The role of psychological skills and characteristics in optimising talent development in a rugby union academy

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Abstract

Title: The role of psychological skills and characteristics in optimising talent development in a rugby union academy

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This thesis sought to examine the role of PSCs in optimising talent development in a rugby union academy. The primary aims of this thesis were: (i) To conduct a review of the current literature to collate the research on psychological characteristics and skills (PSCs) that contribute to the development and performance of talented rugby union (rugby) players, to provide a rugby specific list of PSCs and highlight any limitations in the existing literature. (ii) To examine the PSCs of elite rugby players in a professional academy over a season; (iii) To gain insight into the players' experiences of being part of an academy including which PSCs the players perceive as important to be successful in a professional rugby academy, the challenges they face and the support they receive; (iv) To explore the attitudes towards and use of sport psychology in rugby union in Ireland.

Ten studies examining the PSCs of talented rugby players were identified in the literature review. PSCs including motivation, commitment, coping skills, confidence, focus, and self-regulation were identified as being important for navigating the talent development pathway in rugby successfully. The first study of this research monitored and examined the PSCs of twenty rugby players that were part of a professional academy throughout a full competitive season. The next study used mixed methods to explore the experiences of four players of being part of an academy including what PSCs the players perceive as important to be successful in a professional rugby academy, the challenges they face and the support they receive. The final study investigated the attitudes of 144 Irish rugby players and coaches, towards the use of sport psychology.

The results of this research revealed that those in their final year of the academy could be lower in confidence, aspects of motivation and self-regulated learning than those in their first year of the academy and therefore, may need more support during this time. Players that are rated as more likely to succeed may be less able to cope with adversity than those that are less likely to succeed. Furthermore, a range of PSCs can predict the number of playing caps a player has achieved. Further results showed that players need a range of PSCs to deal with the numerous challenges that they face when part of the academy. The results highlighted the importance of supporting players in dealing with challenges such as proving their worth, the pressure to gain muscle mass and recover from injury, living away from home and moving countries to join the academy. In addition, results revealed that players held a positive attitude towards psychological support. Nevertheless, they also indicated that they did not have enough access to psychological support in comparison to other sport science support. Finally, results showed that although rugby coaches and players in Ireland generally have a positive attitude towards sport psychology and demonstrate a willingness to use sports psychology for a variety of reasons the actual uptake on sport psychology services is currently low.

Taken together, the results of this research extends previous research on the role of PSCs in talent development. Furthermore, these results have important implications for practice. More psychological support needs to be provided to players at all stages of development. This research provides a basis of what should be included in a curriculum of psychological skills that should be taught to players as part of the academy programme. It also provides support for monitoring PSC development.

Declaration

I declare that the work in this thesis is my own work and completed under the supervision of Dr Mark J. Campbell and Prof David Lavallee (of the Department of Physical Education and Sport Sciences, University of Limerick). This work has not been submitted for any academic award at this, or any other, third level institution.

Signed: ___________________________

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List of Abbreviations

ACSI-28 - Athletic Coping Skills Inventory-28

ANOVA – Analysis of Variance

BPNS in General - Basic Psychological Needs in General Scale

CMD - Common Mental Disorders

COM - Concern Over Mistakes

DAA – Doubts About Action

DMGT – Differentiated Model of Giftedness and Talent

LTAD – Long Term Athlete Development

ORG - Organisation

PCDE - Psychological Characteristics of Developing and Excellence

PS - Personal Standards

PCP - Perceived Coach Pressure

PPP - Perceived Parental Pressure

PSCs – Psychological Skills and Characteristics

SMPS-2 - Sport Multidimensional Perfectionism Scale-2

SMS-II - Sports Motivation Scale-II

SRL-SRS for Sport Practice - Self-Regulation of Learning-Self-Report Scale for Sport Practice

TEOSQ - Task and Ego Orientation in Sport Questionnaire

TOPS-2 - Test of Performance Strategies -2

Glossary of Terms

Activation - is the mental and physiological activity geared deliberately toward preparing a planned response to an anticipated situation.

Agreeableness - high score tends to mean that a person is honest, dependable, and generous.

Attention Control – is the ability to control thought processes and to concentrate on a task.

Automaticity- is the ability to do things without occupying the mind with the low-level details required, allowing it to become an automatic response pattern or habit. It is usually the result of learning, repetition, and practice.

Autonomy - is the need of the player to be in control.

Coachability - This assesses if a player is open to and learns from instruction and accepts constructive criticism without taking it personally and becoming upset.

Competence – is the need of the player to be effective.

Concentration - This reflects whether a player becomes easily distracted and can focus on the task at hand in both training and game situations, even when adverse or unexpected situations occur.

Concern over Mistakes – this involves the player's negative feelings in relation to the possibility of failure in competition and or poor performance, as well as the belief that mistakes result in a loss of respect from other athletes.

Confidence and Achievement Motivation: Measures if a player is confident and positively motivated, consistently gives 100% during training and games, and works hard to improve his skills.

Conscientiousness– A high score on this tends to mean that a person is reliable and prompt and may have traits such as being organised, methodical and thorough.

Coping with Adversity - This assesses if a player remains positive and enthusiastic even when things are going badly, remains calm and controlled, and can quickly bounce back from mistakes and setbacks.

Doubts about action – Excessive tendency to doubt one's own performance.

Ego orientation - is when a player is motivated by outperforming others, and by managing to complete tasks with less effort than others.

Emotional Control – Players can experience a range of emotions before, during and after performing. Being able to control these emotions is thought to be important in facilitating performance.

Extraversion– This relates to how sociable one is and what their source of energy and excitement is, i.e., from other people or from within themselves. A high score tends to mean that they like being around other people and may have traits such as being energetic, talkative, and assertive.

Freedom from Worry - Assesses whether a player puts pressure on themselves by worrying about performing poorly or making mistakes; worries about what others will think if he performs poorly.

Goal Setting - Goal setting is a mental training technique that can be used to increase an individual's commitment towards achieving a goal.

Goal Setting and Mental Preparation - Assesses whether a player sets and works toward specific performance goals, plans, and mentally prepares for games, and clearly has a game plan for performing well.

Imagery - involves the athlete imagining themselves in an environment performing a specific activity using all their senses. Imagery is effective for decreasing anxiety and enhancing self-confidence, self-efficacy, and concentration. It is also beneficial for use as a coping strategy, maintaining existing skills, and reviewing past performances.

Neuroticism– This relates to one's emotional stability and negative emotions. A low score on this means more emotional stability, calmness, and less likely to react extremely when experiencing stress.

Openness- this relates to how much a person enjoys new experiences. A high score in this means creativity and enjoying discovering new things.

Organisation – it refers to the emphasis on the importance of order and organization.

Peaking Under Pressure - Measures if a player is challenged rather than threatened by pressure situations and performs well under pressure.

Perceived Coach Pressure – this refers to the player's perceptions about high levels of performance established by the coaches as well as negative interactions established with the coaches when the player does not achieve high levels of performance in the competition.

Perceived Parental Pressure – this describes the player's perceptions about the high expectations of parents and criticisms when the player does not achieve high levels of performance in the competition.

Personal Standards – this involves personal expectations and excessive demands that players establish in competition and as a sportsperson.

Psychological Characteristics - innate predispositions or traits, they are relatively stable but can be enhanced or strengthened through systematic development.

Psychological Skills - an individual's ability to use learned strategies to achieve a specific result.

Relatedness – the need of the player to be in close relationships with others.

Relaxation - is a psychological strategy used by players to help manage or reduce stress-related emotions (e.g., anxiety and anger) and physical symptoms (e.g., physical tension and increased heart rate during high pressurised situations.

Self-efficacy – is the belief in one's ability to accomplish a task or succeed in specific situations.

Self-Talk – is the conscious and subconscious dialogue that occurs in one's mind before, during, and after competition. Self-talk can affect confidence and emotions which impacts performance

Talent - the superior mastery of systematically developed abilities in any field of human activity to a level that the individual belongs to the top 10% of peers active in that field.

Talent development - the process of recognising current participants with the potential to become elite players.

Talent development environment – where players are provided with a suitable learning environment so that they can realise their potential.

Task orientation - is when a player is motivated from learning new skills, improving their performance, and doing their best.

Chapter 1 Introduction

1.1 Background

Athletes that are deemed to possess talent are a valuable resource that is consistently in demand in sports. Nevertheless, one universally accepted definition of talent does not exist, and various definitions exist in the literature. For example, Baker, Cobley, and Schorer (2012) suggested “talent refers to the quality (or qualities) identified at an earlier time that promotes (or predicts) exceptionality at a future time” (p. 3). However, this definition makes it impossible to explain whether an athlete’s current level of performance is the result of their innate abilities, from learning through experiences and training or some combination of these factors (Baker, Wattie, & Schorer, 2019). Issurin (2017) defined talent as “a special ability that allows someone to reach excellence in some activity in a given domain” (p. 1994). Again, this definition highlights innate abilities as central to talent and it does not explain how it is different from current performance and/or level of acquired skill.

The definition of talent which will be used to underpin this discussion of talent in this thesis will be "the superior mastery of systematically developed abilities in any field of human activity to a level that the individual belongs to the top 10% of peers active in that field" (Vaeyens, Gullich, Warr, & Philippaerts, 2009, p. 703). This definition considers the athlete’s ability to develop and become talented over time through training and experiences.

This definition goes beyond identifying an athlete as talented based on current performance and recognises that talent can be developed over time, for example, through talent development environments.

Talent development environments such as professional team academies have been established with the goal of identifying and developing elite athletes that will achieve at the highest level within their sport. The continual increase in competitiveness throughout professional sport provides an incentive for teams and organisations to not only identify talented athletes but also provide development pathways that will ensure these athletes reach their potential (Mann, Dehghansai, & Baker, 2017). Since success at junior level does not predict success at senior level, then other determinants of athletes reaching their potential need to be considered (Faber, Bustin, Oosterveld, Elferink-Gemser, & Nijhuis-Van der Sanden, 2016). Abbott and Collins (2004) advocated for the "need to recognise the important role of psychology in the ability of individuals to fulfil their sporting" (p.395); Nevertheless, progress in terms of practical application in talent development environments has been slow. In spite of the acknowledgement that psychological factors are an important contributor to the development of super-elite athletic performance (Rees et al., 2016). Of particular relevance to this research is the notion that psychological skills and characteristics (PSCs) may be a key factor during important developmental stages of an athlete's life, such as negotiating a talent development pathway (Newton & Holmes, 2017).

1.2 Definitions

The meaning of talent development varies throughout the research. It is often used as an umbrella term to encompass talent identification, talent detection and talent development (Tranckle & Cushion, 2006). Therefore, to ensure clarity in this thesis and consistency with previous research, the term talent identification will be used to describe "the process of recognising current participants with the potential to become elite players" (Williams & Reilly, 2000, p. 658). The term, talent development environment, on the other hand, will refer to when "players are provided with a suitable learning environment so that they have the opportunity to realise their potential" (Williams & Reilly, 2000, p. 658).

Furthermore, recent research has suggested that inconsistencies exist in psychological terminology in the talent development literature, which can lead to confusion and ambiguity (Dohme, Backhouse, Piggott, & Morgan, 2016). The main issues occur with terms such as psychological factors, components, characteristics, skills, and attributes all being used interchangeably. To avoid confusion and ambiguity, the present research will use the following terms and definitions when discussing the psychological aspect of talent development. The term psychological characteristics will be used to describe "qualities of the mind" (Dohme et al., 2016, p. 19) that can be viewed as innate predispositions or traits; they are relatively stable but can be enhanced or strengthened through systematic development (Dohme et al., 2016). The term psychological skills, however, will be used to describe "skills of the mind" (Dohme et al., 2016, p. 20). This term refers to an individual's ability to use learned strategies to achieve a specific result. Therefore, psychological skills can be used to enhance or develop psychological characteristics (Dohme et al., 2016).

1.3 Talent Development Environment

Talent development is a complex long-term process that expects short-term performance and achievement (Henriksen, 2010). Therefore, a talent development environment is one that equips athletes with a wide range of cognitive, perceptual and motor skills that may distinguish between the best performers at later stages in their career (Martindale, Collins, & Abraham, 2007). The most common type of talent development environment in sport discussed in the literature are elite academies. Successful talent development environments are thought to have a long-term focus where mastery and progress are more important than achievement at a young age (Aalberg & SÆTher, 2016). They also take into consideration group, and relational factors as these are believed to have positive effects on an athlete's development (Henriksen, 2010). Martindale et al. (2007) indicated that a good talent development environment must facilitate flexible systems that are suited to the individual athlete and that the overall focus should be the athlete's progression rather than previous results.

During their time in a talent development environment, an athlete is faced with numerous challenges, including; pressure to perform, expectations from both themselves and family (Beckford, Poudevigne, Irving, & Golden, 2016), the physical challenge of first-team training, having to work hard to prove themselves and forming new relationships with new teammates and coaches (Finn & McKenna, 2010). Furthermore, an athlete's sports career does not stand alone from the rest of their lives. Therefore, the sport psychologist must support the athlete in dealing with challenges both in and out of sport for them to be successful (Aalberg & SÆTher, 2016). To establish an effective talent development environment, it is necessary to know which PSCs are needed by players in that specific environment and sport (Larsen, Alfermann, & Christensen, 2012) as well as whether it is possible to explicitly or implicitly teach them (Henriksen, Stambulova, & Roessler, 2010; Martindale & Mortimer, 2011). Despite the recognition that PSC are important for development, it is often the case that they are only indirectly practised and rarely talked about in the talent development environment (Larsen et al., 2012).

1.4 PSCs and talent development

PSCs are recognised as being central for success in elite sport (e.g. Gould, Dieffenbach, & Moffatt, 2002; Macnamara, Button, & Collins, 2010a; Newton & Holmes, 2017). In fact, a common reason given for athletes with high potential not being successful is despite having many of the prerequisite physical skills for elite sport, they do not have sufficient psychological resources (Holt & Mitchell, 2006; Taylor & Collins, 2019). Nevertheless, PSCs have long been seen as being undervalued within talent development environments (Bailey et al., 2010; Gledhill & Harwood, 2015; Vaeyens, Lenoir, Williams, & Philippaerts, 2008). Previous research has indicated that the PSCs needed for elite performance also aid in the successful progression through the development pathway (Macnamara, Holmes, & Collins, 2008). PSCs such as goal setting, realistic performance evaluation, imagery and commitment have been found to distinguish between medal and non-medal winners (Tranckle & Cushion, 2006). Additionally, PSCs are thought to be a determining factor in how an athlete deals with lifestyle challenges that are necessary to overcome to reach elite level (Abbott & Collins, 2004; Gould et al., 2002; Macnamara & Collins, 2011; Morris, 2000; Vaeyens et al., 2008). Furthermore, psychology has been suggested to be important in talent development as research has suggested an athlete's psychological characteristics are thought to have a role in an athlete's ability to engage in deliberate practice (Starkes, Deakin, Allard, Hodges, & Hayes, 1996). Therefore, PSCs are an important contributor to the development of elite athletic performance (Rees et al., 2016) and a key factor during critical developmental stages of an athlete's life (Newton & Holmes, 2017).

1.5 Attitudes towards Sport Psychology

Players and coaches involved in contact sports such as American football or rugby may have negative perceptions of Sport psychology due to a 'macho' dimension of participating in sports that are considered masculine. There may be a stigma of help-seeking as it can be seen as a sign of weakness or unmasculine (Martin & Wrisberg, 1997; Zakrajsek, Martin, & Zizzi, 2011). There are several factors that influence help-seeking behaviours, such as stigma tolerance, confidence in SP consultation, personal openness, and cultural preference (Martin & Wrisberg, 1997). It is important to gather information from those that underutilise sport psychology as it may influence how sport psychology services are delivered (Zakrajsek et al., 2011).

1.6 Models of Talent Development

1.6.1 Côté's Development Model of Sport Participation (DMSP)

The DMSP is considered a psychological model of talent development (Collins & MacNamara, 2017). The model consists of three main stages: the sampling, specializing, investment. At the sampling stage (6-12 years) children have the opportunity to sample different sports and develop fundamental movement skills while sport is seen as fun and exciting. At the specialising phase (13-15 years) children start to focus on a smaller number of sports but fun is still a vital part of sport participation. At the investment stage (16+ years) children commit to specific and try and attain a high level of performance in that sport. The focus is now on strategy, competition and skill development (Bailey et al., 2010). At each stage, individuals can move to a subsequent stage, drop out of sport, or enter the recreational years. The model also distinguishes between deliberate practice and deliberate play. Deliberate practice is a term used to describe practice that is focused on improving performance (Ericsson, Krampe, & Tesch-Römer, 1993). Deliberate play, however, involves take part in sport for its own sake and because it is enjoyable. It is usually involves an altered version of the rules and gives children the freedom to experiment (Bailey et al., 2010). This model is considered a psychological model because it is based on psychological theories such as Bloom's stages of talent development (Bloom & Sosniak, 1985) . However, it does not focus on the psychological characteristics or skills need for talent development.

1.6.2 Long Term Athletic Development Model (Balyi & Hamilton, 2005)

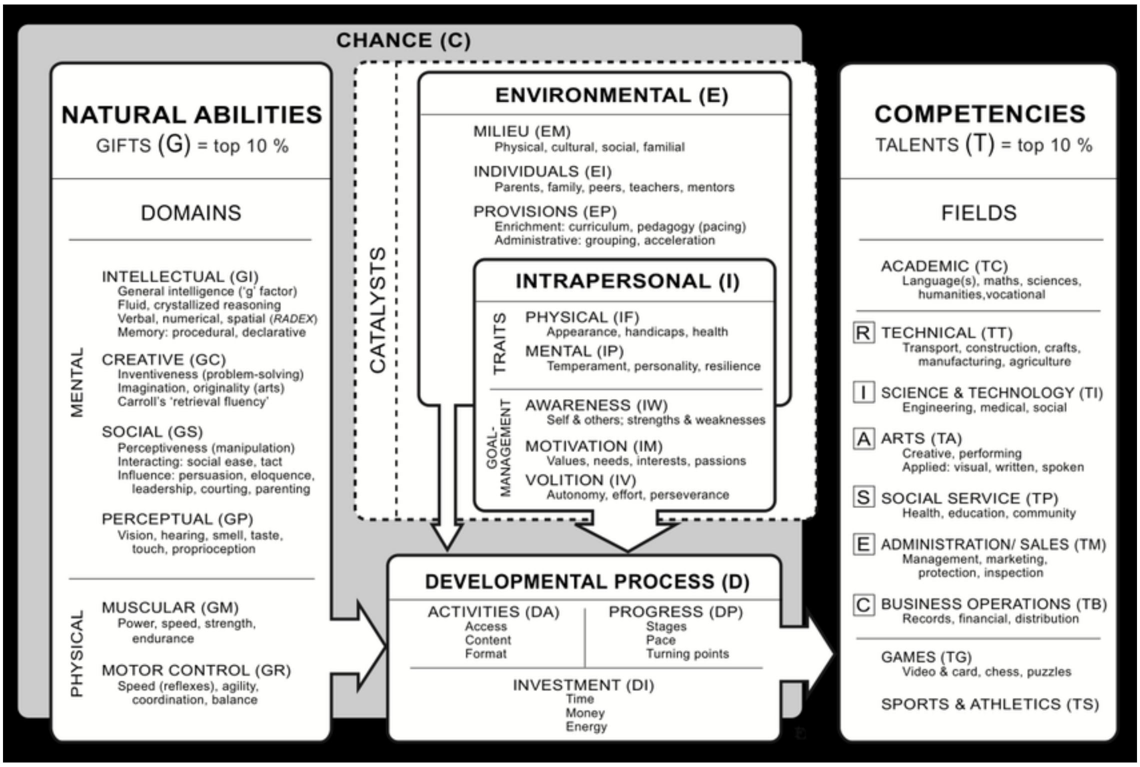
One of the most common models that has been adopted and implemented by national sporting organizations (NSOs) worldwide is the Long Term Athlete Development model (Balyi & Hamilton, 2005). LTAD is thought to have two goals, which are to improve sport performance and increase sport participation. The late specialization version of this model consists of seven stages; active start (Males and Females 0-6 years), fundamentals (Males 6-9 years, Females 6-8 years), learn to train (Males 9-12, Females 8-11), train to train (Males 12-16 years, Females 11-15) train to compete (Males 16-23+/-, Females 15-21+/-) train to win (Males 19+/-, Females 18 +/-) and active for life (Balyi & Hamilton, 2005). The LTAD was developed primarily as a physiological model to promote athletic excellence by ensuring that children learned fundamental movement skills during the optimal physical development stages (Banack, Bloom, & Falcão, 2012). However, many NSOs have recognized the importance of psychological characteristics and skills for athlete development and, as a result, included their own psychological component to their long-term plans. However, the current psychological components have been added in ad hoc fashion with limited and vague guidelines for implementation (Holt, 2010).

1.6.3 Gagne's Differentiated Model of Giftedness and Talent (DMGT)

Due to its attempt to highlight the complex nature of talent development and the many factors that can influence the process, the model that underpins the view of talent development in the current research is Gagne's Differentiated Model of Giftedness and Talent (DMGT). Gagné (2008) defined talent development as "systematic pursuit by talentees, over a significant period of time, of a structured program of activities leading to a specific excellence goal" (p.2). The DMGT (Gagné, 2004) was developed for the domain of education, but it is highly applicable to the dynamic developmental process of sport. Hence, the DMGT (Gagné, 2004) has received growing support for its use in sport (Li, Wang, & Pyun, 2014; Mills, Butt, Maynard, & Harwood, 2012; Tranckle & Cushion, 2006; Vaeyens et al., 2008; van Rossum, 2009). The model draws a distinction between gifts and talents and suggests that they are at either end of a continuum. Gagné considers gifts to be the raw materials and talent the end product of development (Gagné, 2004). The model is "an established theory that captures the distinction between potential and achievement whilst recognising all possible determinants of expertise" (Mills et al., 2012, p. 1594). Conversely, an athlete may have a natural ability, but it is only after a process of development and mastery of those abilities that they would be considered talented. Furthermore, Gagné (2004) suggests that it is the rate of learning rather than ability at a certain time that will identify those that will become talented.

The DMGT acknowledges that although someone may have the attributes to become successful, this does not always happen (Gagné, 2004). Even though someone may be gifted, various intrapersonal and environmental factors must align at the right time for that person to become a talented performer. Therefore, the development process allows for a transformation of gifts to talents. It is only after a process of development that an individual can be considered talented (Gagné, 2004). Hence, an athlete entering a professional academy is considered gifted. Once they have successfully completed the development process, they can be considered talented. This is an important distinction in sport as many athletes are identified as having potential but not all fulfil this potential. Therefore, the DMGT provides the distinction between those that have potential, i.e., gifted and those that fulfil their potential, i.e., talented, as well as highlighting possible factors that impact on this process. The multidimensional nature of the model reflects the complex nature of talent development in sport.

Figure 1.1.1 Gagné's Differentiating Model of Giftedness and Talent (DMGT 2.0; 2008 update)



1.7 Transitions in Talent development Pathways

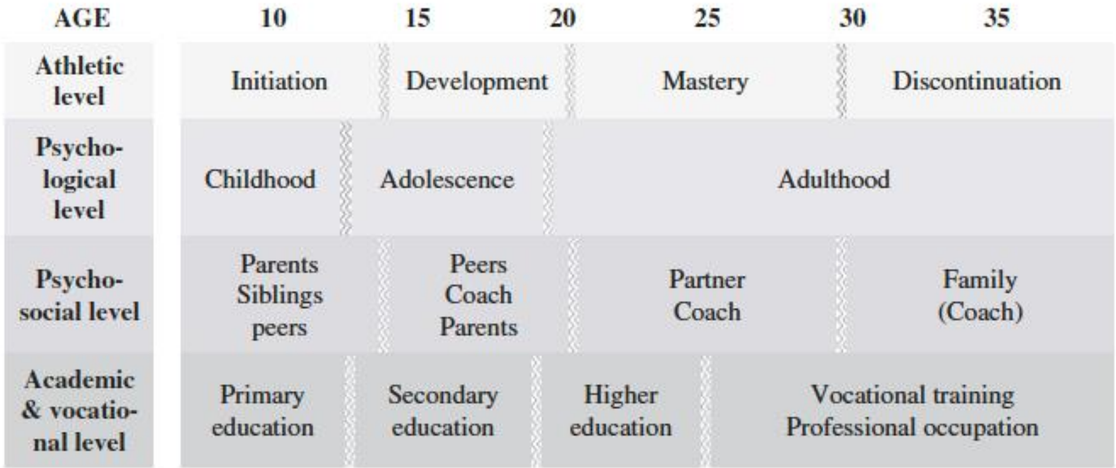
Wylleman, Alfermann, and Lavallee (2004) presented a development model that illustrates the normative transitions faced by athletes throughout their careers. This developmental model consists of four layers and aims to presents "a whole person" and lifespan perspective.

