of mutual sharing of goals and perspectives, where sport is being used to develop players ability to connect and grow in an autonomous perspective and enrich the quality of relationships that may be used in different contexts of life. This viewpoint is consistent with the findings of a qualitative study conducted by Jones and Lavelle (2009) who found that communication skills can be learned in an organised sport environment, and then transferred to another lifelong area. Parallel to this finding, coach 1 emphasised the importance and positive effects of delivering a well- designed programme, built on varied sport- related games to encourage players to engage in self-discovery, where they have opportunities to find solutions to problematic situations:

"I try to make drills interesting, where the players have to ask question to complete the activity. In a simple passing or shooting drill, it might be completely silent, and I don't like that, I'd

rather them be speaking to each other. So, getting them to think on their feet, be curious, and ask lots of questions gives the session a better feel. They might ask, "can I tackle in the safe area", or "can we have more than one person in that area?" (Coach 1).

The coaches' assertion that 'being curious', and 'asking questions' are important factors in developing communication is in accordance with the work of Tepekoylu et al. (2015), on the impact of sport-related games on players communication skills. They suggest that coaches should aim to develop imaginative and adaptable activities, rather than merely classical drills. The comments of parent 3 could represent a degree of success in what coach 1 is trying to achieve:

> "He's never really asked questions at school and college… his teachers have always commented on that… there have been cases where he has been misunderstood, which is so frustrating for him, and that's sometimes come out in the wrong way. I watch him here and he's like a different person, he's constantly speaking, asking questions, he's curious, he wants to learn and do well with his football, and he is very happy to properly engage" (Parent 3).

This finding suggests that communication patterns could be related to issues with behaviour. Korkut (2004) found that miscommunication and an incapability to express oneself will invariably lead to loneliness and unhappiness, as well as psychological and emotional problems. Similarly, Dumas et al. (1994) and Gordis et al. (2005) found that children who struggle to build up effective and proper communication experience increased levels of aggression and frustration where conflicts were routine. The comments from the research participants within this section imply that the disability programme under investigation has proven to be an excellent means for expressing and communicating the characteristics of players with ASD. It may be reasonable to suggest that a fundamental feature that the disability programme brings to players with ASD is to enhance their knowledge and autonomy. Coaches are attempting to create unique and tailored opportunities to develop communicatory skills necessary to practice a range of activities, so that players are better equipped to participate in sport and community life.

4.4 Collaboration and social relationships

The findings within this section reveal that players in the programme benefit from developing a range of personal and social skills such as peer relationship skills, prosocial behaviours, conflict resolution and de-escalation, and personal and social responsibility skills. Furthermore, this section will provide evidence to indicate that enhancing such collaboratory skills, not only improves players engagement and commitment levels to the programme, but they will also be more likely to make a successful transition to adult life. Within this theme, it was apparent the disability sport programme provides a suitable setting for developing and transferring these skills to other domains in life.

4.4.1 Sense of community

A sense of community (SOC) refers to characteristics that lead to members feeling a sense of belonging, attachment, and shared interest in common goals and values (Warner and Dixon, 2011). Quotes within the current study suggest that peers and social connections were often the catalyst for participation and engagement. When research participants were asked about the venue and culture within the programme, they all expressed positive views that were associated with safety, belonging and attachment:

> "We have players that have been coming for 10 plus years, they feel at home here… they feel part of the club. All the coaches get what it means for the players... even though we have 5 different teams in terms of ability, we are like a big family, there's a real sense of community. All the players are from around here, they all support the club, now they are playing for the disability club on the pitch!" (Coach 3).

> "When I moved to the area, the first thing I wanted to do was to join a football team. Not just to play football, to make friends too. It's helped me settle into this area, and I feel part of this community now" (Player 1).

Despite the prominence of SOC in inclusive sport, few studies have provided meaningful insights into the mechanisms that improve the SOC within a disability sport programme (Warner and Dixon, 2011). The comments from coach 3 suggest that SOC is concerned with the community characteristics that lead to players, coaches and parents feeling a sense of belonging which can be experienced at various levels (geographical region, specific teams, whole club). A theme that emerged from the data as a contributor to SOC was the importance of having a common area to train and play in. Interestingly, the club's stadium was the most mentioned place that helped to develop SOC for everyone involved in the club:

> "The stadium isn't just somewhere they play football. We all feel part of the club when we are training there. We watch from the stand, it's chance for us to get to know other parents. After we've trained on the pitch in the morning, some of the players usually help with stewarding for the first games in the afternoon, this builds a sense of community within the club" (Parent 2).

These findings demonstrate a strong sense of community both within the disability department, and the clubs first team. The stadium has perhaps become more than a setting for just playing football, it has become a setting that enables people to connect with one another and experience social bonding. Rowles (1983, cited in Chaudhury, 2008) refers to this bonding as "social insideness" (p.13) where people experience the feeling of being a fundamental part of the community through social exchanges and relationships. Manzo (2005) agrees that a venue or place can become meaningful for the social opportunities one finds there. This conclusion also aligns with the comments of Taylor et al. (2015) who suggest that these social aspects of a venue provide the experience of positive social bonding, and

this is what the participants build an attachment to. Gustafson (2001) indicates that places become meaningful because of the relationship created between self and others at the venue. Therefore, it could be suggested that the stadium is central to creating and developing social relationships within the disability department and wider community.