Wylleman and Lavallee in their model recognised that while athletes were experiencing transitions in sport, they were concurrently experiencing transitions in other areas of their lives. Therefore, the model describes the development, interaction, and normative transitions at different layers such as athletic, psychological, psychosocial, and academic. The model shows how the transitions in the sport and in the other aspects of the athlete's life overlap and interact with each other.

The top layer consists of the stages and transitions which athletes can experience in their athletic development. In this layer, Wyllemann & Lavallee included the three stages identified by Bloom (1985) initiation, development, and mastery. Furthermore, they included a discontinuation stage which reflects the transition out of competitive sport. The second layer includes the developmental stages and transitions occurring at psychological level, including childhood, adolescence, and adulthood. The third layer reflects the changes which can occur in the athlete's psychosocial development which are relevant to their athletic involvement. The focus of this level is on relationships with parents, siblings, coaches, significant others, and any other relationships that are significant to the athlete. The final layer reflects the stages and transitions at academic and vocational level. This layer focuses on the transitions from primary education to secondary education, to higher education and finally to professional employment.

This model further underpins the research in this thesis as it highlights the various and often concurrent transitions experienced by players. Throughout their time in a rugby academy players can experience concurrent transitions at each layer as outlined in this model. At the athletic development level, players can experience the transition from development to mastery. At the psychological level, they can experience the transition from adolescence to adulthood. At the psychosocial level, players may transition to from parents and coach to partner and coach being the most significant relationships. Finally, players can also experience the transition from secondary education to higher education or vocational training.

Figure 1.1.2 The developmental model of transition faced by athletes (Wylleman & Lavallee, 2004)



Note. A dotted line indicates that the age at which the transition occurs is an approximation.

In particular, the experience of simultaneous transitions in academic and athletic development can be stressful for academy players as they try to cope with various and opposing demands (Knowles & Lorimer, 2014; Miller & Kerr, 2002; Petitpas, Brewer, & Vanraalte, 2009). For example, in terms of athletic development players may struggle with training demands or parent expectations (Finn & McKenna, 2010). Furthermore, the transition to academy level and the simultaneous academic transition may result in challenges such as moving away from home and family and friends as well as new personal and academic responsibilities (MacNamara & Collins, 2010). At this time, players also experience changes in their psychosocial and psychological development (Wylleman & Lavallee, 2004). For example, psychosocial transitions occur in the nature of relationships held with parents. More specifically, parents have been shown to provide integral emotional support for athletes managing difficult transitions during their career (Mills et al., 2012; Pummell, Harwood, & Lavallee, 2008) but when moving to university, an athlete's access to this support may be reduced and parental influence may be replaced by support from other sources (Falls & Wilson, 2013).

A player' ability to manage and overcome the demands they experience during their concurrent transitions to academy and university is likely to determine whether they successfully negotiate the academy and reach senior level (Hollings, Mallett, & Hume, 2014). To support these players, it is important to understand the challenges that they experience as well as the PSCs that are needed to negotiate the academy and successfully transition to senior level.

1.8 Research Philosophy

Research philosophy refers to "a system of beliefs and assumptions about the development of knowledge" (Saunders, Lewis, & Thornhill, 2009, p. 124). There are various philosophical approaches to research including postpositivist, social constructivist, and pragmatist.

Postpositivist approach is a deterministic philosophy. Problems studied by postpositivists reflect the need to identify and assess the causes that influence effects or outcomes. Postpositivist view the aim of research as being able to reduce the ideas into a small, discrete set of ideas to test, such as the variables that include hypotheses and research questions. Developing numeric measures of observations and studying the behaviour of individuals is central from the postpositivist view. The accepted approach to research by postpostivists, begins with a theory, then data collection that either supports or disproves the theory, and then makes necessary revisions before additional tests are made. Therefore, postpositivist assumptions hold true more for quantitative research than qualitative research.

Another approach to research is social constructivism which is often seen as an approach to qualitative data. The assumptions of social constructivism are that individuals seek understanding of the world in which they live, and individuals develop subjective meanings of their experiences. The meanings that people develop are varied and multiple. Therefore, the researcher aims to discover the complex views of participants rather than narrowing meanings into a few categories which differs from quantitative research. The goal of the research is to rely as much as possible on the participants' views of the situation being studied. Meanings are formed through interaction with others and through historical and cultural norms. Therefore, researchers often address the processes of interaction among individuals. They also focus on the specific contexts in which people live and work, in order to understand the historical and cultural settings of the participants. The researcher's intent is to interpret the meanings others have about the world. Then the researcher generates a theory or pattern of meaning.

Pragmatism focuses on the outcomes of the research and is concerned with the application of those outcomes and solutions of problems rather than antecedent conditions as in other philosophies as postpositivism (Patton, 2002). Therefore, instead of the focus being on the methods used in research, the important feature of research is the problem being studied (Creswell & Poth, 2016). Cherryholmes (1992) outlined a number of basic ideas that underpin the pragmatism. Firstly, it is not dedicated by any one system of philosophy or reality. As a result, when conducting research, researchers have a freedom of choice in terms of methods, techniques, and procedures. The researcher can choose what best meets their needs and purposes. Secondly, pragmatic researchers can use many approaches to collect and analyse data rather than subscribing to only one way. Thirdly, pragmatism considers truth to be what works at the time. Fourthly, pragmatists agree that that research always occurs within other contexts such as social, historical, and political. Finally, pragmatist researchers look to the "what" and "how" of research based on its intended consequences and where they want to go with it. This in practice means that the individual pragmatist researcher uses multiple methods and sources of data collection to best answer the research question. They focus on the practical implications of the research and emphasize the importance of conducting research that best addresses the research problem (Creswell & Poth, 2016).

A central aim of this thesis is to conduct research that informs practice. The applied practice of providing psychological support and training to rugby players in an academy can be informed by identifying the PSCs that are important for development within an academy, how PSCs develop over time, the challenges that players need to deal with in the academy and the psychological support that is available to players. Pragmatism means practice or practical and emphasises the impact of research on applied practice. Therefore, the research within this thesis is grounded in pragmatism. A pragmatic philosophy to research suggests that research should make a difference to those specific groups that it studies, in this case, rugby players that are part of a talent development pathway. Pragmatism is concerned with what works; therefore, it underpins this research at two levels. Firstly, the research is concerned about what works in the psychological development of rugby players in terms of what and when PSCs should be taught. Secondly, in the choice of research methods used. Pragmatists believe that research questions drive methodological choices (Onwuegbuzie & Leech, 2005; Sparkes, 2015). Therefore, a quantitative method was used for study 1, as I wanted to examine the changes of PSCs over time. For study 2, a mixed-method approach was used to gain a rich and meaningful picture of players in a rugby academy (Johnson & Onwuegbuzie, 2004) and as a method of triangulation for the quantitative data collected in Study 1. Pragmatism is also relevant for Study 1 and 2 as a small sample size is congruent with a pragmatic approach (Moran, Matthews, & Kirby, 2011). Study 3 used a quantitative method to gather information from a large sample size on the attitudes towards sport psychology in rugby.

Pragmatism does not believe that there is one single reality, and as a result, pragmatists consider that researchers cannot determine whether their theories are any closer to the truth than other researchers. Therefore, pragmatism chooses methods and theories that are more useful in specific contexts rather than those that aim to reveal "underlying truths about the nature of reality" (Giacobbi, Poczwardowski, & Hager, 2005, p. 21). Although previous research has examined the PSCs of developing athletes, little research has been conducted in rugby. Hence, this research examined the role of PSCs in the specific context of rugby.

1.9Aims and Outline of the Thesis

This thesis sought to examine the role of PSCs in optimising talent development in a rugby union academy. The aims of this research were to:

a) To conduct a review of the current literature to (i) collate the research on PSCs that contribute to the development and performance of talented rugby players (ii) provide a rugby specific list of PSCs and (iii) highlight any limitations in the existing literature (Chapter 2).

b) To examine selected psychological characteristics and skills of elite rugby players in a professional academy over a season (Chapter 3).

c) To gain insight into the players' experiences of being part of an academy, including what PSCs the players perceive as important to be successful in a professional rugby academy, the challenges they face and the support they receive (Chapter 4).

d) To explore the attitudes of rugby players and coaches in Ireland towards sport psychology, the use of sport psychology in rugby in Ireland in terms of the number of players and coaches that have accessed sport psychology services, are currently accessing it and to compare the attitudes and willingness if coaches and players. (Chapter 5).

In the next chapter, a review of the literature will extend and give further insight into the points raised in this introduction. In the subsequent chapter I will outline the studies undertaken. In chapter 4 I will present a longitudinal study on the PSCs of professional academy rugby players. In chapter 5 I will present a mixed-method case study on the experiences of players in a professional academy. In chapter 6, I will present a quantitative study on the attitudes of Irish rugby players and coaches toward sport psychology. In the final chapter, I will discuss the findings of these studies and will make recommendations for the implications and application of this research.

Chapter 2 - Literature Review

The challenges of navigating the pathway to professional rugby union: A narrative review of the role of psychological characteristics and skills

2.1 Preface

In the current chapter, I will synthesise the research examining the PSCs that contribute to rugby players overcoming challenges to reach their potential. Section 2.2 will provide an introduction to rugby union. Section 2.3 will discuss the various challenges associated with rugby union, such as managing transitions and play-related challenges such as positional demands, injury, and burnout. Section 2.4 will discuss the role of PSCs in talent development. Section 2.5 will outline the method used to identify and select the papers included in this review. Section 2.6 will discuss the PSCs that contribute to success in rugby, including motivation, commitment, coping skills, confidence, focus and self-regulation, as well as the limitations of this review. Furthermore, this section suggests that players should be taught a wide range of psychological skills so they can develop the skills and characteristics to be able to deal with the challenges they face and reach their potential.

2.2 Introduction

Rugby Union (hereafter referred to as rugby) is a physically demanding contact sport. It is one of the world's most popular sports with 9.2 million men, women and children registered as players worldwide as well as a fanbase of 344 million (World Rugby, 2019). Furthermore, the Rugby World Cup is now the world's third-largest sporting event after the Olympic Games and the FIFA World Cup (Corrado, Murgia, & Freda, 2014). Rugby is a game characterised by players engaging in frequent bouts of high-intensity activity (e.g., sprinting and tackling), separated by short bouts of low-intensity activity (e.g., jogging) (Corrado et al., 2014). In a senior level rugby match, there are 15 players on the field from each team, and each team has eight substitutes. A match at senior level is usually 80 minutes in duration (Quarrie et al., 2001) which is split into two halves with no time outs and a short half-time period of fifteen minutes (Hodge, Henry, & Smith, 2014). There is a range of different playing positions, each with its own set of demands. Overall, numbers one to eight are forwards, and nine to fifteen are backs. Due to different positional demands, there are significant differences between the physical profiles of forwards and backs. The primary role of forwards is to gain and retain possession, whereas backs are the main points scorers (Casserly, Neville, Ditroilo, & Grainger, 2019). Positional demands require forwards to have a greater body mass and for backs to have greater levels of aerobic fitness (Casserly et al., 2019)

Competitive rugby is played at all ages and levels, including school, community, club professional and international (Ranson, George, Rafferty, Miles, & Moore, 2018). Since the professionalisation of the game in 1995, there has been an increase in playing numbers across all levels. Due to the rise in popularity, there is also an increase in competitiveness, particularly at the professional level. This competitiveness exists not just between teams to win but also between players as they compete to be selected for teams, talent development programmes and professional contracts. Therefore, to be competitive, professional rugby teams and organisations worldwide must identify talented players. Nevertheless, to ensure that these players fulfil their potential, they must also provide development programmes that will ensure these players reach that potential (Mann et al., 2017).

Players that compete and aim to compete at the professional level face many challenges. To deal with these challenges, players must possess appropriate PSCs. Therefore, developing players must be provided with effective psychological training and support within their talent development pathway. Although players should be provided support and training for the challenges they face as they negotiate the talent development, they must also be prepared for the challenges they will face in the transition to the professional level.

2.3 Challenges of rugby

Rugby became professional in 1995, and this changed the demands and challenges facing elite rugby players (Nicholls, Holt, Polman, & Bloomfield, 2006). From a playing perspective, the game has become more physically demanding, and as a result, the expectations of players physical abilities increased. From 1995 to 2020, the percentage of time the ball is in play during a match increased almost 50%, from 27 minutes to 39 minutes which would suggest that players need to be fitter and remain focused for longer (World Rugby, 2020). Also, the average player is now four kilograms heavier, increasing from 100kg to 104kg from 1995 to 2020 (World Rugby, 2020). Body size has become vastly important for success in rugby, with Sedeaud et al. (2012) revealing that body size discriminated between successful and unsuccessful teams in the 1987 and 2007 Rugby World Cups. Body size has become linked to progression within rugby. Therefore, young players aspiring to reach professional level are faced with the challenge of becoming bigger, stronger and faster (Till et al., 2016). This challenge can lead to the "dark side" of rugby (McKenna & Thomas, 2007), in which young players are under considerable pressure to cut corners to achieve the expected physical attributes to be successful. To meet these expectations, young players can become reliant on supplements for performance enhancement which can be the first step toward the use of prohibited substances. Backhouse, Whitaker, and Petróczi (2013) revealed that nutritional supplement users were three and a half times more likely to engage in doping than non-users. Additionally, Didymus and Backhouse (2020) recently reported that rugby players dope to cope with stressors such as injury, pressure to perform, selection and weight and size expectations.

It could be argued that because players are now stronger and faster that there are more injuries as players are being tackled at a faster rate by a stronger force. Overall, the incidence of injuries doubled between 1993/94 and 1997/98 (Garraway, Lee, Hutton, Russell, & Macleod, 2000) and it has been recently reported that the injury incidence rate is now between 46.8 and 81 per 1000 player hours (Yeomans et al., 2018). For comparison, it has been reported that the rates in field hockey, basketball and netball are respectively 15.2, 15.1 and 12.1 per

1000 hours (Stevenson, Hamer, Finch, Elliot, & Kresnow, 2000). One of the primary injury concerns within rugby is the rate of concussion occurrence. It has been reported that across various levels of play, concussion accounts for as much as 4.5–25% of all injuries in rugby (Bathgate, Best, Craig, & Jamieson, 2002; McIntosh, McCrory, Finch, & Wolfe, 2010). Furthermore, within a game, a player must try to meet various demands such as fulfilling the requirements of their positional role, executing the team game plan, and switching between attack and defence. To achieve this effectively, players need to possess the necessary psychological skills (Hodge, Lonsdale, & McKenzie, 2005).

Outside of games, players must also meet an evolving array of demands to be successful in an elite environment. There are further challenges, such as being a commodity and getting selected. Since the professionalisation of the game, there is increased pressure on players in securing a contract as they have to compete with players that are moving between clubs and countries (Rayner, 2018). Phases of transition are also challenging for players, such as transitioning from junior to senior or academy to the first-team (Finn & McKenna, 2010).

Previous research has highlighted various challenges facing players on a talent development pathway. Specific challenges associated with players identified as talented are: coping with the academy to first-team transitions (Finn & McKenna, 2010) and why players with high potential often do not make it to the professional level (Taylor & Collins, 2019). Finn and McKenna (2010) revealed a comprehensive list of challenges faced by players during the academy to the first-team transition. They identified the following playing-related challenges: (i) increases in the physical challenges of a first team training and playing schedule; (ii) a need for players to continually train and work hard to prove their value to the team; (iii) the strain of developing new relationships with new coaches; (iv) the pressure of performing at the highest domestic levels of their sports and the challenges of earning respect from their more established yet still unfamiliar peers. Further lifestyle challenges include (v) social strains of significant others to engage in distracting social activities; (vi) pressure from agents; (vii) financial pressure and unhelpful behaviours such as high levels of alcohol consumption and poor diets (Finn & McKenna, 2010).

Further challenges faced by players with high potential that did not make it are lack of opportunity, physical characteristics, lack of social skills, lack of support and maladaptive family input (Taylor & Collins, 2019). Furthermore, players that are part of a talent development pathway may be investing extraordinary amounts of time and effort to be successful (Baker, Cote, & Abernethy, 2003) which can lead to burnout. Burnout is a syndrome characterised by (a) emotional and physical exhaustion, (b) sport devaluation, and (c) a reduced sense of accomplishment (Hodge, Lonsdale, & Ng, 2008). Hence, overcoming the concentration problems, mood swings, poor performance and potential to dropout from rugby associated with burnout, can be a challenge for players at the academy and youth level.

At youth level in Ireland, rugby player's typically dropout at two main transitions: moving from primary school to second level and when they level second level. At primary level almost 16% of fifth and sixth class children regularly play rugby. This decreases to 10% at second level and further decreases to 1-2% at adult level (ERSI report). In 2021, there are 67 players enrolled in the four provincial academies in Ireland and 80-85% of these players are predicted to progress to senior level (Tracey, 2021). The players that do not progress will typically not do so due to deselection with only a minority dropping out at this stage. Nevertheless, deselection and dropout could occur due to players not being able to overcome the challenges of the talent development pathway.

Research examining the stressors experienced by rugby players has mainly focused on professional-level players. Nicholls et al. (2006) reported on the stressors professional rugby players experienced during matches and training. The most cited stressors during this time were injury, mental error, and physical error. These findings were reinforced by the results of

Nicholls et al (2007) which stated the most frequently-cited stressors of Under 18 England international players were making a physical error, receiving coach/parental criticism, making a mental error, injury, and observing an opponent play well. In comparison, Nicholls, Levy, Jones, Rengamani, and Polman (2011) revealed that stressors such as opponents, coaches, playing an important match, and injuries were appraised as losses and gains by professional players. This finding suggests that these stressors could be seen as both challenges and threats to professional players and when providing support to players in it important to gain an understanding of their relational meaning of a situation. Acknowledging the limitation of just examining competitive stressors Nicholls, Backhouse, Polman, and McKenna (2009) explored the lifestyle stressors of professional rugby players. This study indicated that players rated diet, climate, sleep, and health as worse than normal on training days. In contrast, home-life, friends, and recreation were rated as significantly better than normal on rest days, highlighting the challenge of balancing rugby and life stressors.

The link between stressors and mental disorders have been examined at the professional level. Gouttebarge et al. (2018) examined the association between stressors and common mental disorders (CMD) such as distress, anxiety, sleep disturbance, eating disorders and adverse alcohol use. The results revealed that players that reported stressors, such as recent adverse life events or career dissatisfaction were likely to report symptoms of CMD. Although 95% of participants reported that symptoms of CMDs negatively affected their rugby performance, 46% also reported that specific support measures were not available in professional rugby. Concerning academy players, Hill, MacNamara, and Collins (2015) identified mental health issues as having an impact on their developmental processes and dealing with these issues resulted in players being away from the talent development environment and a reduction in effective interactions with the environment when the issue was present. Furthermore, coaches acknowledged the prevalence of mental health issues in rugby.

Still, it was suggested that there was a lack of awareness at both a macro and micro level within rugby.

Based on their findings, Nicholls, Jones, Polman, and Borkoles (2009) suggested that to deal with the stressors experienced by rugby players, it is necessary to adopt a strategic plan to develop mental skills that meet the needs of elite players. Lack of sufficient psychological resources was identified as the most common reason for the failure of high potential athletes, which suggests there is a need for more psychological training and support. Talent systems often fail to provide adequate support for athletes, particularly around transitional phases, and they lack understanding when athletes are engaging with a period of challenge (Stambulova, Alfermann, Statler, & Côté, 2009; Taylor & Collins, 2019; Wylleman et al., 2004). In Ireland, support for successfully making transitions is provided to players in Ireland by Rugby Players Ireland (RPI). RPI is a representative body that have three core principles: represent, develop, and engage. They aim to help players make successful transitions such as transition into academies and transitioning out of the sport after retirement. Therefore, players in Irish academies should have adequate support for dealing with transitions. However, it is unclear whether this support is effectively integrated into the support structures in all provincial academies. Research suggests that athletes who successfully progress, experience and successfully overcome a significant number of traumatic challenges, whether pathway-related or naturally occurring (Collins, Macnamara, & McCarthy, 2016). Players that overcome these challenges have the necessary PSCs to do so (Macnamara et al., 2010a) and they developed these PSCs either through their background and life experiences or through the explicit teaching of PSCs (Collins et al., 2016). Therefore, to overcome the challenges, players must be provided with development programmes that give them the opportunity to learn and develop PSCs that will assist them in dealing with the challenges they face.

2.4 PSCs and Talent Development in Rugby

Talent development programmes such as rugby academies aim to develop players to achieve at the highest level, namely play at the professional level. Nevertheless, previous research has been critical of the scientific foundation of such programmes (Abbott, Collins, Martindale, & Sowerby, 2002; Bailey & Collins, 2013; Durand-Bush & Salmela, 2001; Vaeyens et al., 2008). The model that typically underpins most rugby pathways is the Long Term Athlete Development model (World Rugby, 2019). The LTAD model's main aim is to produce more significant numbers of athletes who can excel at the highest level (Stafford, 2005). The late specialisation version of this model, which would be applied to rugby, consists of seven stages. These include active start (Males and Females 0-6 years), fundamentals (Males 6-9 years, Females 6-8 years), learn to train (Males 9-12, Females 8-11), train to train (Males 12-16 years, Females 11-15) train to compete (Males 16-23+/-, Females 15-21+/-) train to win (Males 19+/-, Females 18 +/) and active for life (Balyi & Hamilton, 2005). The LTAD was developed primarily as a physiological model to promote athletic excellence by ensuring that children learned fundamental movement skills during the optimal physical development stages (Banack et al., 2012). Many of the national rugby organisations have recognised the importance of PSCs for athlete development and, as a result, included their own ad hoc psychological components to their long-term plans. Nevertheless, the current psychological components have been added in an ad hoc fashion with limited and vague guidelines for implementation (Holt, 2010).

Considering the restrictions of the LTAD, Gagne's Model of Differentiating of Giftedness and Talent may be a more suitable model of talent development in sport (Vaeyens et al., 2008) This model distinguishes between gifts and talents and suggests that they are at either end of a continuum. Gagné (2004) considers gifts to be the raw materials and talent the end product of development. The model is "an established theory that captures the distinction between potential and achievement while recognising all possible determinants of expertise"

(Mills et al., 2012, p. 1594). Conversely, an athlete may have a natural ability, but it is only after a process of development and mastery of those abilities that they would be considered talented. A particular strength of this model is that it considers the psychological aspect of development, as it outlines the intrapersonal catalysts of motivation, volition and awareness as being significant in the talent development process. Nevertheless, this is a broad overview of the psychological factors impacting talent development.

In elite sport, psychological characteristics have been recognised as key to success. Nevertheless, researchers believe that their role in talent development has been undervalued (Bailey et al., 2010; Vaeyens et al., 2008). Previous research has indicated that the psychological characteristics needed for elite performance also aid in the successful progression through the development pathway (Macnamara et al., 2008). Goal management and psychological factors such as goal setting, realistic performance evaluation, imagery and commitment have been found to distinguish between medal and non-medal winners (Tranckle & Cushion, 2006). Furthermore, psychological characteristics are a determining factor in how an athlete deals with lifestyle challenges that are necessary to overcome to reach elite level (Abbott & Collins, 2004; Gould et al., 2002; Macnamara & Collins, 2011; Morris, 2000; Vaeyens et al., 2008). Therefore, it is well recognised that psychological factors are an important contributor to the development of elite athletic performance (Rees et al., 2016) and that PSCs are a key factor during critical developmental stages of an athlete's life (Newton & Holmes, 2017).

Similarly, a common reason given for athletes with high potential not being successful is despite having many of the prerequisite physical skills for elite sport, they do not have sufficient psychological resources (Holt & Mitchell, 2006; Taylor & Collins, 2019). The argument that potentially important PSCs are often overlooked within talent development environments has existed within the research for several years (Abbott & Collins, 2004;

Gledhill & Harwood, 2015). Even recently, research has highlighted that the provision of sport psychology consultancy services in rugby is not commonplace (Mellalieu, 2017). Therefore, suggesting that even though it is a challenging time for players, there is a lack of focus on PSCs throughout talent development pathways in rugby.