Furthermore, quotes suggested that leadership opportunities and social spaces are an important attribute in creating SOC among players in this study. Engaging in volunteerism on match days at the stadium was identified by coaches and supported by parents to help players with ASD become less dependent on their parents, better able to make independent decisions, and be better prepared to face social and relational challenges:

> "He loves his stewarding at the stadium after training. It gives him that real sense of purpose, and he's developing his social skills all the time as he has to talk and interact with people. He's contributing to the club and the community, he feels like an important part of the club's family" (Parent 2).

The metaphor of the word 'family' that is used in this quote illustrates a highly symbolic place and suitably describes parent 2's perception of their child's experience of stability, belonging, and connection within the club. This finding is supported by the comments of McMillan and Chavis (1986) who stated that feelings of membership or belongingness to a group are key components relating to a SOC. Likewise, Schriber (2014) suggests that belonging to a community provides people with ASD a strong emotional sense of support and identity, where people find their own niches and places that provide an important sense of social connectedness and belonging. Relph (1976) suggested that one feels like an insider when one has a deep experience with a place or venue, rather than a place that is purely considered to be the background or setting for activities. This demonstrates that the interaction within players, parents and coaches constructs a strong emotional attachment to the playing venue and wider community, in this case, the stadium and the wider fan base of the club.

This section demonstrates that community features within the disability programme are being designed and managed to create a SOC and enhance participant experience. It is worth noting that player 1 defined their sense of belonging in terms of their team and not necessarily in terms of the disability programme as a whole. While it may be suggested that this is problematic and could lead to teams becoming isolated from the other teams within programme, it may be proposed that players have an opportunity to create different points of attachment that could be formed as a result of the membership and boundaries of a smaller, more closely acquainted group.

4.4.2 Conflict resolution/ de-escalation

Community sport programmes can be a powerful tool for uniting people, developing tolerance, respect, and social inclusion (Porter, 2001). Porter (2001) proposes that these are key values in supporting

peacebuilding and conflict resolution processes. The evidence collated within this section identifies how the players started to work with the coaches and parents to create an atmosphere where players can come together and work towards the same goal, and show respect to one another, by adopting key competitive sporting values. These values include teamwork, discipline, fairness, and respect for the opponent. Coach 1 drew on various examples where players have explicitly worked in a conflict-resolving manner, where football and competition had been perceived as a bridge- building activity and an alternative to violence:

> "There are so many different personalities here, so we do have some clashes that we have to manage. Autism affects everyone in different ways, and everyone comes from very different backgrounds, so players do have disagreements. But I don't mind that, because we (the coaches) encourage players to learn how to solve these disagreements through playing football" (Coach 1).

Indeed, all of the coaches and parents explained to some extent how the programme is currently being used as an effective tool to aid conflict resolution because of its cross- cultural nature, and unique way of breaking social barriers. In particular, coach 3 described how they use situations of conflict that naturally arise from these interactions to find innovative ways to solve disagreements:

> "During the match at the end, I don't really referee the game, I let the players referee it. I'm there if things get a little out of control, and to help them resolve any issues they have" (Coach 3).

According to Cardenas (2013), football matches without referees can be used to encourage players to negotiate the rules of the game as presented by the Football for Peace Methodology. However, Cardenas (2013) also proposes that using sport for conflict resolution is a relatively new social intervention strategy and an emerging interdisciplinary research field. As such, academics (Borsani 2009 and Lea-Howarth, 2006) have stressed the lack of research analysing the interplay between sport and peace from a perspective of conflict resolution studies. Borsani (2009) and Lea-Howarth (2006) made use of conflict resolution approaches from which future research can develop a more systematic interpretation of the use of sport as a social catalyst. Therefore, this chapter will now focus on Galtung's (1998) 3Rs approach (reconstruction, reconciliation, and resolution) to illustrate some of the ways in which the sport programme may support conflict resolution initiatives. Parent 2 provided an insight into how the local council had played a central role in rebuilding the structure of the disability programme by providing a new venue for after their original venue became unavailable to use due to COVID-19 restrictions:

> "When we got told that we weren't allowed to use the clubs football ground to train and play, we had to find another venue. The local council and the Kent FA helped us find somewhere, free of charge. Without this we wouldn't be playing now" (Parent 2).

This implies that local council and FA helped to rearrange the venue for the sport programme in a region greatly affected by the COVID-19 pandemic. It could be agreed that this gave players opportunities to re-build relationships with teammates and coaches that they had not seen for one year, and thereby enhance social inclusion (Kuvalsund, 2005). Lea-Howarth (2006) suggests that in terms of reintegration into society, sport programmes can serve as hooks, which engage people in team sports where players are likely to foster a sense of identity and belonging. This is used as a conflict resolution method not only within the UK to address societal matters, but also worldwide to address cultural and democratic issues and disagreements.

Furthermore, the reconciliation stage (by Galtung, 1998) aims to rebuild relationships between individuals or a group of people that previously had disagreements and conflict. Comments from the research participants suggest that sport can contribute to building a more positive environment by supporting players to regain a sense of security and normality, thus facilitating reconciliation between opposing parties. Player 1 drew upon instances in which the sport programme had contributed to conflict resolution and reconciliation through communal activities and individual development:

> "There used to be a big rivalry between us, and other disability teams close to here. When we used to play league games, they were pretty horrible, there would sometimes be little scraps. Since we have been playing in the same southeast disability team, we have all been playing and training together, so we have got to know them, and they are just like us I guess" (Player 2).