Players must possess a range of psychological characteristics to manage the challenges and stressors they may face. To develop these characteristics, they should be taught and assisted in developing a range of psychological skills. Dohme et al. (2019) highlighted a range of PSCs that are facilitative of youth development across a range of sports. Furthermore, the Psychological Characteristics of Developing Excellence (Macnamara et al., 2010a; Macnamara, Button, & Collins, 2010b) are a range of PSCs that have been suggested as relevant for young athletes negotiating development pathways (Collins, MacNamara, & Cruickshank, 2019). Nevertheless, Collins et al. (2019) indicated that this is a broad range of PSCs, and a list of PSCs for specific contexts may be needed. Conversely, Taylor and Collins (2019) reported that a full set of psychological skills should be taught as part of a curriculum in a development setting such as an academy. To effectively teach a curriculum of psychological skills, it must be structured in line with the demands and characteristics of the targeted sport (Holland, Woodcock, Cumming, & Duda, 2010). Hence, to provide effective support to players during their talent development pathway, we must identify the relevant PSCs that players need to possess to progress successfully in their specific sport.

The purpose of this review is to synthesise research examining the PSCs that contribute to rugby players overcoming challenges to reach their optimal performance. The aims of this review are to (i) collate the research on PSCs that contribute to the development and performance of talented rugby players, (ii) provide a rugby specific list of PSCs and (iii) highlight any limitations in the existing literature.

2.5 Method

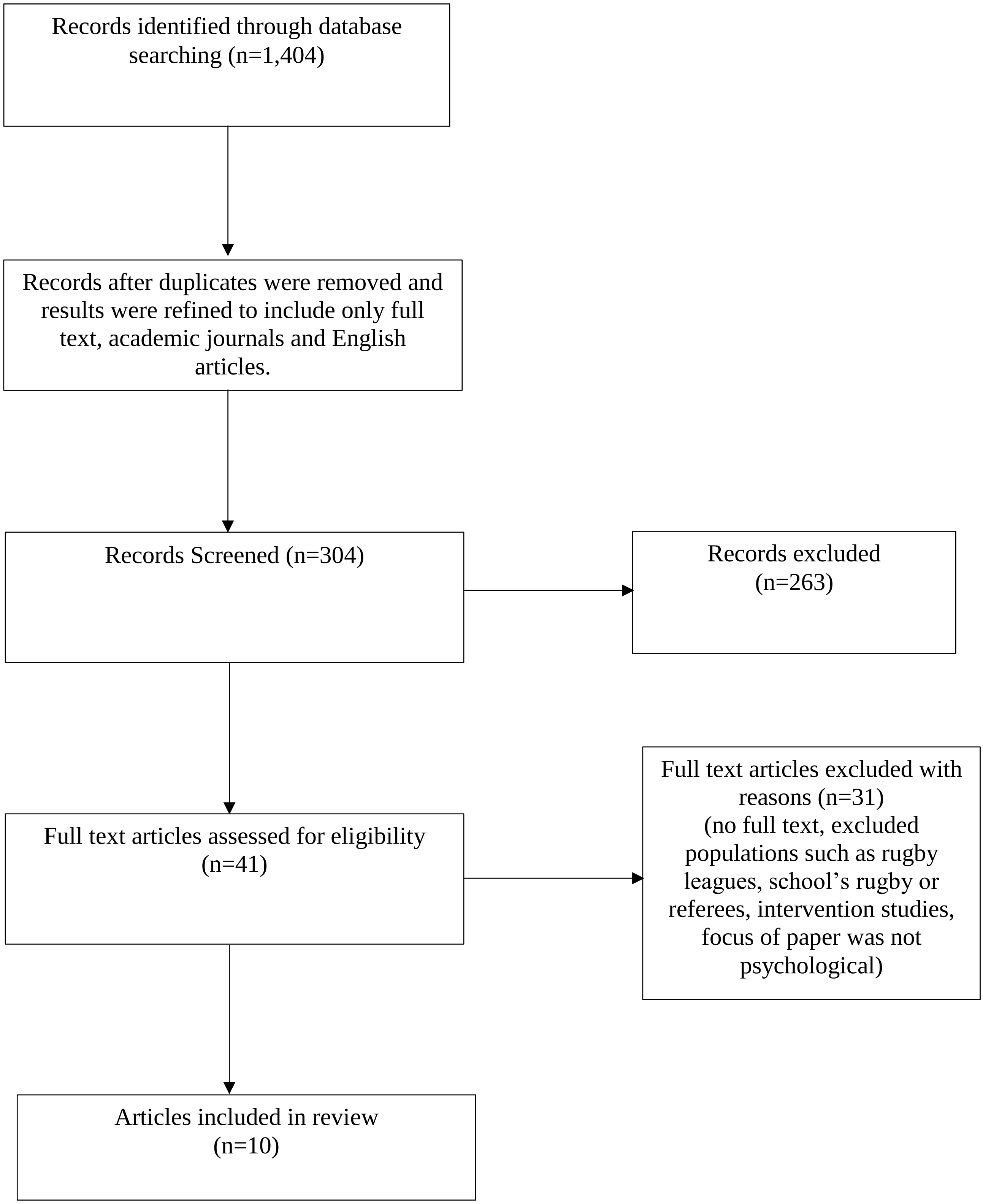
This chapter is a comprehensive review of the contribution of PSCs to the development and performance of talented rugby players. In an attempt to avoid confusion and ambiguity, this review will use the following terms when discussing the psychological aspect of talent development: *psychological characteristics* and *psychological skills*. The term psychological characteristics will refer to "qualities of the mind" (Dohme et al., 2016, p. 19) which are innate predispositions or traits. Psychological characteristics are relatively stable but can be enhanced or strengthened through systematic development (Dohme et al., 2016). The term psychological skills, nevertheless, will refer to "skills of the mind" (Dohme et al., 2016, p. 20), which is an individual's ability to use learned strategies to achieve specific a result. Therefore, psychological skills can enhance or develop psychological characteristics (Dohme et al., 2016).

A narrative review was considered to be a more appropriate method than a systematic review given the small number of studies in the area (Steidl-Müller, Hildebrandt, Raschner, & Müller, 2019). Nevertheless, as narrative reviews can be thought of as less objective than systematic reviews (Hudson, Males, & Kerr, 2016), the search strategy and selection process will be outlined.

Four databases were searched, including SportDiscus, PsycArticles, PsychINFO and Scopus. The key search terms used were "rugby" "psych*" "mental" and various combinations of these terms. Inclusion criteria were as follows: (1) electronically-accessible English language publication, (2) Full-text academic journal (3) original research rather than reviews (4) publications focusing on rugby rather than rugby league (5) publications that focused on talented populations such as youth or underage teams of professional teams, academies, and professional teams.

A flow diagram describing the detailed search strategy, exclusion criteria and article selection process is shown in Figure 1.

Figure 3.1 Flow diagram representing the process of inclusion and exclusion of papers



2.6 PSCs that contribute to success in rugby

Ten studies examining the PSCs of talented rugby players were identified for this review (Table 2.1). Four of these studies were exploratory studies that aimed to identify the PSCs of rugby players of different levels. The other six studies focused on how one or more PSCs impact a particular aspect of development or performance in rugby, e.g., injury rehabilitation or burnout. The research has suggested that a lack of a range of PSCs can negatively impact talent development, such as lack of commitment and lack of developmental awareness (Hill et al., 2015). Taylor and Collins (2019) further emphasised this idea as they stated that a lack of sufficient psychological resources could have an impact on talent development in rugby, including lack of motivation, commitment, coping skills, confidence, focus and self-regulation. This argument is supported by previous research, which has repeatedly reported these characteristics as being important for facilitating talent development in rugby.

Holland et al. (2010) conducted focus groups with 43 male rugby players to reveal the psychological characteristics they perceived to facilitate their development; included in their results are attentional focus, self-aware learner and confidence, which are closely linked to the psychological resources outlined by Taylor and Collins (2019). Nevertheless, they also reported further characteristics, which included enjoyment, responsibility, adaptability, squad spirit, determination, optimal performance state, game sense, and mental toughness. These characteristics were further confirmed when the perceptions of the parents, coaches and sports administration staff of the players that participated in the study were examined Holland et al. (2010). They revealed the same psychological characteristics as identified by the players as being important for their development (Woodcock, Holland, Duda, & Cumming, 2011). Commitment, attentional focus, and attention to detail were also identified as important for success in rugby (Corrado et al., 2014; Hill et al., 2015).

Holland et al. (2010) suggested that the characteristic of self-aware leaner is closely linked to self-regulated learning. Additionally, Hill et al. (2015) highlight self-regulated learning as a central characteristic of players that achieved success. With regards to development, self-regulated learning can be a process that facilitates learning, training, and competition as it makes it possible for athletes to develop their knowledge and skills more successfully (Zimmerman, 2006) and experience faster performance improvement. Characteristics such as growth mindset and grit were also identified by Hill et al. (2015) as being a central feature of athletes that achieved success. Nevertheless, they also suggested that the associated behaviours of these characteristics are operationalised through self-regulatory processes. Similarly, Hill et al. (2015) identified emotional intelligence as being important for development as players that can understand their emotions and manage them in a positive way are more likely to achieve success.

Table 2.1 Articles identified examining psychological skills and characteristics in rugby union

Year	Author(s)	Title	Sample Size	Gender	Average Age	Level of participants	Method	Psychological Skills and Characteristics
2019	Taylor & Collins	Shoulda, Coulda, Didnae—Why Don't High-Potential Players Make it?	10 Rugby Coaches	Male	37.8	Academy Coaches	Interviews	Motivation, commitment, coping skills, confidence, focus and self-regulation
2018	Hodge, Lonsdale & YY. NG	Burnout in elite rugby: Relationships with basic psychological needs fulfilment	133	Male	19.7	Academy	Questionnaires	Autonomy, Competence
2017	Carson & Polman	Self-determined motivation in rehabilitating professional rugby union players	5	Male	between 18 and 27	Professional	Interviews, Diaries, Questionnaires	Autonomy, Competence and Relatedness

2015	Hill, McNamara & Collins	Psychobehaviorally Based Features of Effective Talent Development in Rugby Union: A Coach's Perspective	15	Male	38.9	Academy Directors and Coaches	Interview	Cognitive Ability, Competitiveness, Confidence & Self-Belief, Consistency, Courage, Cultural Identity, Developmental Awareness, Driving Group Standards, Effective Communication, Emotional Intelligence, Flexibility & Adaptability, Game Understanding, Grit, Growth Mindset, Honesty, Leadership, Manage Transitions Successfully, Maturity (nonphysical), Commitment, Coping with Pressure, Focus & Distraction Control, Goal Setting, Planning & Self-Organisation, Quality Practice, Realistic Performance Evaluation, Resilience, Self-Awareness, Process Orientated, Self-Regulation.
2014	Corrado, Murgia & Freda	Attentional focus and mental skills in senior and junior professional rugby union players	90	Male	15.77 Junior professional players 26.40 Senior professional	Professional	Questionnaires	Attentional focus

2010	Holland, Woodcock & Cumming	Mental Qualities and Employed Mental Techniques of Young Elite Team Sport Athletes	43	Male	15.9	U-16 Regional development teams	Research groups	enjoyment, responsibility, adaptability, squad spirit, self-aware learner, determination, confidence, optimal performance state, game sense, attentional focus, and mental toughness. Personal performance strategies, reflection on action, taking advantage of a supportive climate, and team-based strategies.
2009	Sheard & Golby	Investigating The 'Rigid Persistence Paradox' In Professional Rugby Union Football	78	Male	23.7	Professional	Questionnaires	Passion
2006	Wilson, Hardy & Harwood	Investigating the Relationship Between Achievement Goals and Process Goals in Rugby Union Players	150	78 Males, 72 Females	24.31	Club to National level	Questionnaires	Self-Directed Task Self-Directed Ego Social Approval Task

2011	Woodcock et al	Psychological Qualities of Elite Adolescent Rugby Players: Parents, Coaches and Sports Administration Staff Perceptions and Supporting Roles	26	N/A	N/A	The parents, coaches, and sports administration staff of the elite adolescent rugby union players interviewed by Holland, Woodcock & Cumming (2010)	Focus groups	enjoyment, responsibility, adaptability, squad spirit, self-aware learner, determination, confidence, optimal performance state, game sense, attentional focus, and mental toughness. Personal performance strategies, reflection on action, taking advantage of a supportive climate, and team-based strategies.
2011	Hill & Appleton	The predictive ability of the frequency of perfectionistic cognitions, self-oriented perfectionism, and socially prescribed perfectionism in relation to symptoms of burnout in youth rugby players	202	Male	18.8	youth teams of professional and semi-professional rugby union clubs	Questionnaires	Perfectionism

Characteristics related to motivation, focus and confidence are commonly discussed within the talent development literature. Nevertheless, other characteristics that may have a significant impact on the development and performance of rugby players have also been identified, such as squad spirit (Holland et al., 2010). It has also been suggested that transitioning to higher levels in sport is facilitated by passion (Hill et al., 2015; Sheard & Golby, 2009) as it assists players in preserving in the less enjoyable activities of their development.

So far, the psychological characteristics discussed were revealed in exploratory studies. Nevertheless, some studies have attempted to examine how psychological characteristics help players deal with specific challenges. Researchers have examined how basic psychological needs fulfilment can identify burnout in elite rugby (Hodge, Lonsdale, & Ng, 2008) and assist players when rehabilitating from injury (Carson & Polman, 2017). Perceived basic needs fulfilment, in particular, autonomy and competence, are predictors of burnout in junior elite rugby players. Furthermore, developing autonomy, competence and relatedness while players are rehabilitating can facilitate the effective return to competition (Carson & Polman, 2017).

Characteristics that can have a negative impact on the development of players have also been identified in the literature. Hill et al. (2015) revealed a range of characteristics that can negatively impact effective talent development in rugby, including avoidance-based coping strategies, complacency, disorganised, failure to overcome challenges, inappropriate goals, lack of awareness, lack of commitment, loss of focus and mental health. Furthermore, it has been highlighted that those players with perfectionistic cognitions can suffer from burnout.

Although a wide range of psychological characteristics were identified in this review, less attention has been given to psychological skills, except for those that are related to self-regulated learning processes such as goal setting, planning and self-organisation and realistic performance evaluation (Hill et al., 2015) as well as key psychological skills for young rugby players, including personal performance strategies (e.g. relaxation, routines, self-talk, visualisation), reflection on action and taking advantage of a supportive climate (Holland et al., 2010; Woodcock et al., 2011). As most of the PSCs identified in this review come from exploratory studies, the lack of psychological skills identified may suggest that players are either not being taught or they are not employing psychological skills.

One of the aims of this review was to provide a rugby specific list of PSCs that can be taught to players and developed throughout their talent development pathway (Table 2.2). The PSCs highlighted in this review would help players deal with the range of challenges and stressors they face and help them to reach their potential. Learning a range of psychological skills can help players develop the psychological characteristics needed to negotiate these challenges and stressors. By implementing these skills and possessing the necessary characteristics, players can deal with the various challenges they face. PSCs do not have one isolated function; rather, they can be applied to various situations and challenges. For example, motivation is important for any athlete that wishes to seek excellence in their sport (Gagné, 2010). It can assist the player in dealing with playing challenges such as executing the team game plan, completing college work and proving value to the team. Motivation can be defined as "the investigation of the energisation and direction of behaviour" (Roberts & Treasure, 2012, p. 6). Intrinsic motivation is particularly important as individuals take part in an activity out of interest for the activity itself rather than external reward. To increase intrinsic motivation, three basic psychological needs must be met: competence, autonomy and relatedness (Deci & Ryan, 2008). Whereby autonomy refers to the experience of volition and having control; competence refers to a sense of effectiveness in an environment; and relatedness refers to a sense of belonging and connection with others in a given social context (Deci & Ryan, 2000). Therefore, motivation can be increased through the implementation of psychological skills such as planning, goal-setting, communication, process orientation and vicarious experience.

Similarly, a confident player can more effectively deal with challenges such as impressing in their first game, performing under pressure, and recovering after a mistake. Confidence can be developed through the use of self-talk, visualisation, reflection and routines. Furthermore, players must learn to cope with many challenges to their goals of reaching the highest level of their sport, including; pressure to perform, expectations from both themselves and family (Beckford et al., 2016), the physical challenge of first-team training, having to work hard to prove themselves and forming new relationships with new teammates and coaches (Finn & McKenna, 2010). Psychological skills such as concentration, goal setting, stress avoidance and coping skills such as peaking under pressure and freedom from worry (Smith & Smoll, 1995) can help players to better cope with these challenges.

Additionally, the ability to be flexible and adaptable was deemed to be a key feature of resilience for high performing athletes. Resilience can be defined as "the role of mental processes and behaviour in promoting personal assets and protecting an individual from the potential negative effect of stressors" (Fletcher & Sarkar, 2012, p. 675). Although differences exist between the two concepts (Gucciardi, Gordon, & Dimmock, 2008; Sheard, 2012), similarities exist between resilience and mental toughness, such as both deal with effectively overcoming and dealing with pressure, challenges and stressors (Cowden, Meyer-Weitz, & Oppong Asante, 2016). Mental toughness is "a personal capacity to produce consistently high levels of subjective or objective performance despite everyday challenges and stressors as well as significant adversities" (Gucciardi, Hanton, Gordon, Mallett, & Temby, 2015, p. 28). Resilience and mental toughness are associated with concepts. Therefore, psychological skills such as being able to compartmentalise, organise, plan and cope could help players become more resilient and mentally tough.

Table 2.1 Rugby specific list of psychological characteristics and skills of rugby

Psychological Characteristics	Psychological Skills
Motivation	Process orientation
Coping	Relaxation
Confidence	Routines
Concentration	Self-talk
Self-regulation	Stress avoidance
Autonomy	Vicarious experience
Competence	Visualisation
Relatedness	Goal setting
Flexibility & adaptability	Planning
Mental toughness	Self-organisation
Passion	Realistic performance evaluation
Perfectionism	Coping Skills
Commitment	Reflection
Resilience	Communication
Self-Awareness	Compartmentalisation
Emotional Intelligence	

2.7 Limitations of the current literature and future research

Overall, the literature examining the PSCs important for development and performance in rugby is limited. There is a lack of studies that have examined the PSCs of players over time. Furthermore, there is a lack of focus on the PSCs of professional rugby players, with the main focus on youth teams to the academy level within the research. To provide effective psychological support along the talent development pathway, it is important to understand these aspects of the professional level to prepare players with the skills to be successful at that level. Therefore, future research should explore professional samples. Of the four exploratory studies identified in this review, only one focused on the players' perceptions of their PSCs. Therefore, although it is suggested that a curriculum of psychological skills should be taught to rugby players across the talent development pathway, more player-focused research is needed to identify the PSCs important across the participation levels**.**

Furthermore, research examining PSCs in rugby has several limitations that need to be addressed. Firstly, even though our aim was to highlight PSCs that have been specifically identified with rugby populations, some studies examined a variety of sports. This focus on multiple sports highlights that rugby specific research is limited, and future research should take this into consideration. Furthermore, previous research has been characterised by a preponderance of studies examining the retrospective perceptions of coaches. The use of retrospective methods is a potential limitation as what individuals recall may be inaccurate. Retrospective interviews are dependent on the memories of participants and can, therefore, lack objectivity (Taylor, Collins, & Carson, 2017). Therefore, research must gather information from prospective methods such as measuring athletes' psychological characteristics over a period of time.

Longitudinal studies would be advantageous here and would provide a complete view of the challenges that players face and the PSCs that contribute to success across the talent development pathway (Abbott & Collins, 2004; Collins et al., 2016; Vaeyens et al., 2009; Vaeyens et al., 2008) and to the professional level. Access to larger elite athlete samples can be difficult (McNally, Eisenberg, & Harris, 1991). Therefore, a case study approach may be effective for exploring the PSCs of small samples of elite athletes in a specific talent development environment such as a professional academy. Furthermore, a case study would provide in-depth and meaningful information on a complex social phenomenon, i.e. how athletes navigate a talent development environment (Yin, 2009). Specifically, a mixed-method case study in which both qualitative and quantitative data are collected would provide a complete and comprehensive account of the phenomenon. The experiences of athletes can be sport and stage of talent development pathway-specific; for example, experiences of transitioning into an academy may differ from the experiences of transitioning to the professional level. Therefore case studies allow for an in-depth exploration of the real-life context of athletes (Yin, 2009).

A further pressing issue that needs to be addressed is how PSCs can help players negotiate through the academy and transition to the professional level, as these are critical stages in development (Mills et al., 2012). Even though previous research, (e.g. Finn & McKenna, 2010) has highlighted this period as a potentially difficult one, it has received little attention in the literature. The research identified in this review that studied the academy period was not solely focused on rugby and examined the perceptions of coaches rather than players.

With only ten papers identified in this review, it would suggest that there is still an absence of evidence in this area. Therefore, an opportunity exists for future research to strengthen the evidence for psychological training and support in rugby. Although the impact of psychological training and support can be examined for many potential challenges and stressors, may be the most relevant one currently is the psychological impact of Covid-19 restrictions on players. Research needs to examine the psychological impact on players of new challenges such as health concerns, social distancing, limited training and game time and lack of crowd attendance at games. Also, research needs to be conducted to examine potential ways to assist players in dealing with these challenges.

The limited number of studies examining the role of PSCs in talent development in rugby may be due to a lack of use of sport psychology within rugby. This lack of use may be a wider reflection of the attitudes of coaches and players towards sport psychology within rugby. As coaches are thought to be the gatekeepers of sport psychology (Pain & Harwood, 2004), it is important to understand their attitudes towards it as they may influence whether a player has access to psychological support or not. Several studies examining the attitudes of coaches have been conducted in the US and the UK (e.g.Pain & Harwood, 2004; Wrisberg, Loberg, Simpson, Withycombe, & Reed, 2010; Wrisberg, Simpson, Loberg, Withycombe, & Reed, 2009). Nevertheless, there is a lack of research comparing the attitudes of players and coaches. It may be the case that even when players have a positive attitude towards sport psychology and acknowledge the benefit of it for their development, negative attitudes of coaches may prevent the player from accessing it. Previous research has been conducted examining a range of Irish athletes and coaches understanding of and attitudes towards sport psychology in the past (Lavallee, Jennings, Anderson, & Martin, 2005; MacIntyre, Mahoney, & Moran, 1998; Scully & Hume, 1995). Nevertheless, current research focused on a particular sport in the Irish context is lacking. Sharp, Woodcock, Holland, Cumming, and Duda (2013) reported positive perceptions of UK rugby coaches towards a mental skills training programme. Nevertheless, a more comprehensive and specific examination of the use of sport psychology in rugby in Ireland is needed.

Although this review has identified a wide range of psychological characteristics that are important for development and performance in rugby, more attention needs to be given to the psychological skills that can enhance or develop these characteristics. Furthermore, future research should examine whether an educational and training programme based on the PSCs identified in this review would have positive effects on players navigating the talent development pathway to professional rugby.

2.8 Conclusion

This review aimed to synthesise research examining the PSCs that contribute to players overcoming challenges to reach their potential. Players need to possess a range of PSCs, including motivation, commitment, coping skills, confidence, focus and self-regulation, to navigate their talent development pathway in rugby successfully. Therefore, rugby players need to be exposed to and taught a wide range of psychological skills so they can develop the skills and characteristics to be able to deal with the challenges they face and reach their potential.

Chapter 3 - Study 1

A longitudinal study of the development of psychological skills and characteristics of rugby union players in a professional academy

3.1 Preface

In the current chapter, I will examine selected PSCs of twenty rugby players in a professional academy over the course of a full season. The literature review in Chapter 2 informed the choice of PSCs examined in the current chapter. The aims of this chapter were to examine (a) any changes in PSCs over the course of the season, (b) differences between those in the different years of the academy, (c) differences between those that are rated by coaches as likely to succeed or not. Seven self-report questionnaires measuring PSCs, including self-regulated learning, coping skills, perfectionism, goal orientation, motivation, basic needs satisfaction and performance strategies, were administered. This study revealed novel findings including (a) players in Year 1 of the academy scored higher in confidence, intrinsic motivation to experience stimulation, extrinsic motivation identified and reflection than those in Year 3; (b) those rated by coaches as moderately likely to succeed scored lower in coping with adversity than those that were rated as less likely to succeed; (c) PSCs were also found to predict the number of caps a player had, specifically ego orientation, basic needs satisfaction and extrinsic motivation.

3.2 Introduction

PSCs have been well established to be central for peak performance and success in sport (e.g. Gould et al., 2002; Williams & Krane, 2001). Research in recent years has extended these findings by examining the role of PSCs in athlete development (e.g. Abbott et al., 2002; Macnamara et al., 2010a; Macnamara & Collins, 2015). PSCs play an important role in talent development. The term psychological characteristics is used to describe "qualities of the mind" (Dohme et al., 2016, p. 19) that can be viewed as innate predispositions or traits. They are relatively stable but can be enhanced or strengthened through systematic development (Dohme et al., 2016). The term psychological skills, Nevertheless, is used to describe "skills of the mind" (Dohme et al., 2016, p. 20). This term refers to an individual's ability to use learned strategies to achieve a specific result. Therefore psychological skills can be used to enhance or develop psychological characteristics (Dohme et al., 2016).

Much of the research that has been conducted examining talent development in sport has focused on football (e.g. Feichtinger & Honer, 2015; Forsman, Blomqvist, Davids, Liukkonen, & Konttinen, 2016; Gledhill & Harwood, 2015; Holt & Dunn, 2004; Holt & Mitchell, 2006). For example, a recent review of junior to senior transitions identified football as the type of sport most researched at 37%. Rugby, nevertheless, was only examined as part of one multi-sport study (Drew, Morris, Tod, & Eubank, 2019). This highlights the lack of research examining talent development in rugby and the need to explore the role of PSCs in player development in rugby.

PSCs are important for talent development as they assist athletes in overcoming the challenges that are associated with progressing to elite sport (Ericsson, Krampe, & Tesch-Roemer, 1993). Research suggests that athletes that overcome significant challenges as they progress through their development pathway successfully progress to an elite level (Collins et al., 2016). Finn & McKenna (2010) investigated how athletes cope with the academy to the first-team transition in several sports. They identified the following challenges: increases in the physical challenges of a first-team training and playing schedule; a need for players to continually train and work hard to prove their value to the team; the strain of developing new relationships with new coaches; the pressure of performing at the highest domestic levels of their sports and the challenges of earning respect from their more established yet still unfamiliar peers. Further challenges have been highlighted, such as lack of opportunity, physical characteristics, lack of social skills, lack of support and maladaptive family input. (Taylor &

Collins, 2019). Therefore, the PSCs needed for successful performance may not necessarily be the same as those needed for development.

Previous research has attempted to identify the characteristics that are needed for development (Macnamara et al., 2010a, 2010b). As a result of this research, 10 PSCs were identified and termed Psychological Characteristics of Developing and Excellence (PCDEs). PCDEs include commitment, coping with pressure, having a vision of what it takes to succeed, imagery, focus, distraction control, social skills, goal setting, realistic performance evaluation, competitiveness, and game awareness. More recently, Dohme et al. (2019) conducted a systematic review of studies that identify PSCs that facilitate youth development. This review included the PCDEs, and the findings revealed 19 PSCs in total that facilitates youth development. They identified eight psychological skills (e.g., goal setting, social support seeking, and self-talk) and 11 psychological characteristics (e.g., self-confidence, focus, and motivation). Although these lists provide a synthesis of PSCs needed for athletic development, it may not be possible to have one list of PSCs that are suitable for all sports and development stages (Collins et al., 2019; Dohme et al., 2019). Recommendations from previous research are that the PSCs should be explicitly taught to athletes engaged in a talent development pathway. Nevertheless, PSCs needed for development may be context-specific and may vary between sport. Therefore, there is a need to explore the PSCs needed for each sport, how they develop over time and if differences exist between stages of development.

Research on PSCs in rugby is limited. As identified in Chapter 2, studies of an exploratory nature have been conducted to try and identify the PSCs of rugby players at different stages of development. Holland et al. (2010) conducted focus groups with 43 male rugby players to reveal the psychological characteristics they perceived to facilitate their development. PSCs identified in their results are attentional focus, being a self-aware learner, confidence, reflection on action and taking advantage of a supportive climate. These PSCs were further confirmed by Woodcock et al. (2011) when they interviewed the parents, coaches and sports administration staff of the players that were examined by Holland et al. (2010). Taylor and Collins (2019) reported similar results but also reported further characteristics, which included enjoyment, responsibility, adaptability, squad spirit, determination, optimal performance state, game sense, and mental toughness. Commitment, attentional focus and attention to detail, goal setting, planning, self-organization, and realistic performance evaluation have also been identified as important for success in rugby (Corrado et al., 2014; Hill et al., 2015)

Further studies have been conducted to examine how particular PSCs can help players deal with specific challenges. Researchers have examined how basic psychological needs fulfilment can identify burnout in elite rugby (Hodge, Lonsdale, & Ng, 2008) and assist players when rehabilitating from injury (Carson & Polman, 2017). Perceived basic needs fulfilment, in particular, autonomy and competence, are predictors of burnout in junior elite rugby players (Hodge, Lonsdale, & Ng, 2008). Furthermore, developing autonomy, competence and relatedness while players are rehabilitating can facilitate the effective return to competition (Carson & Polman, 2017).

Self -regulated learning strategies are considered important for development. Self-regulated learning can be a process that facilitates learning, training, and competition as it makes it possible for athletes to develop their knowledge and skills more successfully and experience faster performance improvement (Zimmerman, 2006). Holland et al. (2010) suggested that the characteristic of self-aware leaner is closely linked to self-regulated learning. Additionally, Hill et al. (2015) highlight self-regulated learning as a central characteristic of players that achieved success. Characteristics such as growth mindset and grit are thought to be operationalized through self-regulatory processes (Hill et al., 2015).

Motivation also underpins many of the characteristics necessary to successfully negotiate a talent pathway, such as commitment (Gagné, 2010). Hill et al. (2015) reported that intrinsic and extrinsic motivation should not be viewed as two ends of a continuum as extrinsic motives are just as important as intrinsic. Similarly, goal orientation is important for development. Athletes that are high in both task and ego orientation may be more successful in the talent development pathway. Conversely, athletes with this orientation will not only persist at a difficult task, but they may try harder because they are comparing their performance to others. (Gould, Eklund, & Jackson, 1992; Hayman, Borkoles, Taylor, Hemmings, & Polman, 2014).

To pursue a career in professional sport and successfully navigate a talent development pathway, athletes need to learn to cope with many stressors and challenges (Finn & McKenna, 2010; Holt & Dunn, 2004). Coping behaviours have been found to distinguish between youth players who successfully progressed into professional football and those who did not (Van Yperen, 2009). A talent development pathway in rugby requires a player to not only cope with stressors and challenges but achieve high standards and strive for excellence (Gucciardi, Mahoney, Jalleh, Donovan, & Parkes, 2012; Nerland & Sæther, 2016).

Perfectionism can drive a player to achieve high standards (Gucciardi et al., 2012). Nevertheless, it is a construct that has been considered both positive and negative. Therefore, it has been categorized into two main dimensions: perfectionist strivings and perfectionist concerns. Perfectionist concerns are maladaptive and perfectionist strivings facilitate the pursuit of high standards and excellence (Stoeber, 2011). Nevertheless, perfectionistic strivings have also been associated with negative outcomes when an athlete is faced with failure, such as decreases in performance, negative cognitions and emotions toward the task and self (Madigan et al., 2019). Although many of the PSCs discussed are considered positive for development, it is also important to examine PSCs that are considered to have a negative impact on development, such as maladaptive perfectionism.

The aim of the current study is to examine selected PSCs of rugby players in a professional academy over the course of a full season by identifying (a) any changes in selected PSCs over the course of the season, (b) differences between those in the different years of the academy, (c) differences between those that are rated by coaches as likely to succeed or not. A comprehensive list of PSCs needed for development in rugby does not exist (Collins et al., 2019). Therefore, the current study will examine a range of PSCs that have been highlighted as being important for development. These PSCs include self-regulated learning, coping skills, perfectionism, goal orientation, motivation, basic needs satisfaction and performance strategies.

3.3 Method

3.3.1 Design

This study followed a repeated measures design across four time points throughout a rugby season**.**

3.3.2 Context

The professional rugby clubs in Ireland consist of four provincial teams. Each of these teams has an academy that provides a route for players to progress to the senior team. The academy aims to prepare young players for professional rugby and beyond. The academy consists of a programme that players can follow for up to three years. The academy has, on average, twenty players a year. Approximately three of these players progress to the senior squad each year. Although the players are contracted and train full time with the academy or senior squad players, they are usually enrolled in university simultaneously. The rugby season for the academy runs for nine months, from September to May, with two months of preseason training running through July and August.

3.3.3 Participants

Twenty male rugby players (*M*age = 19.45, SD=.887) were recruited for this study. The sample represented an entire rugby provincial academy. Eight players were in Year 1 of the academy, eight in Year 2 and four in Year 3. Previous longitudinal research has been carried out on similarly small samples where access is challenging (McNally, Eisenberg & Harris, 1991). Access to these players was granted with permission from the academy management, and therefore, this is a convenience sample. It was made clear to the participants that their participation was optional and that their information would remain anonymous. Ethical approval was granted by the University ethics panel prior to data collection.

3.3.4 Measures

The self-report measures used in this study were chosen because they are all published questionnaires with evidence of validity and reliability (Saw, Main, & Gastin, 2015).

Test of Performance Strategies -2 (TOPS-2; Appendix A)

We assessed athletes' use of psychological skills during practice (32 items assessed facets relating to goal setting, self-talk, imagery, attentional control, emotional control, activation, relaxation, and automaticity) and competition (36 items assessed facets relating to goal setting, self-talk, imagery, negative thinking, attentional control, emotional control, activation, relaxation, and automaticity) using the 68-item Test of Performance Strategies (TOPS-2; Hardy, Roberts, Thomas, & Murphy, 2010). Each of the items describes a specific situation that the athletes may encounter in their practice or competition. An example item from the imagery in practice subscale is, "During practice, I visualize successful past performances." Participants indicated how frequently the situation applied on a 5-point Likert scale (1 - never;

5 - always). TOPS has Cronbach alpha values for competition ranging from .62 (Automaticity) to .89 (Emotional Control) and for practice ranging from .71 (Activation) to .85 (relaxation) (Hardy, Roberts, Thomas, & Murphy, 2010).

Athletic Coping Skills Inventory-28 (ACSI-28; Appendix B)

The Athletic Coping Skills Inventory - 28 (ACIS-28; Smith & Smoll, 1995) is a 28-item scale measuring seven subscales of athletic coping skills, including coping with adversity, peaking under pressure, goal setting and mental preparation, concentration; freedom from worry, confidence and achievement motivation, and coachability. The participants were asked to respond to each statement using a 4 point scale (0 = almost never to 3 = almost always) while considering how often they had these experiences when playing sports (e.g., I put a lot of pressure on myself by worrying about how I will perform"). Scores of each subscale ranged from a low of 0 to a high of 12. Athletes should be scoring at least ten if they are efficient in the skill (Hidrus, Kueh, & Kuan, 2016). The ACSI-28 has a full-scale internal consistency of .86, and subscale alphas range from .62 to .78 (Smith & Smoll, 1995).

Self-Regulation of Learning - Self-Report Scale for Sport Practice (SRL-SRS for Sport Practice Appendix C)

SRL-SRS for Sport Practice was used to assess six self-regulated learning processes planning (8 items), self-monitoring (4 items), evaluation (4 items), reflection (2 items), effort (8 items) and self-efficacy (5 items). The scale consists of 31 items measured on a scale ranging from 1 (Almost Never) to 7 (Almost Always). Example items include: "I determine how to approach a practice task before I begin" (Planning), "I check aspects of my workout while doing it" (self-monitoring), "I double-check to make sure I did practice tasks right" (evaluation), "I often think about my past experiences at practice to gain new insights" (reflection), "I put forth my best effort when performing tasks at practice" (effort), "When I am confronted with a difficulty during practice, I can usually find several solutions" (self-efficacy). The SRL-SRS for Sport Practice has demonstrated acceptable reliability with Cronbach alpha values between 0.62 - 0.87 (Bartulovic, Young, & Baker, 2017).

Basic Psychological Needs in General Scale (BPNS in General; Appendix D)

The Basic Need Satisfaction in General scale (Deci & Ryan, 2000; Gagné, 2003) was used to measure the satisfaction of the needs for autonomy (7 items), competence (6 items) and relatedness (8 items). The scale consists of 21 items measured on a scale ranging from 1 (not at all true) to 7 (very true). Example items include: "I generally feel free to express my ideas and opinions" (autonomy), "People I know tell me I am good at what I do" (competence), and "I get along with people I come into contact with" (relatedness). Cronbach alpha values for the three subscales range from .69 to .86 (autonomy = .69, relatedness = .86, and competence = .71).

Sports Motivation Scale-II (SMS-II; Appendix E)

The Sports Motivation Scale-II (SMS-II;Pelletier, Fortier, Vallerand, & Tuson, 1995) is used to measure why athletes participate in their sport. The SMS-II is a 28- item questionnaire is made up of seven subscales of sports motivation: (a) Intrinsic motivation—to know (e.g. "For the pleasure it gives me to know more about the sport that I practice", (b) Intrinsic motivation—to accomplish (e.g. "Because I feel a lot of personal satisfaction while mastering certain difficult training techniques") (c) Intrinsic motivation—to experi- ence stimulation (e.g. "For the pleasure I feel in living exciting experiences") (d) Extrinsic motivation—identified (e.g. "Because, in my opinion, it is one of the best ways to meet people"), (e) Extrinsic motivation—introjected (e.g. "Because, in my opinion, it is one of the best ways to meet people"), and (f) Extrinsic motivation—external regulation ("Because it allows me to be well regarded by people that I know"), (g) amotivation ("I used to have good reasons for doing sport, but now I am asking) myself if I should continue doing it"). Using a 7-point scale ranging from 1 (does not correspond at all) to 7 (corresponds exactly), participants are asked to indicate the extent to which an item corresponds to their reason for participating in sport. Cronbach alpha values for SMS-II vary from .74 to .80, except for the identification subscale, which has an alpha value of .63 (Pelletier et al., 1995).

Task and Ego Orientation in Sport Questionnaire (TEOSQ: Appendix F)

Task and Ego Orientation in Sport Questionnaire (Duda, 1989) is a 12-item measure that is used to assess whether athletes defines success in a sporting context as "task-oriented" (e.g. I learn a new skill by trying hard) or "ego-oriented." (e.g. "I am the only one who can do the play or skill"). Items are scored on a 5-point scale from "strongly disagree" to "strongly agree.". The Cronbach alpha coefficients for the task and ego orientation subscales have been reported as .82 and .89 (Duda, 1989).

Sport Multidimensional Perfectionism Scale-2 (SMPS-2; Appendix G)

The Sport Multidimensional Perfectionism Scale-2 (Gotwals & Dunn, 2009) a 42-item instrument that assesses six dimensions of perfectionism in sport: Personal Standards (PS), Concern Over Mistakes (COM) Perceived Parental Pressure (PPP) and Perceived Coach Pressure (PCP), Doubts About Action (DAA) and Organisation (Org). The participants rated the extent to which they agree with each item using a 5-point scale (1 = strongly disagree; 5 = strongly agree). Scores are calculated by averaging the items of each subscale. Higher values mean greater orientation in that subscale. Example items include: "If I do not set the highest standards for myself in my sport, I am likely to end up a second-rate player" (PS), "Even if I fail slightly in competition, for me, it is as bad as being a complete failure" (COM), "My parents set very high standards for me in my sport" (PPP), "I feel like my coach criticizes me for doing things less than perfectly in competition" (PCP), "I usually feel uncertain as to whether or not my training effectively prepares me for competition" (DAA), "On the day of competition I have a routine that I try to follow" (OR). Cronbach values for SMPS-2 range from .84 to .87 across the four subscales (Gotwals & Dunn, 2009).

3.4Procedure

Participants were provided with a participant information sheet (Appendix H) and informed consent form (Appendix I) online outlining the purpose of the study and how the data collected will be used and stored. After providing informed consent, the participants completed questionnaires online through SurveyMonkey at four time points throughout the season (Baseline - Preseason, Time1 -Beginning of Season, Time 2- Mid-Season and Time 4 - End of Season). The schedule of measures administered can be seen in Table 3.2. Even though the questionnaires were collected online, players completed the questionnaires in groups in a computer lab at each time point so that the researcher could be present. Being present meant the researcher was available for any questions and clarifications the players might have had when completing the questionnaires. A selection of questionnaires were used at different time points due to time restrictions. Access to elite athletes within a talent development environment can be difficult (Cumming, Turner, & Jones, 2017; McNally et al., 1991). Therefore an agreement was made with the academy management that testing would be scheduled for an hour at the beginning and end of the season and 30 minutes during the season. The questionnaires completed during the season were those where the most changes were expected to occur, and that could be completed within the allotted time—table 3.1 outlines which questionnaires were used at which time point.

Table 3.2 Measures administered at each time point

Baseline	Time 1	Time 2	Time 3
TOPS 3			TOPS 3
ACSI – 28	ACSI – 28	ACSI – 28	ACSI – 28
TEOSQ	TEOSQ	TEOSQ	TEOSQ
BPNS in general	BPNS in general		BPNS in general
SMPS			SMPS
SMS II		SMS II	SMS II
SRL-SRS for Sport Practice			SRL-SRS for Sport Practice

3.5 Data Analysis

Prior to the main analyses, Shapiro Wilks tests were performed. As the presence of significant ($p<.05$) outliers were indicated, then Z scores for significant outliers were assessed. Following guidelines for small sample sizes, data point with Z scores greater than two were Winsorized (Smith, 2011). Simple mean imputation was used to replace the data from 4 participants from the last time point (Cumming et al., 2017).

The main analyses followed three steps. First, Kruskal Wallis tests were performed to (a) examine if there were differences between year groups on a range of PSCs, and (b) to examine if there were differences between the mean scores of three groups based on their likelihood to succeed – least likely, moderately likely, highly likely. Kruskal Wallis was used because the small sample size and unequal groups of participants meant that the scores of dependent variables were unlikely to be normally distributed. Second, a multiple regression analysis was conduct to see if PSCs predicted the number of caps a player had. Finally, to examine the differences in PSCs over time, a series of repeated measures tests were conducted;

(a) Wilcoxon signed-rank tests were conducted to determine if perfectionism, self-regulated learning and performance strategies differed from start to end of the season; (b) repeated measures ANOVAs were conducted to examine differences over time for coping, ego, task, intrinsic motivation and extrinsic motivation. All multicollinearity, homogeneity, normality and outlier checks met the assumptions necessary for all data analyses.

3.6 Results

Differences between the mean scores of PSCs for different year groups

A Kruskal Wallis test was used to examine if there are differences in the PSCs of players depending on the year of the academy they are in: Year 1 (n=8), Year 2 (n=8) and Year 3 (n=4). Fifty-four PSC variables, including total scale scores and subscale scores, were assessed, of which six were statistically significantly different between year group. Subsequently, pairwise comparisons were performed using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons. Adjusted p-values are presented. Results revealed that the following PSCs were statisitically significant different between year groups: **confidence** X^2 (2) = 6.649, p=.036, the post hoc analysis revealed statisitcally significant confidence scores between Year 3 (mean rank = 4.00) and Year 1 (mean rank = 13.25) (p=.010); **intrinsic motivation experience stimulation** X^2 (2) = 7.494, p=.024, the post hoc analysis revealed statistically significant intrinsic motivation experience stimulation scores between Year 3 (mean rank = 4.88) and Year 1 (mean rank = 14.44) (p=.025); **external motivation identified** X^2 (2) = 11.045, p=.004, of 7.06, the post hoc analysis revealed statisically significant external motivation identified scores between Year 3 (mean rank = 6.63) and Year 2 (mean rank = 15.88) (p=.032) and between Year 1 (mean rank = 7.06) and Year 2 (mean rank = 15.88) (p=.009); **reflection** X^2 (2) = 11.126, p=.004, the post hoc analysis revealed statisically significant reflection scores between Year 3 (mean rank = 3.50) and Year 1 (mean rank = 15.00) (p.004); overall **extrinsic motivation** X^2 = 7.705 , p=.021, the post hoc analysis revealed no statistically significant difference in overall extrinsic motivation scores between Year groups.

Differences between the mean scores of three groups based on their likelihood to succeed – least likely, moderately likely, high likely

A Kruskal-Wallis test was performed to examine if there were any differences in PSCs of three groups that were rated by coaches as less likely to succeed, moderately likely to succeed and highly likely to succeed (Table 3.3): less likely (n=4), moderately likely (n = 10), highly likely (n=6). 54 PSC variables were again assessed for these groups, of which two were statistically significantly different between the groups. Subsequently, pairwise comparisons were performed using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons. Adjusted p-values are presented. Results revealed that there were significant differences in the following PSCs: ***coping with adversity*** X^2 (2) = 6.098, p=.047, the post hoc analysis revealed statistically significant coping with adversity scores between moderate (mean rank = 7.35) and less likely groups (mean rank = 15.13) (p=.047); ***reflection*** X2 (2) = 7.063, p=.029, the post hoc analysis revealed statistically significant reflection scores between less likely (mean rank = 3.75) and moderately likely (12.60) (p=.027).

Table 3.3 Players rated as highly likely, moderately likely and less likely to succeed according to Year of Academy

Year of Academy	Highly Likely	Moderately Likely	Less Likely	Total
Year 1	2	6	0	8
Year 2	3	3	2	8
Year 3	1	1	2	4
Total	**6**	**10**	**4**	**20**

Prediction of number of playing caps based on PSCs

Multiple regression analyses were used to assess whether PSCs were able to predict the number of playing caps of players. The total scores for coping skills, self-regulated learning, perfectionism, basic needs satisfaction, task orientation, ego orientation, intrinsic motivation and extrinsic motivation were included in the multiple regression. The multiple regression model statistically significantly predicted the number of playing caps, $F(8, 11) = 6.318$, $p=.003$, adj. $R2 = .69$. Ego orientation, basic need satisfaction and extrinsic motivation added statistically significantly to the prediction, $p < .05$. Regression coefficients and standard errors can be found in Table 3.4..

Table 3.4 Multiple regression results for PSCs

PSCs	*B*	95% CI for *B*		*SE B*	β	R^2	ΔR^2
		LL	UL				
Model						.906	.821*
Constant	84.509***	48.688	120.329	16.275			
Basic Need Satisfaction	-2.541*	-4.364	-0.718	0.828	-0.87		
Intrinsic Motivation	-.538	-3.889	2.813	1.522	-0.077		
Extrinsic Motivation	-2.030**	-3.168	-0.891	0.517	-0.656		
Self-Regulated Learning	-.466	-1.5	0.568	0.47	-0.255		
Perfectionism	-1.204	-2.707	0.299	0.683	-0.422		
Ego Orientation	4.684*	0.902	8.465	1.718	0.66		
Task Orientation	-1.887	-11.775	8.001	4.493	-0.125		
Coping Skills	.224	-0.319	0.767	0.247	0.232		

Note. Model = 'Enter' method is SPSS statistics; *B = unstandardised regression coefficient; CI= confidence interval; LL=lower limit; UL=upper limit; SE B = standard error of the coefficient;* β = standardised coeffient; R^2 = coeffient of determination; ΔR^2 = adjusted R^2. *p<.05. **p<.01. ***p<.001

PSCs scores across time

Wilcoxon signed-rank tests were conducted to determine if **perfectionism, *self-regulated learning and performance strategies*** differed from start to end of the season. Of the 20 participants recruited to the study, perfectionism increased in 5 participants, whereas 15 decreased. There was a statistically significant median decrease in perfectionism at the end of the season compared to the beginning of the season, Z= 2.24, p=.025. Overall, self-regulated learning did not reveal any significant changed from the start to the end of the season. Nevertheless, when the individual subscales were examined, ***self-monitoring*** scores were significantly different, z=-2.116, p=.034. The scores of fourteen players decreased from the start to the end of the season. From the range of the performance strategies measured ***emotional control*** in competition significantly increased, z=3.03, p=.002; ***imagery in competition*** significantly decreased, z=2.46, p=.014; ***activation in competition*** increased, z= 2.58, p=.010; ***relaxation in competition*** decreased, z=3.78, p<.05; ***self talk in practice*** increased, z=3.93, p<.05; ***relaxation in practice*** decreased, z=3.69, p<.05; ***attentional control in practice*** *increased*, z= 3.38, p=001.

A series of repeated measure ANOVAs were conducted to examine differences over time for ***coping, ego, task, intrinsic motivation and extrinsic motivation***. There were no statistically significant differences between the means at the different time points for any of these variables.

3.7 Discussion

The purpose of this study was to examine selected psychological characteristics and skills of elite rugby players in a professional academy over a season. Specifically, this study aimed to examine how these PSCs differed between year groups, players grouped on their likelihood to succeed and from the start of the season to the end of the season. The current study is novel in its approach to examining the PSCs of elite athletes as it a longitudinal study and monitored the PSCs of players over an entire season. Previous research has mainly focused on retrospective interviews or cross-sectional studies.