This finding suggests that creating inclusive, regional football teams provides players with an opportunity to interact with members of other neighbouring communities. This method of reconciliation has been described by Cardenas (2013) to be a low cost- method for people to socialise and strengthen community ties. This is similar to the findings of Brosnan (2020) who examined 323 local authorities in England between 2012 and 2015 to assess whether mainstream and disability sport programmes influence levels of conflict resolution/ de-escalation, and crime rate. Results showed that engagement in sport programmes can lead to players being better prepared to deal with and even avoid potential conflict situations in everyday life. This observation is also aligned with another element of the concept flow in that reconciliation can also take place through individual development:

> "We look to develop their life skills, not just football skills. We can't work miracles, but we use the power of football to teach problem-solving, decision-making skills. Being more well-rounded thinkers will help them just to get on better in life. (Hidden name) never used to like trying new things or speaking to new people… he was very much one dimensional and struggled to make friends and often got frustrated and had issues with other players. He has developed so much in this sense since playing football, he's better able to socialise and he hardly ever has issues with other players" (Coach 2).

The quote above suggests that the sport programme is being used to teach players about peaceful coexistence and resolution conflicts (Sugden, 2008). Interestingly, coach 2 has introduced 'teachable moments' within the session, by encouraging players to learn how to solve disputes in a productive way. This section demonstrates that sport can address many of the factors included in conflict resolution and de-escalation processes, however, Lea-Howarth (2006) implies that it is by no means a comprehensive and holistic peace building strategy. As such, it may be suggested that sport alone should not be propagated as a means to cure conflict situations. With this in mind, Cardenas (2013) proposes that inclusive sport programmes should be considered as a complex multidimensional process to attempt to create togetherness among people from different social, cultural, and educational backgrounds.

4.4.3   Encouraging empathy on the playing field- emotional and social development

Both parents and coaches commented on the role of sport in developing players ability to understand and respond to another person's feeling. It was suggested that coaches play a key role in creating a sporting environment that can help players not only develop their mental and physical prowess, but help players to learn how to live compassionately and constructively within their larger communities:

> "Most of the players struggle with empathy. Players have intentionally pushed an opponent or even teammate out the way to the get the ball… they don't mean to hurt anyone. When we challenge them, they will just say they wanted the ball. They can't see what the problem is. I ask the player to think about what could have happened if the other person had fallen and been hurt, or I might bring up an incidence where that person had been pushed, fell, and went off upset" (Coach 3).

One potential coaching strategy recommended by Gano-Overway (2013) in this instance, could be to encourage the player to think about tactical skills learned to possess the ball legally. Reminding the player that reaching their true potential as a football player would mean perfecting these skills, and could help the player to become more empathic, and reduce the potential of harm within the session. In doing so, players could begin to understand that intentionally pushing another player is not an appropriate way to achieve the intending goal of possessing the ball. This recommendation is supported by Hughes et al. (2011) who found that when coaches of players with ASD restated the goals of the instruction, old behaviour habits were replaced with new, positive behaviour that started to become automatic.

Findings from this study imply that helping the players learn empathy requires coaches to provide opportunities for the players to practice care and empathy:

> "A child might be upset, I'll often ask another player to go over to them and see if they are ok. This doesn't always work, but it gets them to think about the feelings of others… it's a strategy

I use, and it works well in terms of helping them to improve relationships and friendships"
(Coach 2).

This indicates the importance of encouraging players to engage in empathic practices, which Noddings (2002) suggested is achieved by nurturing prosocial behaviours in people with ASD. It appears that the disability programme encourages players to take responsibility and contribute within their community by undertaking activities such as litter picking, packing away, and checking on teammates when upset.

Furthermore, coach 2 expressed their methods for developing players empathy by nurturing and leading by example, which encourages them to emphasise:

"We (the coaches) all take a genuine interest in our players, we really care about them. Players learn from this over time, they start to think, "oh maybe I should ask how they are today"" (Coach 2).

The coaches clearly have a variety of mechanisms for helping players to practice empathy, whether that be through encouraging prosocial behaviours, or producing opportunities to share positive feedback and praise others. The comments of player 2 suggest that it is in these experiences that players learn the importance of listening, supporting and respecting others. In addition, the quote above from coach 2 supports the findings from Shuttle (1993), who suggested that people with ASD learn empathy by observing others. However, Noddings (2002) noted that coaches must be careful not to focus on overemphasizing empathy, as this can provide a diminished sense of what it means to display empathy. Thus, it may be agreed that empathy from coaches should be a model of natural caring. Metz and Gaie (2010) concur that a distinguishing element of empathy is the idea that people enter a community with others and seek to live in harmony with others, while working to achieve a common goal. This aligns with the comments of parent 1 who's comments suggest that inclusive football provides a good learning ground for encouraging players to recognise the importance of collective efforts towards achieving common goals, as well as learning their responsibilities in achieving the team success:

"When (hidden name) first joined the club, he used to get frustrated when his teammates lost the ball, all he wanted was for his teammates to pass him the ball, and he wanted to score. He's played for a while now, he's learnt that for his team to have a good chance of winning, you've all got to do your bit. I know he still sometimes gets frustrated with other players, but he can hide it better. Where he used to just goal hang to score goals, he will do a bit of everything now to help his team" (Parent 1).

This quote aligns with Baron-Cohen's (2002) hypothesis, suggesting that people with ASD have an impaired "theory of mind", which impacts one's ability to attribute subjective mental states to self and others. Given that the child of parent 1 experienced difficulty in their social cognitive skills by being unable to exercise empathic behaviour, meant he struggled to support his team effectively in

accomplishing a common goal. Also, it was stated that the player got frustrated by the level of play from his teammates. This was found to be a common theme in Caldeira's (2016) research which explored identity and stigma for participants with ASD in the Special Olympics.