Furthermore, the results of this study revealed several novel and important findings. Interestingly, players that were in Year 1 of the academy scored higher in confidence, intrinsic motivation to experience stimulation, extrinsic motivation identified, reflection than those in

Year 3. These results are interesting when one considers that those in Year 3 are those that are due to make the transition to the professional level. Nevertheless, the transition to the professional level has long been recognized as a difficult and complex transition (Stambulova, 2009). A possible explanation for these findings is that there are a lot of expectations and demands on players trying to make the transition to the professional level, and this may have an impact on their confidence and motivation. Further, there is a high degree of uncertainty at this time for Year 3 players as they wait to find out whether they will be offered a professional contract or be deselected. This is also an interesting finding as it could have been expected that Year 1 would be lower in confidence while they became familiar with the academy setting. Nevertheless, many players in the academy would have been part of the sub-academy before progressing to the academy, so it may be that the transition from sub-academy to the academy is not as difficult of a transition for players.

Motivation, in particular, is considered a critical component of talent development and is related to reaching high levels of achievement (Gagné, 2010). Nevertheless, motivation is a characteristic that is acquired and can be cultivated over time through coaching (Olszewski-Kubilius, Subotnik, & Worrell, 2015). Furthermore, self-regulated learning strategies such as reflection are important for those that are at the higher stages of talent development so they can identify their own strengths and weaknesses in terms of the required skills needed to make make the transition to the professional level (Olszewski-Kubilius et al., 2015). Again, players must be explicitly taught these strategies so they can implement them as they move through the talent development pathway (Stoeger, Fleischmann, & Obergriesser, 2015). Therefore, it may be that PSCs such as confidence, motivation and reflection were not emphasized and developed enough while those players in Year 3 progressed through the academy and therefore decreased over time.

When examining the differences between those rated by the coaches as being likely or less likely to succeed, the results showed that those rated as moderately likely to succeed scored lower in coping with adversity than those that were rated as less likely to succeed. These findings differ from previous research that suggests that successful athletes are better at coping with adversity and engaging in self-regulated learning strategies such as reflection (Alfermann & Stambulova, 2007; Stambulova, 2009; Stoeger et al., 2015). An explanation of these findings may be that those rated as less likely to succeed may have had to overcome more obstacles to reach the academy stage than others. If coaches rated them as less likely to succeed, it might be because they perceive they lack some skill or characteristic to succeed, or it may be that there are others in that position that they perceived as more talented overall. Therefore, those rated as less likely to succeed may have developed skills like coping with adversity while overcoming obstacles in their talent development pathway. Even though players, such as those rated moderately likely to succeed, may lack some PSCs, it is still possible for them to reach professional level due to the phenomenon of the compensation effect. That is that athletes that lack capability in one area may compensate for that by having a high level of capability in another area (Bartmus, Neumann, & de Marees, 1987). These findings may also be due to the fact that six of the ten players rated moderately likely to succeed were in Year 1 of the academy and may not have developed the skills or characteristics to succeed yet. Research has suggested that those that face challenges early in their development have the opportunity to learn and implement skills that will help them overcome those and future challenges (Collins & MacNamara, 2012).

In the current study, PSCs were also found to predict the number of caps a player had, specifically; ego orientation, basic needs satisfaction and extrinsic motivation. The findings revealed that ego orientation is positively correlated to the number of caps a player has, whereas basic needs satisfaction and extrinsic motivation are negatively correlated. The findings, in terms of ego orientation and extrinsic motivation, confirms previous research. Ego orientation is linked to success in elite sports (Gould et al., 1992). At the same time, ego orientation is often viewed as maladaptive because athletes evaluate their performance only in terms of others. Nevertheless, if an athlete is high in both task and ego orientation, they may perform better. Conversely, athletes with this orientation will not only persist at a difficult task, but they may try harder because they are comparing their performance to others (Hayman et al., 2014). Although it did not significantly contribute to the regression model, most players in the current study also scored high in task orientation. Therefore, as suggested by previous research, it may be the combination of both goal orientations that contribute to achieving playing caps. Similarly, intrinsic, and extrinsic motivation should not be viewed as two ends of a continuum where intrinsic motivation is positively correlated to performance and extrinsic motivation negative correlated to performance. Instead, in talent development, extrinsic motives are just as important as intrinsic. Therefore, athletes could pursue excellence both for the love of the sport and also to ultimately win (Gagné, 2010).

The finding that basic needs satisfaction is negatively correlated to the number of caps is novel. Basic need satisfaction is typically positively associated with success in sport (e.g., Cheon, Reeve, Lee, & Lee, 2015; Gaudreau et al., 2016). As we do not know the cause and effect relationship, it is only possible to speculate as to a reason for these findings. It may be that as players get capped, they are spending more time with senior players and the senior squad as a whole. Therefore, they may not feel as competent in comparison to their senior counterparts, that they have any control or autonomy over their training or playing, and they may find it more difficult to relate to members of the senior squad while they are still in the academy. Therefore, it may be that the environment of those not being capped is more conducive to satisfying the basic psychological needs (Deci & Ryan, 2000).

Perfectionism, self-monitoring, imagery in competition and relaxation in competition all decreased from the start to the end of the season. Whereas emotional control, activation in competition, self-talk in practice all increased from the start to the end of the season. That changes in PSCs were revealed over the course of the season would suggest that it is possible for them to be developed and enhanced (Cobley & Till, 2017). The changes in these PSCs over time may be because that these PSCs were not emphasized and developed with the players throughout the season. Previous research has suggested that psychological skills are key determinants for athletes to successfully negotiate talent development pathways (Henriksen et al., 2010). Nevertheless, despite the importance of PSCs, they are often not taught in a consistent, explicit manner in academies (Larsen et al., 2012). Therefore, it is necessary to ensure that development programmes incorporate holistic skills training that contains a wide range of cognitive, perceptual and motor skills (Janelle & Hillman, 2003).

The findings of this study have several implications for practice. PSCs should be deliberately taught to players, and what should be taught should be as a result of considering the context they are in. PSCs should be developed early so players can implement them as they need them in the future, but they should also be consistently emphasized with the talent development environment. Particular support should be given to players as they move through the years in the academy, as the final year can be particularly stressful due to the potential for deselection or preparation for transition to the professional level. The current study revealed that Year 3 players were lower in confidence, and players low in confidence may struggle with either deselection or the professional transition.

There are several limitations in this study, specifically, the small sample size and use of self-report questionnaires. The sample in this study represented an entire provincial academy in Ireland. Similar small samples have been used in previous longitudinal research where access is challenging (Cumming et al., 2017; McNally et al., 1991). Although there were only

20 participants in this study, it was roughly 25% of rugby academy players in Ireland at the time of testing. Each of the other three provincial academies had similar numbers of players at that time. This would suggest significant external validity in a population that is small and which can be difficult to access (Cumming et al., 2017). Furthermore, as this study used self-report questionnaires, there is a possibility that the scores of the players could have been influenced by social desirability bias. Although players were assured that scores would be kept anonymous, it is possible that some player's answered questions about how they thought they should rather than truthfully. This is possible due to the competitive nature of the academy. Another limitation of this study is that there was a limited amount of PSCs tested. Although an effort was made to test a wide range of PSCs, nevertheless, due to time constraints, not all PSCs that have been previously identified as being important for talent development were tested.

3.8 Conclusion

The current study conducted an exploration of the PSCs that are important in a professional rugby academy. It specifically examined how these PSCs differed between year groups, players grouped on their likelihood to succeed and from the start of the season to the end of the season. The findings of this study suggested that those in their final year of the academy can be lower in confidence, aspects of motivation and self-regulated learning than those in their first year of the academy and, therefore, may need more support during this time. Players that are rated as more likely to succeed may be less able to cope with adversity than those that are less likely to succeed. This may be due to the differences in obstacles they have had to overcome early in their development. Furthermore, a range of PSCs can predict the number of playing caps a player has achieved. This study revealed novel findings and added weight to previous research that suggests that PSCs are important for successful talent development.

Chapter 4 - Study 2

A case study of the role of psychological characteristics and skills in negotiating a professional rugby union academy

4.1 Preface

In the current chapter, I will use a mixed-methods approach to (a) profile the PSCs of these players and (b) understand and explore the experiences of rugby players within an Irish provincial academy. Chapter 4 provides an in-depth examination of the data of four of the participants from Chapter 3. To gain further explanation and confirmation for the scores of the psychometric inventories examined in Chapter 3, interviews were conducted with the four participants. The results of the interview, along with the results of the psychometric inventories, are presented in the current chapter. Thematic analysis of the interview data identified three higher-order themes: PSCs needed to negotiate the academy, challenges of being part of an academy, support in developing PSCs. Findings from this chapter, in particular, that players felt they did not have enough access to psychological support in comparison to other sport science support formed the basis of the study conducted in Chapter 5.

4.2 Introduction

Talent development is a complex process, and as a result, athletes need to overcome a range of demands and challenges as they negotiate a talent development pathway to the elite level (Collins & MacNamara, 2012). A talent development pathway refers to programmes that aim to identify and support potentially talented athletes in their effort to reach the elite level (Webb, Collins, & Cruickshank, 2016). To effectively support players in reaching the elite level, it is important for sport psychologists to be able to identify, manage and deliver to the contextual demands of an academy setting (Keegan, Stoljarova, Kessler, & Jack, 2020). Therefore, it is important to understand what it takes for a player to negotiate a talent development pathway successfully. Talent development pathways are often non-linear (MacNamara & Collins, 2014). A typical pathway for those aiming to reach a professional level in rugby union in

Ireland would be progressing from provincial underage teams to provincial sub-academy through to academy and finally to the senior professional team.

Previous research has examined different aspects of the talent development process; Nevertheless, many studies in the area of talent development have focused solely on the sport of football (e.g. Feichtinger & Honer, 2015; Forsman et al., 2016; Gledhill & Harwood, 2015; Holt & Dunn, 2004; Holt & Mitchell, 2006). For example, from the studies identified in a recent review of qualitative research in junior to senior transitions, football was the type of sport most researched at 37% in comparison to the next highest, which was track and field at 11%. Rugby, on the other hand, was only examined as part of one multi-sport study (Drew et al., 2019). Although studies have examined aspects of talent development in rugby, such as identifying facilitative and maladaptive psychological characteristics that impact talent development (Hill et al., 2015) and why potentially talented players do not succeed (Taylor & Collins, 2019) they have mainly focused on coaches views and experiences. There is a lack of research on the player's experience of a talent development pathway in rugby.

Research suggests that it is those athletes that experience and successfully overcome a significant number of challenges, whether pathway-related or naturally occurring, that successfully progress to an elite level (Collins et al., 2016). Rugby players face a range of demands and challenges when negotiating a talent development pathway, such as progression through an academy structure. Finn & McKenna (2010) explored how players cope with the academy to first-team transition in several sports, including rugby union. They identified the following challenges: increases in the physical challenges of a first-team training and playing schedule; a need for players to continually train and work hard to prove their value to the team; the strain of developing new relationships with new coaches; the pressure of performing at the highest domestic levels of their sports and the challenges of earning respect from their more established yet still unfamiliar peers. Further challenges were highlighted by Taylor & Collins

(2019) such as lack of opportunity, physical characteristics, lack of social skills, lack of support and maladaptive family input. The development of PSCs are important in assisting athletes in navigating the significant period of hardship that they can experience when aiming to reach an elite level in sport (K. A. Ericsson et al., 1993).

An athlete needs to be situated in a talent development environment that offers them the opportunity to develop these PSCs to cope with these aforementioned challenges. A talent development environment is one that equips athletes with a wide range of cognitive, perceptual and motor skills that may distinguish between the best performers at later stages in their career (Martindale et al., 2007). PSCs have been highlighted as an important factor during these critical developmental stages of an athlete's life (Dohme et al., 2019; Drew et al., 2019; Newton & Holmes, 2017). Dohme et al. (2019) highlighted a range of PSCs that are facilitative of youth development across a range of sports. Constructs such as coping, self-regulation, and perfectionism cover a range of the PSCs outlined by Dohme et al. (2019) and could be key for negotiating the pathway to professional rugby. Holt and Dunn (2004) argued that to pursue a career in professional sport, athletes need to learn to cope with stressors. Similarly, Lazarus (2000) suggested that it is the inability to cope with stress that is a significant factor in whether athletes fail to function in many types of athletic performance. The ability to cope with the experience of the development process has been identified as being important for athletes to make the transition from academy to first-team (Finn & McKenna, 2010). A prospective study of the psychological factors that predict career success in professional football found that, among other factors, problem-focused coping behaviours distinguished between youth players who successfully progressed into professional football and those who did not (Van Yperen, 2009). Furthermore, Nicholls and Polman (2007) suggested that knowledge regarding coping should be applied to educating athletes to enable them to cope better with stressors, and this, in turn, should lead to improved performance.

Players negotiating a professional academy need to be able to recognise areas where they need to improve so they can perform better and get selected. It is thought that self-regulated learning assists players in noticing when they lack the skills to achieve a goal (Ertmer & Newby, 1996). Self-regulation learning theory defines self-regulation as "the extent to which individuals are metacognitively, motivationally and behaviourally proactive participants in their own learning" (Toering, Elferink-Gemser, Jordet, & Visscher, 2009, p. 1509). Level of ability alone may not be considered giftedness. Instead, giftedness may be recognised by the rate of learning (Vaeyens et al., 2008) alongside the level of ability. Therefore, it may be the tendency to self-regulate that increases an athlete's chances of achieving elite status (Anshel & Porter, 1996). -regulatory processes will not have an immediate effect on expertise, but they will assist the individual in effectively attaining knowledge and skills (Zimmerman, 2006). Therefore, athletes who self-regulate may be more likely to improve their performance faster and perform more successfully, which could mean they have a greater chance of being selected and remaining in a talent development programme (Toering et al., 2009) and eventually reaching the professional level. Although self-regulated learning is thought to be predictive of superior athletic performance, it is also predictive of enhanced motivation (Hill et al., 2015).

Motivation has been suggested to underpin many of the characteristics necessary to successfully negotiate a talent pathway, such as commitment (Hill et al., 2015). Gagné (2010) reported that intrinsic and extrinsic motivation should not be viewed as two ends of a continuum where intrinsic motivation is positively correlated to performance and extrinsic motivation negative correlated to performance. Instead, he suggests that in talent development, extrinsic motives are just as important as intrinsic. Furthermore, athletes that are high in both task and ego orientation may be more successful in the talent development pathway. Conversely, athletes with this orientation will not only persist at a difficult task, but they may try harder because they are comparing their performance to others. (Gould et al., 1992; Hayman et al., 2014).

Elite sport is characterised by high standards (Nerland & Sæther, 2016), so setting high standards and striving for excellence and perfection are typically considered desirable in athletes who are attempting to reach the highest level of their sport (Gucciardi et al., 2012). Perfectionism is a multidimensional construct that is characterised by a tendency to strive for exceptionally high standards of performance (Gucciardi et al., 2012). It can be categorised into two main dimensions: perfectionist strivings and perfectionist concerns. Research has suggested that it is only perfectionist concerns that are maladaptive and that perfectionist strivings facilitate the pursuit of excellence (Stoeber, 2011). Nevertheless, perfectionistic strivings have also been associated with negative outcomes when an athlete is faced with failure, such as decreases in performance, negative cognitions and emotions toward the task and self (Madigan et al., 2019). Therefore, it is important to understand the role of perfectionism in negotiating an academy setting.

The impact of PSCs on sports performance has been well researched, and this research has extended into how they impact talent development (Macnamara & Collins, 2011, 2013; Taylor & Collins, 2019; Van Yperen, 2009). Nevertheless, many of these studies have focused on qualitative methods. Therefore, there is a need for more mixed methods research that seeks to acquire rich qualitative data in combination with quantitative approaches, which can provide more generalisability (Collins et al., 2019). Furthermore, there has been a lack of focus on the experiences of players while they are engaged in a talent development pathway, as much of the previous research has focused on retrospective interviews with coaches. This study, therefore, aims to gain insight into the players' experiences of being part of a professional rugby academy, including what PSCs the players perceive as important to be successful in a professional rugby academy, the challenges they face and the support they receive.

4.3 Method

4.3.1 Philosophical paradigm and design

The purpose of this study is to gain a complete understanding of players' experiences of being part of an academy, including the role of PSCs in successfully negotiating a professional academy. Therefore, the current study was guided by pragmatism. A pragmatic approach was adhered to in this study to gain a rich understanding of the players' experiences and perceptions. Pragmatism is considered an "overarching philosophy" (Tashakkori & Teddlie, 2010) as it is not committed to one system of philosophy or reality (Creswell, 2010). The pragmatic approach suggests that "the quantitative and qualitative paradigms and their associated methodologies are compatible and can fruitfully be used in conjunction with one another within a 'what-works' approach" (Sparkes, 2015, p. 51). In line with the purpose of this research and pragmatism, a convergent mixed-methods case study was adopted (Creswell, 2010). The purpose of a convergent design is "to obtain different but complementary data on the same topic" (Morse, 1991, p. 122) to best understand the problem being examined. Therefore, quantitative data was collected through multiple self-report questionnaires and qualitative data was collected through semi-structured interviews. When using a mixed-methods design, it is important that there are specific reasons for choosing this method rather than just for the sake of it (Creswell, 2010). Therefore, a mixed-method approach was adopted for this study as a method of triangulation to corroborate the findings of the quantitative data and for completeness in terms of gaining a more comprehensive account of the role of PSCs in negotiating a professional rugby academy (Bryman, 2006).

4.3.2 Context

The professional rugby clubs in Ireland consist of four provincial teams. Each of these teams has an academy that provides a route for players to progress to the senior team. The academy aims to prepare young players for professional rugby and beyond. The academy consists of a programme that players can follow for up to three years. The academy has, on average, twenty players a year. Approximately three of these players progress to the senior squad each year. While the players are contracted and train full time with the academy or senior squad players, they are usually enrolled in university simultaneously.

4.3.3 Participants

Once ethical approval was gained from the University Research Ethics Committee, a purposive sample of male rugby union players were recruited for this study. The participants were selected because they are part of a larger study that was completed with the Irish provincial rugby academy they were a part of, and they were recruited to take part in the interview through contact with an academy coach. There were four male participants (*M*age = 20.25, age-range = 19-21). Three players were in Year 2 of the academy, and one was in Year 3. At the time of the interviews, two out of the four players had received a professional contract with the club's senior team. Since then, another one of the players earned a professional contract with the senior team. Participants were assured of anonymity and confidentiality, both through a participant information sheet and verbally when the data was being collected. Participants gave informed consent for their data to be included in this research.

4.3.4 Data Collection

Quantitative

A range of self-report psychometric questionnaires were used to measure the PSCs of the participants.

Sports Motivation Scale-II (SMS-II)

The Sports Motivation Scale-II (SMS-II; Pelletier et al., 1995) is used to measure why athletes participate in their sport. The SMS-II is a 28- item questionnaire is made up of seven subscales of sports motivation: (a) Intrinsic motivation—to know (e.g. "For the pleasure it gives me to know more about the sport that I practice", (b) Intrinsic motivation—to accomplish (e.g. "Because I feel a lot of personal satisfaction while mastering certain difficult training techniques") (c) Intrinsic motivation—to experience stimulation (e.g. "For the pleasure I feel in living exciting experiences") (d) Extrinsic motivation—identified (e.g. "Because, in my opinion, it is one of the best ways to meet people"), (e) Extrinsic motivation—introjected (e.g. "Because, in my opinion, it is one of the best ways to meet people"), and (f) Extrinsic motivation—external regulation ("Because it allows me to be well regarded by people that I know"), (g) amotivation ("I used to have good reasons for doing sport, but now I am asking) myself if I should continue doing it"). Using a 7-point scale ranging from 1 (does not correspond at all) to 7 (corresponds exactly), participants are asked to indicate the extent to which an item corresponds to their reason for participating in sport.

Task and Ego Orientation in Sport Questionnaire (TEOSQ)

Task and Ego Orientation in Sport Questionnaire (Duda, 1989) is a 12-item measure that is used to assess whether athletes define success in a sporting context as "task-oriented" (e.g. I learn a new skill by trying hard) or "ego-oriented." (e.g. "I am the only one who can do the play or skill"). Items are scored on a 5-point scale from "strongly disagree" to "strongly agree."

Athletic Coping Skills Inventory-28 (ACSI-28)

The Athletic Coping Skills Inventory - 28 (Smith & Smoll, 1995) is a 28-item scale measuring seven subscales of athletic coping skills, including coping with adversity, peaking under pressure, goal setting and mental preparation, concentration; freedom from worry, confidence and achievement motivation, and coachability. The participants were asked to respond to each statement using a 4 point scale (0 = almost never to 3 = almost always) while considering how often they had these experiences when playing sports (e.g., I put a lot of pressure on myself by worrying about how I will perform"). Scores of each subscale ranged from a low of 0 to a high of 12. Athletes should be scoring at least ten if they are efficient in the skill (Hidrus et al., 2016).

Sport Multidimensional Perfectionism Scale-2 (SMPS-II)

The Sport Multidimensional Perfectionism Scale-2 (Gotwals & Dunn, 2009) a 42-item instrument that assesses six dimensions of perfectionism in sport: Personal Standards (PS), Concern Over Mistakes (COM) Perceived Parental Pressure (PPP) and Perceived Coach Pressure (PCP), Doubts About Action (DAA) and Organisation (Org). The participants rated the extent to which they agree with each item using a 5-point scale (1 = strongly disagree; 5 = strongly agree). Scores are calculated by averaging the items of each subscale. Higher values mean greater orientation in that subscale. Example items include: "If I do not set the highest standards for myself in my sport, I am likely to end up a second-rate player" (PS), "Even if I fail slightly in competition, for me, it is as bad as being a complete failure" (COM), "My parents set very high standards for me in my sport" (PPP), "I feel like my coach criticises me for doing things less than perfectly in competition" (PCP), "I usually feel uncertain as to whether or not my training effectively prepares me for competition" (DAA), "On the day of competition I have a routine that I try to follow" (OR).

Self-Regulation of Learning - Self-Report Scale for Sport Practice (SRL-SRS for Sport Practice)

SRL-SRS for Sport Practice (Bartulovic et al., 2017) was used to assess six self-regulated learning processes planning (8 items), self-monitoring (4 items), evaluation (4 items), reflection (2 items), effort (8 items) and self-efficacy (5 items). The scale consists of 31 items measured on a scale ranging from 1 (Almost Never) to 7 (Almost Always). Example items include: "I determine how to approach a practice task before I begin" (Planning), "I check aspects of my workout while doing it" (self-monitoring), "I double-check to make sure I did practice tasks right" (evaluation), "I often think about my past experiences at practice to gain new insights" (reflection), "I put forth my best effort when performing tasks at practice" (effort), "When I am confronted with a difficulty during practice, I can usually find several solutions" (self-efficacy).

Qualitative Interviews

This study utilised a semi-structured interview approach to gain insight into the participants' experiences and perceptions of navigating the pathway to professional rugby. An interview schedule was developed and used to guide rather than dictate the interview process. Examples of the questioning in the schedule included: "Tell me what being part of the academy has been like for you?", "What are the challenges of being part of the academy?"; and "Can you tell me about your experiences of psychological support/training in the academy?".

4.4 Procedure

Participants were provided a participant information sheet outline the purpose of the study and how there data would be used and stored (Appendix J). Informed consent was gathered from the participants through an online consent form prior to completing online questionnaire (Appendix K). After providing informed consent, the participants completed questionnaires online through SurveyMonkey at four time points throughout the season (Baseline - Preseason, Time1 -Beginning of Season, Time 2- Mid-Season and Time 4 - End of Season). The researcher met with the participants as a group and administered a range of self-report questionnaires to them through SurveyMonkey. Being present meant the researcher was available for any questions and clarifications the players might have had when completing the questionnaires. Once the quantitative data was collected, arrangements were made to meet four players individually at the team's performance centre at a time that suited them. A semi structured interview guide (Appendix L) was developed to elicit the participants experiences of being part of a professional rugby academy. The interview guide included rapport building questions, probes and follow up questions. The questions were developed in attempt to provide context to the quantitative data that was collected through the questionnaires. The questions aimed to gather information on the influences on the players development including PSCs, challenges, coaching and psychological support. Written informed consent in relation to the interview was gathered from the four players prior to conducting the interview. All interviews were conducted at the academy’s training facilities. The interviews lasted between 30 and 42 minutes were recorded and transcribed verbatim. A detailed copy of the interview analysis was returned to the player to check for accuracy and authenticity.

4.5 Data Analysis

One of the reasons that this study employed a mixed-methods approach was for triangulation. Therefore, the quantitative data and qualitative data were analysed independently with equal emphasis (Creswell & Clark, 2011). The second reason for conducting a mixed-methods study was completeness. Hence, to gain a fuller understanding of the role of PSCs in assisting players successfully negotiate a professional rugby academy, the findings from the independent analyses of quantitative and qualitative were subsequently integrated.

To analyse quantitative data, the questionnaires scores of each of the participants were examined (Table 4.1). To examine the scores of players, the questionnaire scores were broken down into low, moderate, and high categories for each scale (Table 4.2).

To analyse the qualitative data, thematic analyses were used. To conduct this reflexive analysis steps as outlined by (Braun & Clarke, 2006, 2019) were followed because of its potential to deliver rich and complex understandings of the data (Hallett & Lamont, 2015). Recordings of the interviews were transcribed and repeatedly read to become familiar with the data. The first author then examined the data in more detail and conducted initial coding. Codes were structured into higher-order themes, and for each higher-order theme, lower-order themes were identified inductively. The data was then analysed and interpreted. To integrate the quantitative data and qualitative data, themes were identified that provided confirmation or further explanation of the quantitative data.

Table 5.1 Results of Self Report Questionnaires

	Player 1	Player 2	Player 3	Player 4
Motivation				
Intrinsic Motivation	12.25	12.75	10.75	9.00
Extrinsic Motivation	7.00	6.00	9.50	6.00
Goal Orientation				
Ego	4.50	4.33	3.17	2.50
Task	5.00	4.57	3.71	3.71
Coping Skills				
Coping with Adversity	9.00	6.00	8.00	6.00
Coachability	12.00	8.00	11.00	6.00
Concentration	9.00	7.00	6.00	5.00
Confidence	10.00	10.00	8.00	6.00
Goal Setting	8.00	9.00	4.00	5.00
Peaking Under Pressure	9.00	12.00	10.00	6.00
Freedom From Worry	9.00	5.00	7.00	8.00
Self-Regulated Learning				
Planning	5.50	6.00	4.75	4.13
Self-Monitoring	5.25	6.00	4.75	4.00
Evaluation	5.50	6.25	5.00	4.50
Reflection	6.00	4.00	5.50	4.00
Effort	6.50	6.88	4.75	4.88
Self-Efficacy	5.20	6.80	4.60	4.40
Perfectionism				
Personal Standards	3.57	5.00	3.29	3.43
Concern over Mistakes	3.63	2.88	3.25	2.75
Perceived Parental pressure	2.22	2.11	2.33	2.00
Perceived Coach Pressure	4.00	3.50	3.33	3.50
Doubts about Action	3.67	1.67	2.33	3.67
Organisation	3.33	3.67	2.50	3.17

4.6 Results

Questionnaire Scores

Within this section, direct quotes from the interviews are provided to clarify some of the findings. In the following section, the results based on the full thematic analysis of the interviews are provided.

Table 6.2 Categories for Self-Report Questionnaires Scores

	Low	**Moderate**	**High**
Sport Multidimensional Perfectionism Scale-2	1.00 – 2.49	2.50 – 3.99	4.00 – 5.00
Self-Regulation of Learning - Self-Report Scale for Sport Practice Scale	1.00 – 2.99	3.00 – 4.99	5.00 – 7.00
Athletic Coping Skills Inventory-28	1.00 – 4.99	5.00 – 9.99	10.00 – 12.00
Goal Orientation	1.00 – 2.49	2.50 – 3.99	4.00 – 5.00
Motivation	1.00 – 4.99	5.00 – 9.99	10.00 -15.00

Player 1

The self-report questionnaire scores revealed that Player 1 is high in both task (5.00) and ego orientation (4.50). These scores are illustrated by quotes from the player, which suggests that there is always room to improve in the different aspects of the game - *"there's always going to be different areas, that you can get 1% better"* - and to try and be the best - *"always wanting to want to improve want to be the best"*. Player 1 is also more intrinsically motivated (12.25) than extrinsically motivated (7.00), which is highlighted by the following quote *"…I absolutely love it. Like it's, it's unbelievable. You're literally training like a pro…basically it's 24 seven… you're a pro player without the title. I love it like it's absolutely class…*". In relation to coping skills, he scored high in both coachability (12.00) and confidence (10.00), and his lowest score was in goal setting (8.00), which is a moderate score. For self-regulated learning, he scored high in both reflection (6.00) and effort (6.50). Player 1 suggests that work rate is one of the main components of achieving the goal of becoming a professional player, and as a player has to exert a lot of effort to have a high work rate, the following quote may illustrate why he scored highly in effort *"I'd say work rate is one of the main things and just a mindset of just always wanting to be better. Just trying for that ultimate goal at the end."* In terms of perfectionism maladaptive scores, Player 1 scored high in Perceived Coach Pressure (4.00), and he also discussed the pressure to impress coaches and to be always training well:

> "I suppose as an academy player, you're always kind of not looked down on, but you are bottom of the pile. So, realistically, you have to be seriously impressing in training sessions, or you have to be seriously making statements to get recognised. And to gain actual trust from coaches, you have to be training incredibly well. So, I suppose you always want to be training as well as you can to impress".

Nevertheless, he scored low in Perceived Parental Pressure (2.22) and referred to his father as being an influence on and supportive of his development.

> "My dad would have been pretty big into rugby, and my brother would be pretty big into rugby. They would have always been an influence. They're never harsh on me or anything, but it was just, they just really loved it, and they support me…they had a lot of passion towards development in my sport and really cared".

For the perfectionism facilitative subscales, Player 1 scored moderately in both personal standards (3.57) and Organisation (3.33). Although he only scored moderately, he suggested that he had high standards of himself, *"I would like to think I'm pretty hardworking. I like to think I'm pretty critical. And I hold very high standards for myself"*.

Player 2

Player 2 scored high in both task (4.57) and ego orientation (4.33). In terms of task orientation Player 2, discussed in his interview how he talks to the coaches to understand where he needs to improve *"I've chatted to the coaches, had my meetings with them, and seeing where they need to see me…and that's what I need to work on",* and his high score in ego orientation can be illustrated by him describing that one of his goals is to "strive to be the best". Player 2 also scored higher in intrinsic motivation (12.75) than extrinsic motivation (6.00). His level of intrinsic motivation is illustrated by the following quote *"I ended up loving rugby from when I was very young. So, I'd say around four or five, I started playing properly ... and it just became like something I really enjoy"*. Furthermore, his score in extrinsic motivation can be explained by his motivation to get selected for the senior team *"if there was an opportunity to play for the senior team, I would have loved that…it definitely gives me more of a motivation to prove myself to get onto the team to show that I'm capable at that level"*.

For coping skills, he scored high in both peaking under pressure (12.00) and confidence (10.00), and his lowest score was in freedom from worry (5.00). He discussed in his interview how training with the senior team provided an opportunity to compare himself to those players and see how he measured up. Although some players might find this opportunity daunting, the following quote highlights Player 2's confidence; *"being able to compare yourself, to the guys who are considered the best in your province in your country…Yeah, I would consider myself up there, among them"* Player 2 scored high in effort (6.88) and self-efficacy (6.00), in relation to self-regulated learning and lowest in reflection (4.00). Like Player 1, Player 2 discussed the importance of work rate, which may explain his high effort score:

"you have to have a hard work rate, and you have to have this desire to play and to get better the whole time…if you are doubting that at any stage, then you probably aren't right to be here or you should probably try to go somewhere else".

In terms of facilitative perfectionism, Player 2 scored high in personal standards (5.00), whereas for maladaptive perfectionism, he scored moderately in perceived coach pressure (3.50) but low in perceived parental pressure (2.11). He scored lowest in doubts about action (1.67).

Player 3

Player 3 scored higher in task (3.71) than in ego (3.17) orientation and is slightly more intrinsically motivated (10.75) than extrinsically motivated (9.50). He also scored high in coachability (11.00) and peaking under pressure (10.00) in relation to coping skills, although he also scored the lowest in goal setting (4.00). Player 3 revealed in his interview that he considers himself a laid back person, and this perception may explain his peaking under pressure score; "I'm *kind of a very laid back person, some people get worked up about stuff … it's probably good in some ways to be laid back rather than getting worked up"* He scored high in evaluation (5.00) and reflection (5.50) for self-regulated learning, Although he scored lowest in self-efficacy (4.60), which is a moderate score. The following is a quote that illustrates the player engaging in evaluation by reviewing videos of himself and the senior team; "*I suppose something I do is just try and watch some videos where you do good things and to keep on top of even watching senior sessions…".* For maladaptive perfectionism subscales, player 3 scored moderate for in perceived coach pressure (3.33) but low in perceived parental pressure (2.33). He scored moderately in terms of facilitative perfectionism: personal standards (3.29) and organisation (2.50).

Player 4

Player 4 is more intrinsically motivated (9.00) than extrinsically motivated (6.00). Nevertheless, he scored moderately in both. He scored moderately in both task (3.71) and ego (2.50) orientation. In his interview, it was more ego orientation that was revealed: *"I'd love to, obviously be the best I can be in my position"*. In relation to coping skills, he also scored moderately across each of the subscales. He scored the highest in freedom from worry (8.00), Although he also scored the lowest in concentration (5.00) and goal setting (5.00). Even though Player 4 scored highest in freedom from worry, he still expressed worry at meeting the demands of the game; "*You have such demand on you as a rugby player to gain size or to perform and be recovered and well prepared for games…"* He also scored moderately across each of the self-regulated learning subscales. He scored highest in effort (4.88), Although he scored lowest in self-monitoring (4.00) and reflection (4.00). In terms of perfectionism scores, Player 4 scored moderately in all subscales except in perceived parental pressure (2.00), for which he scored low. His score in low Perceived Parental Pressure was evident in his interview as Although it was his father that introduced him to the game and often coached him growing up, he describes himself as a "home bird" and that he likes to get home as much as possible to have that familiarity around him. For maladaptive perfectionism, Player 4 scored highest in doubts about action (3.67). For facilitative perfectionism, he scored highest in personal standards (3.43).

Interviews

The analysis of the interview data identified several factors related to the role of PSCS in successfully negotiating a professional academy, which pertained to the PSCs needed to negotiate the academy, challenges of being part of the academy, and support received to develop PSCs.

Table 7.3 Higher and Lower Order Themes

Higher-Order Themes	**Lower Order Themes**
PSCs needed to negotiate the academy	Resilience Confidence Motivation Desire Determination Work rate Self-awareness Coping
Challenges of being part of the academy	Transition into the academy Physical demands Proving their worth Readiness to perform Competition with other players Not getting Selected Injuries Balancing college and rugby Living away from home Moving to a new country Shifting allegiances Social Isolation Social Pressure
Support received to develop PSCs	One on one support Psychological skills training Lack of attention to psychological development

PSCs needed to negotiate the academy

All participants emphasised the importance of PSCs in negotiating the academy. Each participant indicated that confidence and self-belief were important for players trying to navigate the academy and reach the professional level. The players emphasised that a player needs to believe they are good enough to be part of the academy or they will not be successful; *"if you are doubting that at any stage, then you probably aren't right to be here*" (Player 1). Even though confidence was highlighted as being necessary for success in the academy, only

Player 1 and 2 scored highly in confidence and self-efficacy, Although Player 3 and 4 scored moderately in both.

As well as confidence and self-belief, some players highlighted that to be successful, a player needs to have a drive to consistently want to improve. Different terms were used to describe having this drive, including desire and determination. All these terms are associated with motivation. Therefore, to be successful in a professional academy, a player needs to be motivated to improve; "*You just have to have this desire to play and to get better the whole time"* (Player 2). The players emphasised the responsibility of the player to ask questions about how they can improve.

> Just a mindset of just always wanting to be better, wanting to get better...how you're looking at things, always wanting to improve, wanting to be the best…How can I do things better? How can I improve?… It's always wanting to work (Player 1).

Although Player 1 recognised that perfection is not possible, he suggested that there is always something he can strive to be better at:

> Well, I suppose you can never really be the perfect player. So, it doesn't matter what it is, there's always going to be different areas that you can get 1% better. And there's always going to be that 1%, there's always going to be a bit more that you can improve on".

All the participants scored higher in task orientation than in ego orientation, which would explain their emphasis on improvement. Toknow what to improve on, players need "to *have a really good understanding of yourself and where you're going* (Player 2). Psychological skills such as the ability to self-monitor, reflect and evaluate are important in gaining this understanding. All participants scored either moderate or high in all three.

Resilience and mental toughness were mentioned in terms of dealing with the challenges successfully making it through the academy. The academy was described as being *"a bit like a coliseum"* (Player 4) as coaches are always looking to see who is dealing with the challenges and who is not. All participants scored moderately in coping with adversity which would suggest that these players may need more support in developing PSCs to deal with the challenges of the academy.

Challenges of being part of an academy

Each of the participants discussed the various challenges they have experienced during the academy. Some of the challenges discussed were similar across the participants, but each of them also discussed their own unique challenges.

The transition into the academy was challenging for the players as they had to become more independent as they were living away from home. Living away from home for the first time was a common challenge for each of the participants. They identified struggles with being away from family and friends, cooking for themselves and having to be organised so they could keep up with the demands of being a rugby player, "*I definitely, 100% wasn't ready to be an adult at 18 looking after yourself, providing for yourself…"* (Player 4). Player 4 also referred to being *"in a bit of a dark place"* at the time where he was part of the sub academy and trying to make the transition to the academy. The transition was made more difficult by other life transitions that were occurring simultaneously, including moving away from home to go to college.

Although living away from home was a challenge for all the participants, one player referred to the further challenge of moving to a new country to join the academy. Player 2 discussed many challenges associated with this move. Firstly, in making his decision to move, he had to consider *"shifting allegiances"*, in which he had to change his goals of playing for his national team to playing for Ireland. Social isolation became a challenge once he arrived in Ireland:

> For me, in particular, when I first came over here, I found it pretty difficult to be able to socialise outside of rugby because a lot of guys would have had friends growing up from school, and they know people around here, or they've got family members around here. So, there's lots of people to take their mind off of rugby and that type of thing… (Player 2).

He describes how another player was unable to stay in the academy because of the social isolation they experienced when they first moved to Ireland.

> So, we were stuck in a house on the weekends, for weeks off, everything, we didn't have any transport or anything like that. So literally, we would come in, in the morning train and get back to the house. And literally, we were stuck there. Like doing nothing…and it took a huge toll on him. And basically, that … lead to him leaving here in the end.

The demands of trying to become a professional rugby player were also discussed by each of the players. The competitive nature of being part of the academy was highlighted by Player 1, "It's *a really competitive environment. You know, you're a pro player without the title"*. The challenge of meeting the physical demands of the game was further discussed by Player 4:

> You have such demand on you as a rugby player to gain size or to perform and be recovered and well prepared for games and stuff like that. The amount you have to cook for yourself how regularly you have to do it. It was a huge, huge step up...

The pressure to gain muscle mass, perform and recover well so they can perform was linked to proving their worth as players, so they can get selected to play. There is a constant pressure to demonstrate their ability and their readiness to perform. The pressure comes from the competition for places for selection and contracts. Not only are players competing against other players in the academy but also with senior players who are already in the positions. "It's *a lot harder to be able to shine when you're looked at as the lower, a younger guy trying to come in when there's someone out there being given opportunities*" (Player 2). Therefore, the players feel the need to prove their worth at every opportunity "realistically, you have to be seriously impressing in training sessions, or you have to be seriously making statements to get recognised" (Player 1).

Proving their worth is particularly challenging when even though they feel they are trying their best and training hard, they are not getting selected to play. It is a source of frustration, as Player 1 describes:

> You train, and you train, and I suppose if you train well, you're going to get selected, and then that's when you're going to get times coaches might not select you… I think a huge amount of academy and sport, in general, is proving people wrong.

Not being able to train due to injury was also a challenge as players felt it was time that was lost where they could be proving their worth to the coaches. The players felt by not being able to train that they will be forgotten about, and it will harm their chances of getting selected and ultimately of getting a senior contract.

> …that can be a worry, I suppose if you are out for a long time that they can even forget about you, I know that they probably don't, but it comes into your head sometimes (Player 3).

In the attempt to meet the demands and challenges of being part of an academy and aiming to become a professional player, players recognised that they needed to sacrifice other parts of their lives, including time with friends or family. Nevertheless, this can be particularly challenging for players as there are pressures from friends and family to spend time with them and socialise with them:

> A lot of the time, it kind of ties into social pressures as in other people don't usually understand the amount of effort and time that goes into rugby. So, a lot of people don't understand when you can't meet for drinks, or you can't go meet this person … because you're busy (Player 2).

A further common challenge experienced by each of the participants was balancing college work with rugby. One player reported that it was challenging to make sure that they were giving enough time to both:

> As an academy player, you need to give more. You need to be giving everything you can to try and impress … And then you've college on top of that, which you're missing

a lot of because you are in the academy, and that's obviously going to affect your grades. And it's just a catch 22. (Player 1)

Balancing college and rugby are particularly challenging for the players as they need to consider an alternative career route if they cannot continue with rugby. "… *there's the pressure of what if rugby doesn't work out for you? You have to have something in place*" (Player 3

Support received to develop PSCs

Each of the participants outlined the psychological support available within the academy. The participants were aware that there was one on one psychological support available. Nevertheless, it was only accessed consistently by one of the participants. *"I just think I can get a lot from individual sessions and talking about progress or talking about, say goal setting, or those kinds of small elements"*. (Player 1). Psychological skills training was described as "*workshops a couple of times a year*". One of the participants perceived that psychological training and support was an individual preference. Nevertheless, each of the participants discussed how important they perceived PSCs to be for negotiating the academy. Notably, they considered that rugby is a demanding sport and that they needed strategies to deal with these demands.

I don't think there's enough because rugby's a very demanding sport, and in particular, takes a lot out of you as a person … I don't think there is enough talk in terms of giving people tools to deal with them (Player 2).

Furthermore, it was highlighted that the psychological aspect of development is not given as much attention as the other aspects of development.

> I definitely think more could maybe be integrated a bit more because there's enough stuff about nutrition and stuff like that going on. So why can't we talk a bit more about or learn a bit more about sports psychology as well because I think there would be an interest there … (Player 4).

4.5 Discussion

The current study aimed to gain insight into the players' experiences of being part of an academy, including what PSCs the players perceive as important to be successful in a professional rugby academy, the challenges they face and the support they receive. To my knowledge, this is the first mixed-methods study that has examined this topic, and it extends previous qualitative research (Hill et al., 2015; Holland et al., 2010; Taylor & Collins, 2019). Novel findings were identified in terms of the challenges player's experienced as part of the academy and their perceptions of the support available for developing PSCs.

The findings from this study indicate that to successfully negotiate a professional rugby academy, players need to possess a range of PSCs and have the opportunity to develop these PSCs, so they can deal with the various challenges associated with being part of the academy. Relating the present findings to previous studies revealed that the PSCs examined and identified in this study were similar; determination and confidence (Holland et al., 2010), coping under pressure (Macnamara et al., 2010a; Macnamara & Collins, 2013; Newton & Holmes, 2017), resilience (Mills et al., 2012) and motivation (Forsman et al., 2016). Although the results were similar to previous studies, the approach of this study differed from previous studies as it involved an in-depth examination of players currently engaged in a talent development pathway. Therefore, the current results additionally add weight to the importance of PSCs for talent development in rugby. Hence, any psychological programme offered to rugby players to navigate their way through the talent development pathway should aim to develop and enhance these PSCs.

Understanding the challenges that athletes face during this time is important so that they are given sufficient support and the opportunity to learn and develop skills to deal with these challenges. The current research adds to the athlete perspective of the challenges faced when negotiating a talent development pathway. Challenges identified in this study include the transition into the academy, living away from home and becoming more independent, proving their worth as players and balancing life and rugby.

Novel findings were identified in this study in terms of the challenges players face. A player within this study had moved to a new country to take up a place within the academy. Although this challenge was unique in comparison to the other players interviewed in this study, it is possibly a common challenge for other players within rugby. At the time of data collection, many players worldwide were taking up places in academies and teams that were not in their home country. These moves were made to take advantage of the residency rule. At that time, players that had not previously played for their home country could play for another country's national team if they resided in that country for 36 months. This rule has since been changed to 60 months. Withstanding the rule change, many players move between countries to take up contracts with teams. Shifting allegiances and social isolation were two of the main challenges identified in this study associated with such a move. Social isolation was described as being "stuck in a house" because the players did have contact with anyone outside of training. Social isolation is even more relevant now with the current Covid-19 pandemic, as players have to adhere to rules on social distancing. There is more chance of players experiencing psychological stress and compromised mental health if they feel alienated and have poor coping resources (Schinke et al., 2020). Psychological support needs to be provided to players to ensure that they have the necessary coping skills to deal with the current situation and that they do not feel isolated.

Another novel finding from this research was the attitudes of the participants towards psychological support. Athletes involved in contact sports such as rugby are typically thought to have a high stigma tolerance for accessing sport psychology services (Martin, 2005). Therefore, they believe that they will be negatively labelled if they use sport psychology services (Zakrajsek et al., 2011). Rugby as a physical contact sport can be viewed as a macho sport, and help-seeking behaviour such as working with a sport psychologist could be seen as a sign of weakness and vulnerability that jeopardises the masculine image (Zakrajsek et al., 2011). Nevertheless, in the current study, the players were positive in their attitudes towards psychological support. Nevertheless, they also highlighted that even though they felt that it was important, it was not given as much attention as other sport science support.

Therefore, it would seem that there needs to be more buy-in from coaches and staff. Ravizza (1988) highlighted several barriers to providing sport psychology consultancy services to a team. Although this work is over 30 years old, the majority of the issues highlighted remain the same today. The first barrier discussed in this work is the negative connotation attached to the term 'psychology'. Athletes and coaches often believe that seeking psychological help is a sign of weakness which may feel threatening for athletes. There remains a fear of stigmatisation for seeking the help of a sport psychologist, which is due to sport psychology being viewed as being for problem athletes and a quick fix. Secondly, the sport psychologist's sport-specific knowledge is viewed as important for building trust and rapport with coaches and athletes. To be effective, a sport psychologist would need to increase their knowledge of the sport (Gould, Murphy, Tammen, & May, 1991) and the performance environment (MacIntyre, Cambpell, & Turner, 2014). Finally, inadequate knowledge of the politics in a sporting environment has been highlighted as a potential barrier for sport psychology. Partington and Orlick (1987) discussed a further barrier to the provision of sport psychology services in terms of the concern of coaches about whether sports psychologists could fit in well with the team. This barrier was due to the experience and disliking of consultants that "displayed too much self-importance" or were "unable to stay in the background" (p.100). Further barriers include lack of funding (Voight & Callaghan, 2001), time and space (Pain & Harwood, 2004)

As previously highlighted, the time spent in the academy can be especially challenging for athletes as they have to balance college, sport and other life commitments. Nevertheless, this period is also recognised as the time where investment into great performances should be achieved (Larsen et al., 2012). Therefore, athletes negotiating a talent development pathway may benefit greatly from learning psychological skills (Vealey, 1988). An athlete's sports career does not stand alone from the rest of their lives, so therefore support should be available to the athlete in dealing with challenges both in and out of the sport for them to be successful (Aalberg & SÆTher, 2016). The findings from this study provide additional support for teaching players a range of PSCs while they are engaged in the talent development pathway, so they have the skills to deal with the challenges they face. Furthermore, support should be provided for the unique challenges players may face during their time in the academy.

The present study consisted of four participants, which could be seen as a limitation of the study due to lack of generalisability. Nevertheless, although case studies are often criticised for their lack of generalisability (Hodge & Sharp, 2016), it has been argued that transferability can be achieved when those that read the case study recognise an overlap with their situation and transfer the findings to their actions within their own context (Tracy, 2010). Furthermore, this study used a mixed-method approach in which a qualitative method was used in conjunction with quantitative measures, which can be used to offer a rich and meaningful picture of developing groups (Johnson & Onwuegbuzie, 2004).

4.6 Conclusion

The purpose of the current study was to examine the role of PSCs in successfully negotiating a professional rugby union academy. The findings from this study extend the research on PSCs within the context of a rugby union academy. The findings suggest that players need a range of PSCs to deal with the numerous challenges that they face during the academy. Furthermore, the findings from the current study highlight the importance of supporting players transition from other countries. Although previously, contact sports were thought to have a stigma against sport psychology, the findings from the current study revealed that players held a positive attitude towards it. Additionally, players indicated that they did not have enough access to psychological support in comparison to other sport science support. Future research in this area could examine a larger sample to confirm the findings of the current study. Research examining the impact of a PSCs training programme suitable for a rugby union context on the development of players would significantly contribute to this area.