From the results presented within this section, there is evidence to suggest that the nature of sport makes it an effective vehicle to support young people with ASD to develop into more emotionally competent individuals who come to understand the values and principles of participating in a team. Coaches and parents suggested that sport alone will not guarantee such transformation; rather, parents identified the need for longevity, while coaches recognised the need to establish a climate where empathy can be practiced for this to occur.

4.5   Limitations

There are some limitations to acknowledge in this research. The views expressed were individual perceptions of people involved in the disability programme, and therefore, opinions may have been biased; particularly coaches, who have a personal interest to improve the club's reputation. Due to COVID-19 restrictions, two interviews were conducted over the phone. According to the findings of Block and Erskina (2012), telephone interviews are reliable versus face-to-face interviews. Furthermore, underrepresentation of female ASD players within this study caused the findings to be male biased. This aligns with the high male to female ratio in autism (Milner, 2019). That said, a greater understanding of the experiences of females with ASD is required to improved awareness and support for female community sport programmes.

In addition, whilst care was undertaken concerning the study's methodological rigorousness, it is worth noting that the data was derived from just 8 research participants, and indeed just one disability sport programme. Therefore, results may not be generalisable to other geographical areas, and whilst these findings might be beneficial in offering a way of understanding effective coaching in sport intervention settings for players with ASD, it would be useful to develop this research further. In particular, the use of a broader quantitative study might go further than capturing the 'voices' of coaches, players and parents as this study sought to achieve. This meaningful data could be extended, and potentially reinforced by engaging with greater numbers through a quantitative study, where the effectiveness of certain coaching interventions and strategies are analysed.

4.6   Conclusion

This chapter investigated the emergent themes from the findings of this study related to existing research and relevant theoretical frameworks associated with autism in sport. Quotes were used to illustrate the perceptions of the parents, coaches, and players on the impacts of sport on players with ASD. A common theme repeats throughout: ASD signifies a spectrum of abilities, needs and preferences, and

thus necessitates a range of possibilities with regard to sport. The following chapter will conclude findings, and the potential implications of this study for further research exploring the social and emotional impacts of sport programmes for participants with ASD.

<div align="center">**Chapter 5: Conclusion**</div>

5.1   Introduction to the chapter

This closing chapter will focus on the key findings of the study, revisiting the initial premise of the thesis and research methodology employed. The impact of sport for players with ASD at the disability programme are summarised with potential directions for future research, and recommendations for future practice. Finally, the chapter will conclude the thesis itself.

5.2   Initial question

The purpose of this thesis was to investigate the perception of coaches, parents, and players on the effectiveness of sport intervention programmes for participants with ASD, focusing on communication, confidence, and collaboration. Furthermore, the aim of this study was to address the issue that little is known about the relationship between physical activity and psychological skills in people with ASD. Additionally, the coaches and parents explained their roles and what might constitute effectiveness within the sport programme. Likewise, interviewing players with ASD provided unique opportunity for the researcher to gain an understanding of the players subjective experiences of sport within this current programme. Without the inclusion of players, it has been suggested that the reliability and validity of the research could have been influenced by parent and coach biases (Noble and Smith, 2015). The researcher previously recognised that including participants with ASD was going to be challenging in regard to getting ethical approval, however, on balance, this has added much value to the research. That being said, research conducted by Morison et al. (2000) on the effectiveness of interviewing children and vulnerable people found that due to the interviewer's superior levels of cognitive, linguistic, and social development, neurotypical adults were unable to fully enter the world of someone with ASD. With the majority of research in this area drawing on quantitative research to explain their findings, a grounded theory approach was utilised to examine whether the sport programme led to appreciable changes in players psychological and social skills.

5.3   Summary of research findings

The results of this research yielded some fascinating findings into how the sport programme facilitated and impacted players communication, confidence and collaboration from a participant, coach, and parent viewpoint.

This study demonstrated that camouflaging of ASD- related characteristics in social situations are common among players at the sport programme. Behaviours themselves can be grouped into masking strategies, and in the short term, the aims of camouflaging are often achieved, however there were reports of this causing extreme exhaustion, and contributing to an increase in anxiety. Long term negative impacts were also found as a consequence of camouflaging, which affected players self-

perception and access to support which confirms earlier work by Hull et al. (2017). This said, it is evident that the disability programme allowed for players to express themselves and reduce camouflaging which helped to form social relationships. Based on the responses from the research participants, this positive impact was primarily due to the fact that the programme is disability specific, which reduced or eliminated feelings of marginalisation. These findings resonate with research by Cook et al. (2021) suggesting sport can play a central role in reducing one's desire to camouflage and promote authenticity. In addition, the coach's ability to create a calm and appropriate climate for learning and socialising was a key factor in reducing the players motivation to camouflage their autism. Coaching strategies and characteristics found to be most effective in reducing camouflaging and increasing confidence in players centred around praise, reward, feedback, and support.

Furthermore, pro-social behaviours and social functioning skills were identified as category headings. A clear correlation between how the coaches perceive their roles as 'mentors' and 'role models', and how parents consider the effectiveness of the programme was made evident from parallel feedback given from the triad of research participants. The results suggested that coaches with the foresight or skills to emphasise 'responsibility' through encouraging pro-social behaviours is a successful strategy in developing relationships, confidence, social and psychological skills in players at the programme.