Chapter 5 - Study 3

Comparing the attitude and willingness of coaches and players in the use of sport psychology services in rugby union in Ireland

5.1 Preface

The findings in chapter 4 revealed that although players seemed to have positive attitudes towards sport psychology, they felt they did not have enough access to psychological support in comparison to other sport science support. Furthermore, the findings of chapter 3 revealed that key PSCs decreased over time and that scores were lower for final year players than those in first year. It was thought that as coaches are considered gatekeepers to sport psychology (Pain & Harwood, 2004) that it may be the attitudes of coaches that results in players not accessing sport psychology. Hence, in the current chapter I compare the attitudes of 144 Irish rugby players and coaches towards sport psychology. An online questionnaire consisting of a demographic questionnaire, Sport Psychology Attitudes – Revised (players), Sport Psychology Attitudes for Coaches – Revised (Coaches), and the Sport Psychology Services at NCAA Division I Institutions Questionnaire was distributed to the participants via an email link. Rugby coaches and players in Ireland generally have a positive attitude towards sport psychology and demonstrate a willingness to use sport psychology, but for a variety of reasons, the actual uptake of sport psychology services is currently low. The findings outlined in this chapter have implications for the findings in previous chapters. Particularly, coaches and players may need to be educated on the benefits of sport psychology to increase uptake in sport psychology services so that curriculums of psychological skills and support can be provided at the different stages of development.

5.2 Introduction

Rugby is one of the world's most popular sports with 9.2 million men, women and children registered as players worldwide as well as a fanbase of 344 million (World Rugby, 2019). Since the professionalisation of rugby in 1995 and the subsequent success of the national and provincial teams at the European and World level, the popularity of rugby and the numbers of those playing it in Ireland has rapidly grown. In 2018, Ireland was ranked as the 10th highest in the world for registered players (World Rugby, 2018). Due to the game's professionalisation and growing popularity, there has been an increase in competitiveness within the game. An increase in competitiveness both between teams in terms of winning and within teams in terms of selection means more demands and challenges for rugby players and coaches (Nicholls et al., 2006)

From a playing perspective, the game has become more physically and psychologically demanding. For example, from 1995 to 2019, the percentage of time the ball is in play during a match has increased 33%, from 25 minutes to 34 minutes, suggesting that players need to be fitter and remain focused for longer (McCormick, 2020). Overall, the incidence of injuries doubled between 1993/94 and 1997/98 (Garraway et al., 2000) and it has been recently reported that injury incidence rate is now between 46.8 and 81 per 1000 player hours (Yeomans et al., 2018). Injury can be a stressful event for an athlete (Mitchell, 2011) and can lead players to fear reinjury, sensation of loss, negative, and other mood disturbances (Naoi & Ostrow, 2008; Sparkes, 2000; Vergeer, 2006). The demands on an individual player within a game can be significant as they try to fulfil the requirements of their positional role, execute the team game plan and switch between attack and defence, which to execute successfully need a high level of mental skills (Hodge, Lonsdale, & McKenzie, 2008). Outside of playing, the professional level of rugby is characterised by specific demands such as being seen as a commodity, getting selected and the pressure of securing a contract (Rayner, 2018). To deal with the increasing demands and challenges of rugby in the professional era; there has been increased investment by teams in sport science support, including psychological support (Mellalieu, 2017). Nevertheless, to what extent sport psychology is used within rugby remains unclear.

Several factors can influence coaches and athletes decision to use sport psychology, including the lack of finance (Pain & Harwood, 2004), lack of awareness of what sport psychology can offer them (Martin & Wrisberg, 1997), lack of availability, (Halterman, Steinfeldt, Ruser, Cawthra, & Neidigh, 2020), lack of understanding of how to implement sport psychology (Wilding, 2009), negative perception of sport psychology (Pain & Harwood, 2004), and keeping the size of support teams manageable or coaches may place the onus of psychological development athletes on themselves (Fletcher & Wagstaff, 2009). Furthermore, coaches have reported concerns about whether a breach in confidentiality could occur and whether what they say could get them fired (Halterman et al., 2020) or that the sport psychologist would not become oriented with the sport, go beyond their role and cause problems (Green, Morgan, & Manley, 2012).

Martin (2005) reported that those who participate in physical contact sports might have a high perception of stigma against accessing sport psychology services. Rugby as a physical contact sport can be viewed as a macho sport, and help-seeking behaviour such as working with a sport psychology consultant could be seen as a sign of weakness and vulnerability that jeopardises the masculine image (Zakrajsek et al., 2011). Therefore, players and coaches may be less likely to access sport psychology services because of the perceived stigma of help-seeking. Rugby is still a male-dominated sport, as demonstrated by a report in 2016/2017 that showed 16,184 adult males playing in a structured league as opposed to 4,338 female (Lange, 2019). It is well documented that males are less likely to exhibit help-seeking behaviour than females (Addis & Mahalik, 2003; Fischer & Farina, 1995; Martin & Wrisberg, 1997). Nevertheless, as contact sports like rugby are grounded in male values and experiences, this can be a disadvantage for females as they can be expected to follow these same values, such as accept pain and physical risk (Coakley, 2001). Therefore, it may be possible that females in rugby may be just as likely as males to display less help-seeking behaviour and not access sport psychology services when needed. Although stigmas such as these can prevent coaches and players from accessing sport psychology services, if they have had a positive previous experience of SP, they perceived less stigma toward sport psychology and are more likely to seek sport psychology services in the future (Martin, 2005).

Coaches are central to any team environment, and they are often the ones to initiate, continue, or terminate work with sport psychology consultants (Zakrajsek et al., 2011). Therefore they are thought to be the gatekeepers of sport psychology (Pain & Harwood, 2004). Coaches' attitudes and willingness to use sport psychology services may then play a significant role in whether players have access to sport psychology. Therefore, it is important to compare the attitudes and willingness of coaches and players. It may be that Although players are willing to access sport psychology, they do not have the opportunity to do so as the coaches' attitudes and willingness may differ.

Sharp et al. (2013) reported positive perceptions of UK rugby coaches towards a mental skills training programme, and Mellalieu (2017) suggested that most elite and professional rugby team have access or have previously worked with a Sport Psychology Consultant. Nevertheless, a more comprehensive and specific examination of the use of sport psychology in rugby in Ireland is needed. In recent years, there appears to be greater acceptance and use of sport psychology in general in Irish sports. Nevertheless, it remains unclear how integrated sport psychology is within rugby in Ireland. It is important to examine the attitudes and willingness of players and coaches to use sport psychology services as it could provide invaluable information for sport psychologists on what and how services should be offered as well as how to gain entry to a sport setting that may be underutilising sport psychology (Zakrajsek et al., 2011).

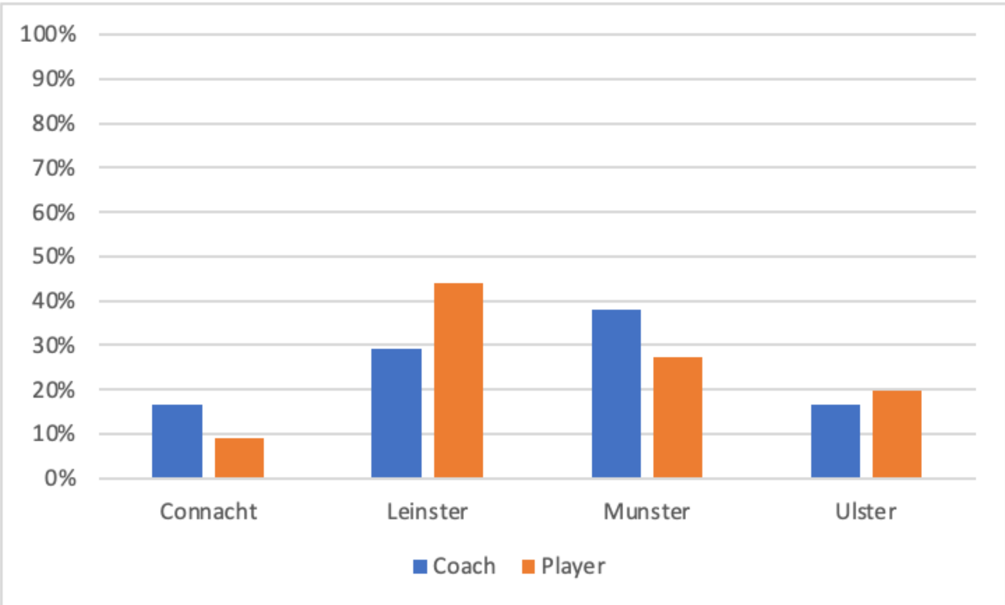
Therefore, the purpose of this study is to explore (a) the attitudes of rugby players and coaches in Ireland towards sport psychology, (b) the use of sport psychology in rugby in Ireland in terms of the number of players and coaches that have accessed sport psychology services, are currently accessing it and (c) to compare the attitudes and willingness if coaches and players.

5.3 Method

5.3.1 Participants

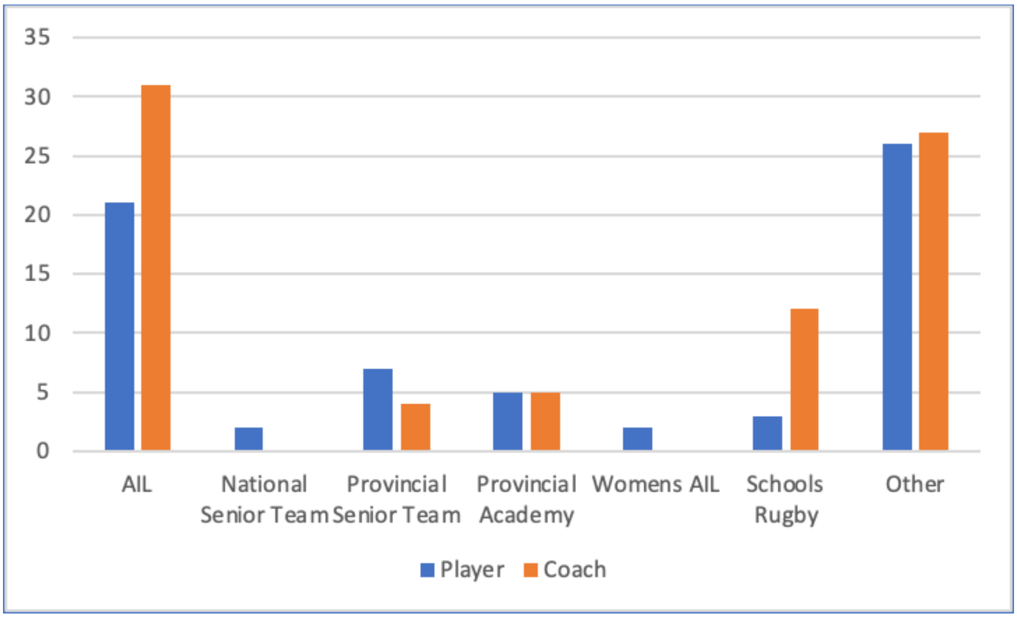
A sample of 144 Irish rugby players and coaches (players: n=66, Mage = 24.35, SD=.637, coaches: n=78, Mage=43.75, SD=10.57) were recruited for this study. Players and coaches were recruited from each of the four provinces (Table 5.1).

Figure 4.1 Percentage of players and coaches according to province



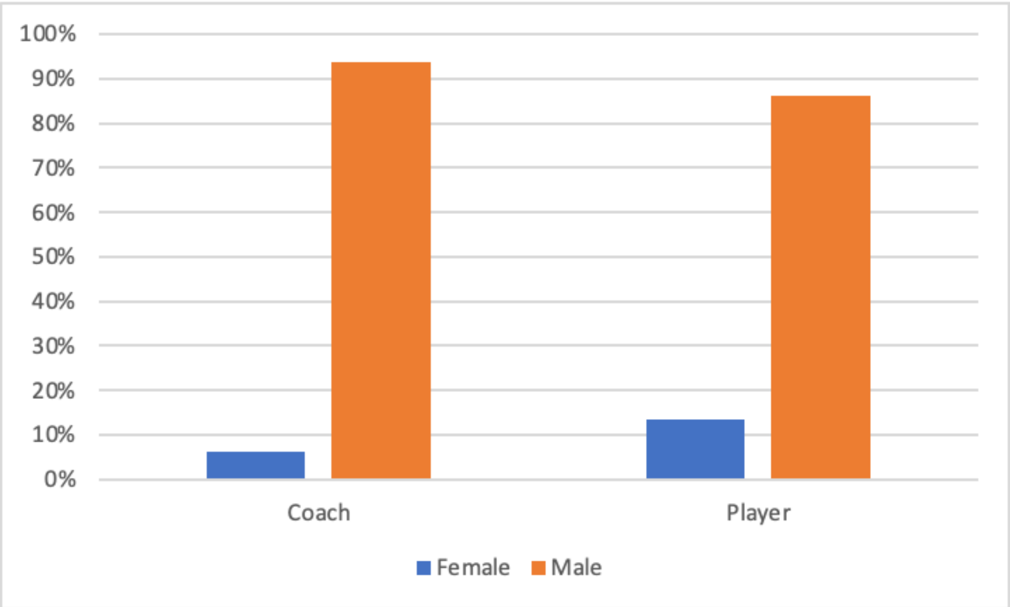
Participants were recruited through emailing a link to the questionnaire to rugby clubs and requesting that the link be forwarded to players and coaches. Respondents were from various levels of rugby in Ireland, including club, academy, and provincial teams (Table 5.2).

Figure 5.2 **Percentage of players and coaches according to playing level**



The questionnaires were sent to both male .and female coaches and players and although there appears to be a low response rate from females (N=9 coaches and N=5 players) this is due to lower female playing numbers than male (Table 5.3).

Figure 6.3 **Percentage of players and coaches according to gender**



In the current study, 11.5% of the coach participants and 7.6% of players were female which reflects the current female participation numbers in Ireland. A recent ERSI report indicated that between 89-94% of those that play rugby in Ireland are male (Lunn & Kelly, 2019). Of the coaches that responded, 38 were head coaches, 21 were assistant coaches, and 19 held other coaching roles. Of the players that responded, 27 were forwards, and 39 were backs. The players had been playing rugby for an average of 13 years (M=13.05, SD=6.38) and coaches also had been coaching for an average 13 years (M=13.56, SD=8.54).

5.3.2 Measures

Attitudes Toward Sport Psychology The attitudes of coaches and players were assessed using adapted versions of the Sport Psychology Attitudes Revised Coaches-2 (SPARC-2; Appendix M) questionnaire and the Sport Psychology Attitudes – Revised (SPA-R; Appendix N). Three of the four subscales from these questionnaires were used: stigma tolerance (7 items), confidence in SP consultation (8 items) and personal openness (5 items). The questionnaire was used to assess the attitudes of players towards sport psychology consultation. It has the same four subscales as SPARC-2. Interpretation and scores are obtained by averaging the responses within each subscale. Higher scores (closer to six) indicate a more negative attitude toward seeking SP consultation (stigma tolerance); a belief that SP consultation and mental training is useful (confidence in SP consultation); and an unwillingness to be involved in SP consultation and mental training (personal openness).

Use of Sport Psychology Services Sport Psychology Services at NCAA Division I Institutions Questionnaire (Wrisberg et al., 2010) was used to identify the players and coaches support for the use of sport psychology services in rugby. There are two versions of the questionnaires, one for coaches and one for athletes. Wrisberg et al. (2010) granted permission for use and modifications to the instrument. Some terminology was changed to refer to rugby in Ireland; for example, institution was changed to the team. Questions focused on (a) previous experience and availability of sport psychology, (b) willingness to seek sport psychology assistance, (c) benefits of sport psychology services, (d) support for sport psychology use and (e) an open-ended question for any additional comment regarding the use of sport psychology services.

5.3.3 Procedure

Following approval from the University Research Ethics Committee, online versions of the questionnaires were created (Qualtrics, Provo, UT). Two different links were created; one for players and one for coaches—a database of email addresses of rugby club contacts that were obtained from their websites. A mass email was then sent to the club contacts informing them of the purpose of the study and requesting that they forward the links to coaches and players. Coaches and players who accessed the link were invited to participate in the survey. They were informed that their participation was voluntary and assured that the confidentiality of their responses would be protected. A participant information sheet (Appendix O) was provided to participants online which outlined the purpose of the study and how their data would be used and stored. Participants provided informed consent online (Appendix P) prior to completing the questionnaire. Participants were invited to complete and submit their answers anonymously. Two weeks later, a second email was sent as a reminder to forward the link to their coaches and athletes if they had not previously done so. The time to complete the questionnaire was approximately 10 minutes. Data was collected solely online due to the COVID-19 restrictions.

5.4 Data Analysis

The purpose of this study was to explore: (a) rugby coaches and players' attitudes towards sport psychology; (b) their willingness to use sport psychology services; and (c) the differences between coaches and players attitudes towards and willingness to use sports psychology. Descriptive analyses were used to describe demographic information, access to and experience with sport psychology consulting, as well and as coaches' and players' overall attitudes and willingness to use sport psychology services. Comparisons based on gender were not conducted due to the low response rate from female players and coaches. Two independent samples t-test were run to examine the difference between coaches and players in their attitudes towards and willingness to access sport psychology services. Subsequently, two multiple regression analyses were conducted to examine whether attitudes predict the overall willingness of coaches and players to access sport psychology services. The open-ended comments (coaches N=20, players N=7) were analysed using a similar method to Wrisberg et al. (2009) and Wrisberg et al. (2010) in which comments were classified as either "supportive", "opposed" or "unsure". In the current study, another category for "barriers" was added.

5.5 Results

Descriptive statistics revealed that 28.4% of players and 43.6% of coaches have personally received services from a sport psychology consultant. 17.9% of players and 18.2% coaches received services 1-3 times with only 4.5% players, and 17.9% coaches receiving more than 5. 11.9% players and 23.1% of coaches rated the experience as highly effective, and 4.5% players and 7.7% coaches rated it as extremely effective. In comparison, only 1.5% of players rated it as not at all and 3% only slightly effective. Only 1.5 % of players are currently receiving services from a sport psychology consultant, but they rated their experience as highly effective. 19.2% of coaches reported that a sport psychology consultant was available for the coaches and players on their team. 85.9% of coaches reported that they did not have enough access to sport psychology services for themselves and their players. 87.9% of players reported that they did not have enough access to sport psychology services.

Coaches are as willing to encourage players to see a sport psychology consultant for personal concerns (M=4.12) as performance-related issues (M=4.00). With regards to the attitudes towards sport psychology of the players and coaches, coaches scored significantly lower in stigma tolerance (M=1.93, SD=.939) than players (M= 4.26, SD= 1.01). Complete mean and standard deviation scores of players and coaches are provided in Table 5.1.

Table 8.4 Mean and standard deviation results for attitudes of players and coaches towards sport psychology

	Stigma Tolerance		**Confidence In SPC**		**Personal Openness**	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**
Player	4.26	1.01	5.02	.969	4.33	1.05
Coach	1.93	.939	5.64	.908	3.10	.937

On inspection of the ordinal ratings from the Sport Psychology Services at NCAA Division I Institutions Questionnaire, it was revealed that responses were skewed toward the highest values on the 5-points Likert scale. Therefore, for the purpose of analysis and to provide a more accurate representation of responding patterns, Likert ratings from the top two and lower two categories were combined. The new categories were labelled "low", "moderate" and "high" (Wrisberg et al., 2010). Higher percentages of players were willing to access sport psychology services for the range of the purposes tested as compared to coaches, e.g., 70.5% of players were willing to access SP services for dealing with pressure as compared to 33.3% of coaches. Complete percentages for coaches and players are illustrated in Table 5.2.

Coaches reported that it would be beneficial (76.9%) for a sport psychologist to be available to coaches and players. The majority of coaches also reported that having a sport psychologist among team support would be beneficial (65.4%). Nevertheless, 25.6% of coaches rated in the low category when asked if it would be beneficial to have a sport psychologist present at training and matches, with only 24.4% rating it beneficial and 50% rating it moderately beneficial.

Table 9.5 Players and Coaches responses for willingness to seek sport psychology services (Percentages)

Purpose	**Low (%)**		**Moderate (%)**		**High (%)**	
	Player	**Coach**	**Player**	**Coach**	**Player**	**Coach**
Dealing with Pressure	6.4	31.8	23.1	34.8	70.5	33.3
Dealing with Injury/Rehabilitation	9.0	18.2	19.2	25.8	71.8	56.1
Building Confidence	9.0	34.8	20.5	16.7	70.5	48.5
Improving Focus	9.0	22.7	19.2	22.7	71.8	54.5
Preventing Burnout	19.2	37.9	34.6	25.8	46.2	36.4
Communicating with Coaches	14.1	28.8	39.7	39.4	46.2	31.8
Communicating with Teammates	7.7	25.8	29.5	39.4	62.8	34.8
Dealing with Personal Issues	9.0	42.4	15.4	21.2	75.6	36.4
Managing Anxiety	10.3	43.9	14.1	18.2	75.6	37.9
Increasing Enjoyment of Sport	11.5	33.3	30.8	25.8	57.7	40.9
Enhancing Performance	6.4	12.1	14.1	19.7	79.5	68.2
Performing as well in competition as in practice	5.1	19.7	23.1	12.1	71.8	68.2
Managing Emotions During Competition	9.0	34.8	17.9	22.7	73.1	42.4
Building Team Cohesion	10.3	13.6	17.9	33.3	71.8	53.0

Difference of attitudes towards sport psychology between coaches and players

An independent-samples test was run to determine if there were differences in the attitudes towards sport psychology between coaches and players. Players rated higher in stigma tolerance (M=4.26, SD=1.01) than coaches (M=1.93, SD=.94), this was a statistically significant difference, M=2.33 (95%CI, 2.01 to 2.65), $t(142) = 14.32$, $p<.005$. Coaches rated higher in Confidence in SPC (M=5.64, SD=0.91) than players (M=5.02, SD=.97), this was also a statistically significant difference, M= -.62 (95%CI, -.93 to -.31), t(142) = -3.97, p<.005. Furthermore, players rated statistically significantly higher in Personal Openness (M=4.33, SD=1.05) than coaches (M=3.10, SD=.94), M=1.23 (95%CI, .90 to 1.56), t(142) = 7.41, p<.005.

Difference in willingness to access sport psychology between coaches and players

An independent sample t-test was run to determine if there were differences in overall willingness to access sport psychology services between coaches that had previously accessed SP services. There was a statistically significant difference in mean willingness score between players (M=3.249, SD= .902) and coaches (M=3.797, SD= .746) t(126.36) = -.548, p<.005. Those coaches that had previously accessed SP services were more willing to access SP services (M=3.99, SD= .654) than those who had not (M=3.65, SD=.786), this was a statistically significant difference, M=.338, 95% CI [.005, .671] t(76)=2.023, p=.047. Nevertheless, there was not a statistically significant difference in overall willingness to access sport psychology services between players that previously received services (M=3.43, SD=.712) from a sport psychologist and those that had not (M=3.31, SD=.973).

Attitudes and willingness to access sport psychology

A multiple regression was run to predict willingness among coaches to access SP services from stigma tolerance, confidence in SPC and personal openness scores. A multiple regression model statistically significantly predicted willingness to use sport psychology services among coaches, F(3, 74) =14.047, p<.005. Confidence in SPC was the only variable to significantly add to the prediction, p<.05. A multiple regression revealed that Stigma Tolerance, Confidence in SPC and Personal Openness statistically significantly predicted willingness to use sport psychology services among players, F(3, 62) =7.380, p<.005. Confidence in SPC was the only variable that was significant (p=.002).

Table 10.6 Multiple regression results for willingness to access SP

Willingness to access SPS	***B***	***95% CI for B***		***SE B***	**β**	***R2***	**Δ *R2***
		LL	***UL***				
Model						.36	.33
Constant	.864	-.251	1.980	.560			
Stigma Tolerance	.096	-.085	.278	.091	.121		
Confidence in SPC	.508	.349	.667	.080	.618		
Personal Openness	-.038	-217	.141	.090	-.047		

Note. Model = "Enter" method in SPSS statistics; B=unstandardized regression coefficient; CI= confidence interval; LL= lower limit, UL=upper limit; SE B= standard error of the coefficient; β = Standardized coefficient; R^2 = coefficient of determination; **Δ**R^2 = adjusted R2.