It was also revealed that the programme can improve language and communication skills in players with ASD, with evidence supporting the use of various coaching strategies to facilitate this development. This primarily focused on deliberate efforts to support players to communicate socially by sharing attention with others, engaging in the imagination of play, and developing an understanding of how people think and feel. Specifically, three research participants recognised the effectiveness of auditory discrimination strategies used by the coaches to encourage players to compare and contrast different sounds within an activity. This was found to improve players auditory and cognitive processes and develop players ability to locate where a sound was coming from. It was also found that this strategy helped players to manage background noises, such as other people, and traffic, whilst also improving eye contact. Furthermore, the coach's ability to recognise that their players have difficulties in retrieving specific and detailed memories of previous sessions and experiences prompted the use of active recall strategies. Coaches were aware of the need to draw on key words representing 'mental images' both at the beginning and end of sessions to trigger players memory in order to create the connection between the stored memories and perceptual experiences (Fantasia, 2020). This was found to enhance learning and receptive communication for players with ASD.

The findings from this investigation have revealed important recommendations for effective practice in disability sport programmes for players with ASD. Based on the findings from this research, it is recommended that disability sport programmes for individuals with ASD are centred on trust, rapport, consistency, and a player centred approach. Disability sport programmes should focus on satisfying the

social and functional needs of the players through consistent and accessible means. Coaches should make a great effort to fully understand their player's individual level of ASD, personality traits and cultural background to develop and maintain consistently high levels of rapport. This would enable coaches to provide their players with authentic and tailored opportunities to engage in pro- social behaviours, that are recommended to impact communication, collaboration, and confidence for people with ASD.

5.4   Implications for ASD in community sport programmes and recommendations for future research

If the perception of the coaches, parents and players are representative of reality, the findings of this study have potentially significant implications for inclusive sport programmes for players with ASD. This small-scale study has provided evidence to support the suggestion that sport programmes for players with ASD do indeed have the capacity to benefit players communication, confidence and collaborative skills. Furthermore, it must be acknowledged that the research has demonstrated that the role of the coach combined with parental support is paramount to the success of the programme, and the attitudes and beliefs of parents and coaches are not always parallel. It was found that coaches favour a player-centred approach, which was supported by the players desire to develop a sense of their own control over their personal development. This discovery supports the idea that players with ASD respond well to instructional and player-centred leadership style, and this correlated positively with players motivation and satisfaction. Interestingly, parents within the study preferred a more autocratic approach, where they drew on areas such as, discipline and punishment. However, this was found to result in situations of increased stress and conflict, whilst having a negative impact on player confidence, communication, and collaborative skills. This leads us to believe that coaches at the programme are well prepared to help their players reach their potential, in regard to psychological and social development, and enabling coaches the opportunity to execute their strategies without parental input is essential to the success of the programme.

Although sport and in particular football provides the context of where, and how, players with ASD within the disability programme could develop communication, collaboration and confidence, it is ultimately the coaches themselves who have facilitated these changes as seen within this research. In addition, the study drew upon multiple examples to illustrate players psychological and social development within the programme, and how this was transferred to day-to-day lives. It was found that participation in regular community–based, sport programmes can help players with ASD to take more responsibility and control over their own lives (Fitzgerald, 2009; Martin, 2018). Consequently, there are key implications for ASD sport programmes, and the coaches who deliver them.

Encouragingly, the research participants were aware of the effects and implications that the programme has on developing how ASD is perceived within the wider community. It was recognised that

educational institutions and local councils are beginning to recognise that autism and other intellectual disabilities are a social issue, and thus more supportive networks, employment and educational opportunities are being provided to people with ASD, rather than discrimination and medical intervention. This suggests that the social model is gradually being re-invigorated for autism by removing social barriers and challenging societies attitudes within the local community. In addition, the researcher purposely refrained from using any of the common terminology in the field, yet the coaches, parents and players consistently introduced related terms (e.g., employment, increased confidence, responsibility, social interaction) into the conversation. Therefore, it appears that the research participants were well informed on the communication, confidence and collaboratory impacts of the programme.

It appeared that all research participants agreed that accessibility, transport, and financial concerns were preventing people from participating in the programme. Coaches and parents emphasised the fact that parents or guardians have to be committed to the 'whole process' for their child or vulnerable person to fully benefit from the potential social and psychological benefits that have been discussed. Hence, it would be useful to further investigate whether the disability programme predominantly attracts players from supportive backgrounds, rather than providing opportunities for all. This study has suggested that sport interventions for youth with ASD that incorporate appropriate adaptations, modelling, and encourage players to take a suitable level of responsibility, can effectively develop players confidence, communication, and collaboration skills. It is thus of critical importance to communicate the utility of individually tailored and developmentally appropriate sport programming to parents, coaches, teachers, and national governing bodies to develop and maintain increasingly engaging youth programmes for people with ASD at all levels of functioning.

5.5   Concluding remarks

Based on the findings from the current study, the researcher has put forward a framework for improving confidence, communication, and collaborative skills of ASD players within a disability sport programme. The framework presented by the researcher embodies certain aspects of research in ASD sport and reinforces the findings of Hassani et al. (2020), that building rapport and trust between the coach and players is integral to promoting pro-social behaviours. This was found to provide the basis for developing communication, collaboration, and confidence. Furthermore, it is necessary that coaches and parents of players with ASD at disability programmes are made aware of the multitude of mediators that impact upon the development of players with ASD. Highlighting the most significant domain specific factors influencing the process - in this case trust, responsibility, consistency, and empathy, is crucial. Finally, given the conflict that emerged from this research between coaches and parents on management and leadership strategies, it would be useful to examine this in future research.

5.6   Personal reflection

When I originally considered studying for my MSc by research on the impacts of a sport-based project on participants with ASD, I eagerly jumped at the chance. I was fully motivated by having the opportunity to contribute an area which I am passionate about, and a topic which I think is underrepresented in research. As a result of conducting this research, I feel that I have a stronger understanding of the role of community coaches, specifically focusing on how coaches could be best prepared to maximise benefits for their participants with ASD and help eliminate barriers. The experiences I have witnessed have categorically enhanced my understanding of the importance of disability sport within a single community and the wider society.

I had basic primary and secondary research skills before engaging in this research; however, those skills were greatly improved as a result of conducting the current study. During this educational journey, I have acquired valuable primary research skills. It was an extraordinary experience, where I engaged in research of such a scale that involved primary data collection and analysis in an individual manner. The most popular qualitative research methods have been learned during the study, and I now fully recognise the effectiveness of semi- structured interviews.

On both personal and professional levels, I have benefited greatly from the research experience through improving my time-management skills. Specifically, the research process required extensive preparation and planning for each stage of the study and each stage had to be conducted in an organised manner. Initially, I faced challenges in terms of ensuring the progress of the study according to the schedule. These challenges mainly arose during the data collections stage of the research. I had initially underestimated the duration of time required to collection data. The issue was dealt with through re-adjusting the time-plan for the study, as well as, increasing the level of personal discipline in terms of following a set plan.

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Appendices

Appendix 1- Interview questions

Appendix 1.1   Interview questions for coach/ parent/ player

Please note the nature and wording of the questions will be changed depending on the type of participant who is being interviewed.

1) How long have you been coaching/playing/involved at Maidstone Raiders?

2) In your opinion, what are psychological benefits for participants in sessions?

3) Can you tell me of a time when a participant has developed in their emotional or psychological state within a session, or over a period of time?

4) What are the issues/ barriers with participation at Maidstone raiders?

5) Do you think participant's communication can improve through participating in sessions? I if so how?

6) Do you think confidence can be improved through participating in sessions? If so how?

7) How do you think Maidstone Raiders can help increase participants independence/ employment opportunities?

8) What/ if any opportunities have and can the organisation provide outside of AITC, long term…?

9) What are the health advantages with attending regular sessions, and would you say this is linked to emotional developments (improved self-worth, decreased anxiety etc)?

10) Do you think coaches have a responsibility to improve participant's personal skills?

11) How long do you think it takes for a participant to feel comfortable at sessions?

12) Do you use rewards to try and inspire participants? How can that help?

13) Do you know of any inspiring stories of participants that have progressed through regular participation at Maidstone Raiders?

Appendix 1.2   Interview guide for participants with ASD

1)   What do you like about coming to play football with the club?

2)   What is your favourite activity or game to play?

3)   Do you like playing as a team? Or on your own?

4)   What is your favourite memory of playing football with Maidstone disability?

5)   Can you tell me something you like about your coach?

6)   Have you made new friends since coming to the programme?

7)   Can you remember your first time coming here to Maidstone Raiders? Can you tell me about it? How did the coaches and other players make you feel?

8)   Can you tell me of a time you have felt sad or upset when playing football with Maidstone Raiders?

9)   Can you tell me of a time you have been proud of yourself when playing for Maidstone Disability?

10)   What would you like to get better at when you come to football practice?

11)   Do you prefer playing in football games, or football practice? Can you tell me why?

Appendix 2- Ethics clearance from the Faculty of Science, Engineering and Social Sciences at Canterbury Christ Church University

Mr Joshua Russell

Graduate College

Faculty of Science, Engineering and Social Sciences

15th February 2021

Dear Joshua

Confirmation of ethics approval: Investigation of community coach perception of sport- based programmes

Your ethics application complies fully with the requirements for ethical and governance review, as set out in this University's Research Ethics and Governance Procedures, and has been approved.

You are reminded that it is your responsibility to follow, as appropriate, the policies and procedures set out in the Research Governance Framework and any relevant academic or professional guidelines.

Any significant change in the question, design or conduct of the study over its course will require an amendment application, and may require a new application for ethics approval.

It is a condition of approval that you **must** inform ethics@canterbury.ac.uk once your research has completed.

Wishing you every success with your research.

On behalf of

Faculty of Science, Engineering and Social Sciences Ethics Panel

ping.zheng@canterbury.ac.uk

Appendix 3- Information and consent form

Appendix 3.1- Parent/Guardian/Coach information and consent form

Dear (Parent/Guardian/Coach)

This letter is to provide you with some information and ask for your consent to participate in a research project that I propose to conduct at Maidstone Raiders. The data will be used in my thesis for my Masters degree in Physical Education and Physical Activity at Canterbury Christ Church University.

The project aims to investigate how people with an Autism Spectrum Disorder experience, perceive and reflect on their participation in physical activity with the support of their coaches and parent/carers. If you choose to give your consent, this form will be used to record your permission for your participation in this study. Interviews are expected to last 30-50 minutes.

This study will not knowingly involve any risk of harm/injury to the research participants, and does not involve the misinforming or deceiving of participants. When writing up the study, anonymity of participants will be maintained by using pseudonyms in place of real names. Data will remain confidential, and raw data and consent forms will remain safely stored. The raw data will only be used for this research project, and will be destroyed after this project has been marked.

If you are happy to participate, please sign the bottom of this letter. I have enclosed a second copy for your records.

Thank you,

Yours sincerely,

Joshua Russell

I _____ have read the above outlining the nature of the research project, and give/do not give my consent to participate.

Date   Signature_____

Appendix 3.2- Parental/ Legal guardian Consent form

Research title: Physical activity participation in people with Autism Spectrum disorders: A player, coach and parent perspective focusing on collaboration, communication, and confidence skills

Overview

The purpose of this form is to provide you (as the parent/ legal guardian of a prospective research study participant) information that may affect your decision as to whether or not you let your child (or vulnerable person) participate in this research study. The researcher will describe the study to you and answer all your questions. Please read the information below and ask any questions you might have before deciding whether or not to give your permission for your child to take part. If you decide to let your child be involved in this study, this form will be used to record your permission.

Purpose of the Study

If you agree, your child (or vulnerable person) will be asked to participate in a research study that aims to investigate how participants at Maidstone Raiders with an Autism Spectrum Disorder, experience, perceive and reflect on their participation in physical activity with the support of their coaches and parent/ carers.

What is my child (or vulnerable person) going to be asked to do?

If you allow your child (or vulnerable person) to participate in this study, they will be asked to partake in an interview lasting 30-50 minutes. Interview questions will draw on their perception of their participation with Maidstone Raiders. Interview questions can be provided on request.

Note: The interview duration is flexible and depends on the psychological state of your child or vulnerable person. The interview can be stopped at any time.

Note: Your child (or vulnerable person) will be audio recorded, so that a transcript can be produced. This will help the researcher to analyse the data and will only be used for the purpose of this study.

Does my child (or vulnerable person) have to participate?

No, your child's (or vulnerable persons') participation in this study is voluntary. Your child (or vulnerable person) may decline to participate or to withdraw from participation at any time. Withdrawal or refusing to participate will not affect their relationship with Maidstone Raiders or Canterbury Christchurch University in anyway. You can agree to allow your child (or vulnerable person) to be in the study now and change your mind later without any penalty.

Interview location

The interview can take place during, before or after a regular football session. However, if either you or your child (or vulnerable person) wishes, an alternative venue can be arranged.

What if my child (or vulnerable person) does not want to participate?

In addition to your permission, your child (or vulnerable person) must agree to participate in the study. If you child (or vulnerable person) does not want to participate, they will not be included in the study and there will be no penalty. If your child (or vulnerable person) initially agrees to be in the study, they can change their mind later without any penalty.

Will there be any compensation?

Neither you nor your child (or vulnerable person) will receive any type of compensation by participating in this study.

How will your child's (or vulnerable person's) privacy and confidentiality be protected if s/he participates in this research study?

Personal information will not be passed onto any third parties beyond the researcher undertaking the project. Personal information collected via notebooks, Dictaphone or any other recorded means will be kept in a secure drawer with a lock to which only the researcher has access. All information stored on USB devices will be password protected. All information collected will be destroyed within the allocated time period, and in accordance with the procedures set out in the University's data protection policy.

The researcher will ensure that all data collected from participants cannot be tracked back to the individual participant. No recordings or transcriptions of data will make reference to the real names of the participants, however, will instead use a relevant system that ensures anonymity. Participants will be referred to as Parent/ Carer 1, Coach 1, Player 1 etc. so the perspective is clear, but their identity is hidden. Pseudonyms or numbers for participants and their workplaces/schools/clubs will be used throughout the write-up of the dissertation to protect the identity of those involved in the study.

In addition, all materials associated with the study will be destroyed after the study according to the University's data protection policy.

The audio recording of the interview will be stored securely and only the researcher will have access to the recording. Recordings will be kept for the duration of the research project and then erased.

Who do I contact with questions about the study?

Prior, during or after your participation you can contact the researcher, Joshua Russell at 07495291513 or send an email to jr737@canterbury.ac.uk for any questions. Additionally, you can

contact Maidstone Raiders Welfare Officer if you have further concerns.

You are making a decision about allowing your child (or vulnerable person) to participate in this study. Your signature below indicates that you have read the information provided and have decided to allow them to participate in the study. If you later decide that you wish to withdraw your permission for them to participate in the study you may discontinue his or her participation at any time. You will be given a copy of this document.

NOTE: Include the following if recording is optional:

_____ My child (or vulnerable person) MAY be audio recorded.

_____ My child (or vulnerable person) MAY NOT be audio recorded.

_____

Printed Name of Child (or vulnerable person)

_____   _____

Signature of Parent(s) or Legal Guardian   Date

_____   _____

Signature of researcher   Date

Appendix 4- Coding and data analysis

Appendix 4.1- Line by line coding

Interview 1 (Player 1)- 27th March 2021- 45 minutes

"I have been a player for 9 years, and I am still playing now, I have also been coaching for 2 years". (Player 1)	The link between sustained participation in Maidstone disability and coaching opportunities.
"My playing experience has enabled me to improve my leadership and communication skills that I have picked up from other coaches. I have picked up a lot of things from other coaches that have had a positive influence throughout my life". (player 1)	Improved leadership skills from participating in sport Coaches are role models Players pick up and imitate certain traits from coaches.
"I completed my FA level 1, and I am on a football coaching degree at the moment, and I hope to complete my level 2 soon. It has been hard of course because of my disability, but the support I have received has been great, so it is possible to follow your dreams". (player 1)	Breaking barriers Education and societal support for people with ASD
"My parents have always encouraged me to follow my dreams, I am very lucky that they support me in this. They have never seen my disability as a barrier, we just sometimes have to approach things differently. They have always told me to realise my potential". (Player 1)	Parental support and encouragement Parental attitude towards ASD Recognising ASD as an opportunity to develop rather than a disability.
"In terms of my own coaching, I think it's a little easier for me to coach the group as I have been playing with many of them for years, they are use to me, I know how they will react, and they know how I will. Familiarity and trust really helps. Also, I think that fact that we are all in the same boat helps, we have encounter similar issues throughout our lives, so we can relate to each other". (Player 1).	Familiarity and trust Relatable, and an understanding between the group
"I know what I can expect from them, what they will be comfortable with doing, and what might cause anxiety". (Player 1)	Staying within comfort zone
"I try to do practices that will encourage the players to… kind of plan tactics and come up with a strategy to win. They have to communicate together, and problem solve. Like one I like to do, is where players work in teams to press the other teams to win the ball back. At first, they use to just run around without a plan, they didn't get much success. But when we play it now, they know to work as a team, to press at certain times, and to cover certain areas on the pitch. I actually learnt this practice of another coach".	Teamwork, and problem solving Taking more responsibility Clear learning taking place over a period of time Collaboratory skills

"Although the relationship that I have built up with the players is positive overall, I do feel like some players take advantage of the fact that I am their friends, and maybe try their luck. For example, (hidden name) still very much sees me as a player, which I still am a lot of the time, but when I am coaching him, I find it hard to get his respect. So I try to set strict boundaries, but that's just for him, most are fine".	Building positive relationships in the coaching environment Players misbehaving if they perceive a lack of authority Setting boundaries Individual requirements (one size does not fit all)
"My motivation to play football has always come from enjoyment first of all. But then in terms of disability sport, I have always played at a fairly high level, so it has always a performance thing for me, more than the social aspect. We won the FA youth cup in 2018, which is a national disability tournament".	Enjoyment as a motivator to get involved initially Desire to improve performance Opportunities to play competitively in national disability tournaments
"I understand that all I want to do when I have turned up for training is just to play, to practice and play football. I get that sometimes, waiting around and transitional periods can cause anxiety as I experience it, so I try and keep sessions moving quickly so players maybe don't have too much time to overthink and questions themselves"	High intensity sessions Waiting around can cause anxiety Quick transitions between practices Overthinking and self-doubt
"I find that when I am playing, too much information can confuse things, and confuse the group, so I try and keep things pretty simple when I coach. I think that learning will take place all the time and they will be improving fitness and other things, so when I am coaching I like to keep things pretty straight forward, and I will always explain the practice a few times, and walk through the activity so they can see as well".	Too much information can be confusing Players benefit from the session no matter the level of coaching. Repeating instructions Demonstrations
"The most important thing is to coach the players based on their needs, from a player a coach's perspective, it is up to the coach to identify the individual needs of players".	Individual requirements (one size does not fit all) Coaches responsibility to identify the needs of players
"You can't really treat any two players the same"	Individual requirements (one size does not fit all)
"As captain of the team, I try to build a good relationship with all the players, where they now feel comfortable in approaching me for any personal advice. For example, (hidden name) contacted me and asked me for advice about his relationship".	Building positive relationships in the coaching environment Being approachable as a player or coach
"My parents would always take me to sessions when I was younger, but now I am an adult, I have to get the bus. So I will check the bus time table, and work out what times will work for me, allowing myself enough time to walk from the bus stop to the session."	Parental support and encouragement Taking more responsibility Practicing time management and planning skills by taking bus to session.

"It would have been easy for my parent's just to drop me off at session, but I like getting the bus, and they know that". Some teachers I have had at school don't really listen to me much, they say that we are doing it like this, even when It causes me stress, and that's what it is like, you have to adapt to try and fit in". (player 1)	Parental attitude towards ASD Parents allowed their child to take responsibility. Negative social attitudes from school teachers ASD students made to adapt and fit in- medicalised approach

Appendix 5- Memo for player 1

Memo- Player 1

Having been a player with the club for the last 8 years, I have developed my confidence, communication, and leadership skills to a point where I am now regularly leading sessions to younger age groups. Having this opportunity to coach made me realise what I want to do with my life, and I know I want to become a coach, so I am working on my coaching badges at the moment.

Further questions for the study- How might coaches be best prepared to help participants improve their confidence, communication, and leadership skills to help players get to this point? Are there strategies they use? How do they overcome any initial distrust? What barriers might coaches and players face in this journey?

Appendix 6- Open coding example

Extract from interview with parent 2:	Possible category
My son struggled with confidence when he first joined, I think that was because he previously had a bad experience in a mainstream football club. I think that playing here has helped his confidence because the playing standard is equal, so no one would feel a lot worse or better than someone else. Playing on the pitch each week in front of family definitely makes (hidden name) feel proud, knowing that they are part of the club, and representing the club gives him so much confidence. I am not a qualified coach or anything, but I do support the coaches when I can. Even if I just collect the balls, that's a huge help for the coach. Sometimes if my son is having an especially difficult day, I might play alongside him as that often helps. After playing football today, (hidden name) will have more of a bounce. I can tell you now that he will be happy to go to the shop on his own, and that's because of the confidence he will take from today.	Fluctuating confidence Negative previous experience in mainstream Equality and pear comparisons Sourcing of confidence Self-worth Parental support One to one support Fluctuating confidence Sourcing of confidence Taking more responsibility