Open-Ended Comments

Twenty-seven players (N=7) and coaches (N=20) provided additional comments about the use of sport psychology in rugby in Ireland. The majority of comments were classified as "positive" (N=17), with the remainder either classified as "negative" (N=3), "barriers to use" (N=5) or "unsure about SP" (N=2). Although some of the positive comments were just supportive of the use of sport psychology in rugby, such as "Huge part of individual and team performance", many of them also mentioned barriers to using sport psychology. Barriers mentioned included: lack of resources (financial and time) "It is generally well-received by players. It's finding time for a sport psychologist to come in and speak to a group", no access to SP "Not enough availability of the service. Especially for young players trying to get to top-level rugby", and unqualified people working in the area "Some bluffers out there. Unqualified talking about basic stuff without fully understanding the practices of the subject. Life coaches claiming to know the discipline". To deal with the lack of resources, coaches felt they could implement some SP into their teams themselves. Nevertheless, they suggested that there was a lack of training available to them, "Resources constrain the use and from a personal point of view very few resources available online to upskill myself". Others were positive, but they did not understand what sport psychology could do for them. For example, "I have little to no idea how a sports psychologist would impact a team, but the team I play for is in trouble, and I'd be open to any helping hand".

Furthermore, positive comments were also followed by references to barriers that exist in accessing sport psychology. For example, lack of resources; "I would see loads of value in using a sports psychologist; however, there is not a hope we could fund it ahead of other demands", lack of time "It is generally well-received by players. It's finding time for a sports psychologist to come in and speak to a group". Although coaches were generally positive towards sport psychology, it is not sometimes seen as not having the same value of other aspects of training "It doesn't carry nearly the same weighting as the S&C support, but the brain is very much the difference particularly in those tight games where control and mindset are vital". The perception of SP having a lower status than other sport science services was even more evident from a comment from a female player "Women's rugby barely gets a physio or an S&C, and you're thinking of an SPC? Ha.". Furthermore, this comment would suggest that there are fewer resources available to female players than male.

Several coaches and players were opposed to using sport psychology, suggesting that it was an unnecessary role for example, "This is creating another layer of management that in a sport played for enjoyment and recreation is totally unnecessary." and "Don't think they should be in the middle between staff and players". Those that were unsure typically had not thought about using sport psychology "I personally haven't given it much thought".

5.6 Discussion

The purpose of this study was to examine the use of sport psychology services in rugby in Ireland. The study explored the current use of sport psychology, attitudes towards sport psychology and willingness to use sport psychology of both rugby players and coaches through the use of online questionnaires. The key finding from this study is that although rugby players and coaches in Ireland have positive attitudes towards and a willingness to use sport psychology, the use of sport psychology services is still low. Furthermore, both players and coaches reported that they did not have enough access to sport psychology services which may suggest that there are barriers to accessing sport psychology services within rugby in Ireland. Potential barriers were highlighted by those that provided additional comments, including lack of resources and the perceptions that other aspects of training are more important or that it is unnecessary and that there are unqualified people working in the area.

The current study revealed that more coaches than players have previously received sport psychology services. This may be because that coaches often perceive themselves as performers and access sport psychology services to enhance their performance capability (Thelwell, Wood, Harwood, Woolway, & van Raalte, 2018). A negative perception of sport psychology services can often play a role in players not accessing sport psychology services. Players may develop negative perceptions due to the "macho" aspect of contact sports such as rugby, in which help-seeking behaviours or self-disclosure may be seen as a sign of weakness (Zakrajsek et al., 2011). Nevertheless, this study revealed that the players generally have a positive attitude towards and are willing to sport psychology.

Players may have positive attitudes towards sport psychology but do not access sport psychology service because the selection of an SPC is influenced by other gatekeepers such as coaches and parents (Thelwell et al., 2018). Coaches are considered gatekeepers with regards to sport psychology in terms of deciding to initiate, continue or terminate work with a sport psychologist (Zakrajsek, Steinfeldt, Bodey, Martin, & Zizzi, 2013). Another possible reason for players not accessing sport psychology services is they may not be comfortable accessing sport psychology services unless the coach was entirely behind the idea (Green et al., 2012). It may be the case that players attitudes have been affected by the attitudes and behaviour of their coaches in relation to sport psychology. Therefore, if a coach does not believe in the worth of sport psychology, then this could impact the confidence players have in SPC (Green et al., 2012).

Players scored higher than coaches in stigma tolerance which supports previous research which has suggested that despite the extensive evidence base supporting its effectiveness, there is still scepticism and stigma towards the application of sport psychology (Green et al., 2012). Furthermore, coaches were more confident in sport psychology consultation than the players. Coaches that previously accessed sport psychology services are more willing to access sport psychology services in the future. Confidence in SPC predicted the willingness of coaches to access sport psychology. Players may have rated lower in confidence in SPC because they have had less prior experience of sport psychology than the coaches (Martin, Lavallee, Kellmann, & Page, 2004). The current study supports previous research, which suggests that coaches who were confident in SPC were more likely to consider recommending the use of an SPC (Zakrajsek et al., 2013).

Previous research has suggested that coaches are more likely to recommend players to a sport psychology consultant for performance-enhancement issues rather than personal issues (Wrisberg et al., 2010). Nevertheless, this research revealed that the coaches were as willing to encourage players to see a sport psychology consultant for personal concerns as performance-related issues. Similarly, coaches reported that it would be highly beneficial for a sport psychologist to be available to coaches and players and for a sport psychologist to be among team support. Somewhat in contradiction to these results, only 24.4% of coaches reported that it would be highly beneficial to have a sport psychologist present at the training. Similar findings have previously reported among NCAA Division 1 coaches (Zakrajsek et al., 2013). A reason for these findings may be that there does not seem to be a consensus of how sport psychologists can complement the services of other staff without resulting in duplication or overlap of services (Pain & Harwood, 2004). This view may stem from the fact that coaches often interpret sport psychology as little more than common sense or that they themselves have enough "psychology skills" to meet the needs of the team (Pain & Harwood, 2004). It seems that sport psychologists need to do more to demonstrate their value.

The findings of this study indicate that players are reluctant to engage with a sport psychologist. As players are typically competing for places on teams it may be that they perceive asking for or engaging with a sport psychologist as a sign of weakness and something that may impact their selection. For this to change and for a sport psychologist to be accepted by players and therefore be effective, then they need 'buy-in' from the coaching staff (Zakrajsek, Martin, & Wrisberg, 2016). The work of the sport psychologist should be supported by the team management, coaches and staff, and psychological skills should be viewed as just as important as technical or other skills (Henriksen, Larsen, Storm, & Ryom, 2014). Furthermore, 'buy-in' may be gained from education and awareness programmes that target coaches, which aim to remove the negative connotations of sport psychology. Once 'buy-in' is created with coaches, then it should be easier to create it with players.

The findings of this study go some way to understanding the attitudes towards and willingness of rugby players and coaches to use sport psychology services in Ireland. The barriers to sport psychology highlighted in the open-ended comments highlight areas that need to be addressed to improve the uptake of sport psychology in rugby. The barriers reported included lack of resources and the perceptions that other aspects of training are more important or that it is unnecessary and that there are unqualified people working in the area. Furthermore, one comment suggested that sport psychology was another layer of unnecessary management. This comment suggests a negative perception of sport psychology and a lack of understanding of its potential benefits. It is an interesting perception of sport psychology in that it highlights that psychology is often not seen as an important component of performance and training but instead something that is unnecessary or something that may be accessed when there is a problem. Therefore, the understanding of what sport psychology is and how it can be used needs to be improved among those involved in rugby in Ireland.

To improve the uptake of sport psychology services, sport psychologists need to work to communicate the benefits of performance enhancement and eliminate the stereotypes and myths of sport psychology consulting, such as it is a quick fix and only for those with problems (Martin, Kellmann, Lavalee, & Page, 2002). Coach and player education could play a significant role in improving the uptake of sport psychology services in Ireland. Stigma towards sport psychology from coaches and players may exist due to the variety of titles used by sport psychology practitioners, which can make it difficult to know who offers what services. This lack of consensus about professional titles in sport psychology can also provide an opening for those who are not qualified to provide services to athletes and teams, creating negative perceptions of the profession (Murphy, 2009). Therefore, it is important to have more effective regulation of the profession (Green et al., 2012).

There are some limitations of this study that should be considered when interpreting the results. Firstly, the sample is not a random representation of rugby coaches and players in Ireland. Therefore, those who completed the questionnaire may have had previous SP experiences or be more likely to engage in SP than those who did not. Secondly, as an online questionnaire was used, it is possible that those that completed the questionnaire were neither rugby coaches nor players. Nevertheless, steps were taken to ensure that those who completed the questionnaire were appropriate participants for this study. The questionnaire was not widely shared on social media or websites, and in. Instead, participants were contacted either directly by email or club contacts were contacted and asked to share the link with coaches and players. Originally, it was planned to physically distribute the questionnaire at team training or meetings. Nevertheless, this distribution of questionnaires was not possible due to Covid-19 restrictions.

Future research should aim to survey a larger population of coaches and players involved in rugby in Ireland, as well as other potential gatekeepers to sport psychology such as parents. There may be a variety of other barriers and reasons for the lack of uptakes in sport psychology among rugby coaches and player in Ireland; therefore, future research could explore these reasons. Furthermore, a longitudinal study on the impact on sport psychology use of an educational programme for rugby players and coaches on the benefits of sport psychology may be beneficial.

5.7 Conclusion

Although rugby coaches and players in Ireland generally have a positive attitude towards sport psychology and demonstrate a willingness to use sport psychology for a variety of reasons, the actual uptake on sport psychology services in currently low. To encourage more uptake in the future, work needs to be done to remove the barriers such as lack of understanding of the benefits and the inconsistencies with titles that prevent coaches and players from accessing sport psychology services.

Chapter 6 - General Discussion

6.1 Introduction

This thesis sought to examine the role of PSCs in optimising talent development in a rugby union academy. To conduct this examination, this thesis had four main aims. The first aim was to conduct a review of the current literature to collate the research on PSCs that contribute to talented rugby players' development and performance. From this review, the aim was to provide a rugby specific list of PSCs and highlight any limitations in the existing literature. The second aim was to examine the PSCs of elite rugby players in a professional academy over a season. The PSCs that were chosen to be examined in this study were identified in the literature review. As the longitudinal study collected only quantitative data, it was decided that a mixed-methods case study should be conducted to gain a more comprehensive account of the role of PSCs in negotiating a rugby academy. Therefore, the third aim of this thesis was to use a mixed-method design to gain insight into the players' experiences of being part of an academy, including what PSCs the players perceive as important to be successful in a professional rugby academy, the challenges they face and the support they receive. The findings from this case study revealed that players felt they did not have enough access to psychological support in comparison to other sport science support. Hence, this thesis's final aim was to explore the attitudes towards and use of sport psychology in rugby in Ireland.

This chapter is concerned with discussing the key themes that emerged from this research and how the findings from this research will enhance the psychological development component of player development in rugby. The discussion will centre on the PSCs that are needed to negotiate a talent development pathway in rugby which were identified in chapter 2 and chapter 4, the differences between PSCs over time and between players, which were revealed in chapter 3 and finally, the attitudes towards sport psychology and the development of PSCs in a rugby talent development pathway which were identified in chapters 4 and 5. Throughout this discussion, particular emphasis will be given to the practical implications of this research. Additionally, future research direction will be highlighted to further extend the knowledge on the role of PSCs in rugby talent development.

6.2 Challenges of the rugby talent development pathway

PSCs are important for development in rugby because players must deal with various challenges in their development pathway. The literature review in Chapter 2 highlighted a range of challenges players face as part of their rugby talent development pathway. Challenges that players may have to deal with include managing transitions, play-related challenges such as positional demands, injury, burnout, pressure to perform, selection, social expectations and weight and size expectations.

In chapter 4, I further explored the challenges faced by rugby players that were, at the time of testing, part of a professional academy. Understanding the challenges that athletes face during this time is important so that they are given sufficient support and the opportunity to learn and develop skills to deal with these challenges. The research outlined in Chapter 4 adds to the athlete perspective of the challenges faced when negotiating a talent development pathway. Challenges identified in this study include the transition into the academy, living away from home and becoming more independent, proving their worth as players and balancing life and rugby.

Novel findings were identified in this study in terms of the challenges players face. Social isolation was identified as a potential challenge for players that moved countries to be part of the academy. Nevertheless, due to the current Covid-19 restrictions, social isolation may be a challenge for more and more players as they have to adhere to rules on social distancing. If players feel isolated or have poor coping resources, then they are more likely to experience psychological stress and compromised mental health (Schinke et al., 2020). This finding highlights the need for psychological support within a professional academy.

6.3 PSCs needed for a talent development pathway in rugby

Chapter 2 consists of a literature review of the PSCs that contribute to the development and performance of talented rugby players. The review identified only ten studies examining the PSCs of rugby players. These studies consisted of four exploratory studies that aimed to identify the range of PSCs the rugby players possess at different developmental levels. The remaining six studies focused on how one or more PSCs impact a particular aspect of development or performance in rugby, e.g., injury rehabilitation or burnout. Holland et al. (2010) conducted focus groups with 43 male rugby players to reveal the psychological characteristics they perceived to facilitate their development. Their results included attentional focus, self-aware learner, and confidence. These results were closely linked to the psychological resources outlined by Taylor and Collins (2019). Nevertheless, they also reported further characteristics, which included enjoyment, responsibility, adaptability, squad spirit, determination, optimal performance state, game sense, and mental toughness. Woodcock et al. (2011) revealed similar psychological characteristics as important for rugby player development. Furthermore, commitment, attentional focus and attention to detail were also identified as important for success in rugby (Corrado et al., 2014; Hill et al., 2015).

The literature review in Chapter 2 revealed that players need to possess a range of PSCs, including motivation, commitment, coping skills, confidence, focus and self-regulation, to navigate the talent development pathway in rugby successfully. Conversely, a lack of a range of PSCs, such as a lack of commitment and a lack of developmental awareness, can negatively impact talent development (Hill et al., 2015). This idea was further emphasised by Taylor and Collins (2019) as they stated that a lack of sufficient psychological resources could have a negative impact on talent development in rugby. Therefore, rugby players need to be exposed to and taught a wide range of psychological skills so they can develop the skills and characteristics to be able to deal with the challenges they face and reach their potential.

In chapter 4, I examined the role of PSC in negotiating a professional rugby academy. The findings of that chapter indicated that players need to possess a range of PSCs and have the opportunity to develop these PSCs, so they can deal with the various challenges associated with being part of the academy. PSCs identified in that study were confidence and self-belief, motivation, perfectionism, self-understanding, resilience, and mental toughness. Relating the findings of Chapter 4 to previous studies revealed that the PSCs examined and identified in this study were similar to those identified in previous studies; determination and confidence (Holland et al., 2010), coping under pressure (Macnamara et al., 2010a; Macnamara & Collins, 2013; Newton & Holmes, 2017), resilience (Mills et al., 2012) and motivation (Forsman et al., 2016). Although the results were similar to previous studies, the approach of this study differed from previous studies as it involved an in-depth examination of players currently engaged in a talent development pathway. Therefore, the current results additionally add weight to the importance of PSCs for talent development in rugby.

6.4 Differences in PSCs between players and across time

Chapter 4 consists of a study that conducted an in-depth exploration of the PSCs that are important in a professional rugby academy. Specifically, it aimed to investigate how these PSCs differed between year groups, players grouped on their likelihood to succeed and from the start of the season to the end of the season. The results from that study revealed several novel and important findings. Interestingly, players that were in Year 1 of the academy scored higher in confidence, intrinsic motivation to experience stimulation, extrinsic motivation identified, reflection than those in Year 3. These results are interesting when one considers that those in Year 3 are those that are due to make the transition to the professional level. Nevertheless, the transition to the professional level has long been recognised as a difficult and complex transition (Stambulova, 2009). A possible explanation for these findings is that there are many expectations and demands on players trying to make the transition to the professional level, which may impact their confidence and motivation. Further, there is a high degree of uncertainty at this time for Year 3 players as they wait to find out whether they will be offered a professional contract or be deselected. This is also an interesting finding as it could have been expected that Year 1 would be lower in confidence while they became familiar with the academy setting. Nevertheless, many players in the academy would have been part of the sub-academy before progressing to the academy, so it may be that the transition from sub-academy to the academy is not as difficult of a transition for players.

Previous research has suggested that motivation, in particular, is considered a critical component of talent development and is related to reaching high levels of achievement (Gagné, 2010). Motivation is a characteristic that is acquired and can be cultivated over time through coaching (Olszewski-Kubilius et al., 2015). Likewise, players must be explicitly taught self-regulated learning strategies so they can implement them as they move through the talent development pathway (Stoeger et al., 2015). Therefore, the results revealed in Chapter 4 may be because PSCs such as confidence, motivation and reflection were not emphasised and developed enough while those players in Year 3 progressed through the academy and therefore decreased over time.

Further results from Chapter 4 revealed that those rated by coaches as moderately likely to succeed scored lower in coping with adversity than those that were rated as less likely to succeed. These findings differ from previous research that suggests that successful athletes are better at coping with adversity and engage in self-regulated learning strategies such as reflection (e.g. Alfermann & Stambulova, 2007; Stambulova, 2009; Stoeger et al., 2015). An explanation of these findings may be that those rated as less likely to succeed may have had overcome more obstacles to reach the academy stage than others. Research has suggested that those that face challenges early in their development have the opportunity to learn and implement skills that will help them overcome those and future challenges (Collins &

MacNamara, 2012). Therefore, those rated as less likely to succeed may have developed skills like coping with adversity while overcoming obstacles in their talent development pathway.

Findings from Chapter 4 also revealed that perfectionism, self-monitoring, imagery in competition and relaxation in competition all decreased from the start to the end of the season. Whereas emotional control, activation in competition, self-talk in practice all increased from the start to the end of the season. The changes in these PSCs over time may be because that these PSCs were not emphasised and developed with the players throughout the season.

PSCs were also found to predict the number of caps a player had, specifically; ego orientation, basic needs satisfaction and extrinsic motivation. Therefore, it may be that the environment of those not being capped is more conducive to satisfying the basic psychological needs (Deci & Ryan, 2000). Those players that earn more caps are spending more time with senior players and the senior squad as a whole. It may be that they do not feel as competent in comparison to their senior counterparts, that they have any control or autonomy over their training or playing, and they may find it more difficult to relate to members of the senior squad while they are still in the academy. It may be considered that the objective for players is not to satisfy their basic needs but instead gain more caps and progress to the senior team. Those players that have earned more caps and scored lower in basic need satisfaction may have adapted better to the challenges of the academy in which their basic needs are not being satisified or they may be fulfilling their basic needs outside of rugby. Although, basic need fulfilment may not predict the number of caps an academy player has, fulfilling basic needs may lead to more long term success due to its link to moitvation (Gagné, 2010) and therefore should be still considered in the development of players.

6.5 Availability of psychological support to players to develop PSCs

In Chapters 4 and 5, I explored the perceptions and attitudes of rugby players towards sport psychology support. Chapter 4 explored the perceptions of players as part of a professional rugby academy. Findings from that research revealed that players positively perceived psychological support even though athletes in contact sports such as rugby typically perceive a stigma associated with accessing sport psychology services (Martin, 2005). Nevertheless, players suggested that even though they felt that psychology was important, it was not given as much attention as other aspects of training. Possible reasons outlined for psychology not receiving as much attention include lack of buy-in from coaches and staff, fear of stigmatisation for seeking the help of a sport psychologist (Ravizza, 1988), concern of coaches about whether sports psychologists could fit in well with the team (Partington & Orlick, 1987), lack of funding (Voight & Callaghan, 2001), time and space (Pain & Harwood, 2004).

As previously highlighted, the time spent in the academy can be especially challenging for athletes as they have to balance college, sport and other life commitments. The findings of Chapter 4 provide additional support for teaching players a range of PSCs while they are engaged in the talent development pathway, so they have the skills to deal with the challenges they face. Furthermore, support should be provided for the unique challenges; players may face during their time in the academy.

In chapter 5, I examined the attitudes of Irish rugby players and coaches towards sport psychology. The key finding from that research is that although rugby players and coaches in Ireland have positive attitudes towards sport psychology, the use of sport psychology services is still low. Furthermore, both players and coaches reported that they did not have enough access to sport psychology services. In Chapter 4, players reported that they felt they did not have enough access to psychological support with the acadmey, however, the academy aims to create an autonomy supportive environment. Therefore, players have the opportunity to take responsibility for their own training and access their own psychological support. Taking responsibility and making their own decisions is an important part of a talent development pathway and provides players with essential life skills. Nevertheless, as this thesis has highlighted psychology is an important component for sport development and success and therefore it should be integrated within an academy like other sport science support.

Barriers to accessing sport psychology services within rugby in Ireland were idenitfied in Chapter 5. Similar potential barriers as those highlighted in Chapter 4 were revealed, including lack of resources and the perceptions that other aspects of training are more important or that it is unnecessary and that there are unqualified people working in the area. Similar to players in the academy, players at other levels could also seek psychological support on an individual basis but majority of players do not. The reasons to do not seek psychological support themselves may be because they view it as a weakness, not necessary or they may fear that it would reflect negatively on them in terms of selection. Furthermore, players may not seek psychological support themselves because they are unsure of the benefits or who offers the support that they need.

6.6 Limitations

There are some limitations to this research that had to be considered when interpreting the results. Studies outlined in Chapter 2 and Chapter 3 consisted of what could be considered small sample sizes, twenty and four participants, respectively. However, with regards to Chapter 2, the sample represented an entire provincial academy in Ireland. Furthermore, the 20 participants in this study represented roughly 25% of rugby academy players in Ireland at the time of testing. This percentage would suggest significant external validity in a population that is small and which can be difficult to access (Cumming et al., 2017). Therefore, the size of the sample in Chapter 2 could be considered a strength of the study.

Chapter 4 consisted of four participants, which could be seen as a limitation of the study due to a lack of generalisability. Nevertheless, it has been argued that transferability can be achieved when those that read the case study recognise an overlap with their situation and transfer the findings to their actions within their own context (Tracy, 2010). Furthermore, a mixed-method approach was used in Chapter 4, in which a qualitative method was used in conjunction with quantitative measures, which can be used to offer a rich and meaningful picture of developing groups (Johnson & Onwuegbuzie, 2004).

The use of self-report questionnaires in Chapter 3, 4, and 5 could also be considered a limitation. The scores of the players could have been influenced by social desirability bias (Crowne & Marlowe, 1960). Social desirability occurs because people answer questions in ways they think will make themselves look good, often at the expense of honesty (Holtgraves, 2004; Paulhus, 2002). Players may have given untruthful answers due to the competitive nature of the academy and wanting to present themselves in a positive light. Nevertheless, players were assured that scores would be kept anonymous and that their answers would not impact their selection to teams or their progression in the academy.

In Chapter 5, an online questionnaire was used that was sent to possible participants via email. It is possible that those that completed the questionnaire were neither rugby coaches nor players. Nevertheless, steps were taken in an attempt to ensure that those that completed the questionnaire were appropriate participants for this study. The questionnaire was not widely shared on social media or websites, and instead, potential participants were contacted either directly by email or club contacts were contacted and asked to share the link with coaches and players. Physical distribution of the questionnaire at team trainings or meetings was not possible due to Covid-19 restrictions.

Finally, the sample in Chapter 5 is not a random representation of rugby coaches and players in Ireland. Therefore, those that completed the questionnaire may have had previous experiences of sport psychology or be more likely to engage in sport psychology than those who did not.

6.7 Implications for practice and theory

The findings of this research have several important implications for practice and theory. To provide effective support for players in a talent development pathway, it is necessary to understand the challenges they encounter. This research identified many challenges that rugby players face when part of an academy, including transitioning into the academy, pressure to gain muscle mass, perform and recover, prove their worth, living away from home for the first time and moving countries. Awareness of these challenges can help sport psychologists, coaches and sporting bodies provide effective support for players so that they can successfully navigate the academy pathway.

This research identified social isolation as a challenge experienced by players that move countries to join the academy. Social isolation is even more relevant now with the current Covid-19 restrictions, as players have to adhere to rules on social distancing. Psychological support needs to be provided to players to ensure that they have the necessary coping skills to deal with the current situation and that they do not feel isolated.

PSCs that are important for success in a talent development environment are sport and context specific. This research identified a list of PSCs specific to rugby. As players encounter many challenges throughout their time in a rugby talent development environment, a curriculum of PSCs should be deliberately taught to players as part of the academy programme to deal with the challenges and reach their potential. This research further revealed that PSCs can increase and decrease over time. Therefore, PSCs should be developed early so players can implement them as they need them in the future. Nevertheless, they should also be consistently emphasised within the talent development environment to ensure that key PSCs do not decrease over time.

This research highlighted that it might be necessary to provide extra support to players as they progress through the years in the academy. In this research, final year players scored lower in PSCs, such as confidence and motivation. This reduction in reported PSCs scores may be due to the potential for deselection or preparation for transition to the professional level. The reduction may also be due to a lack of psychological training and support. Therefore, more psychological training and support is necessary throughout the rugby talent development pathway. As emphasised in the longitudinal study in Chapter 3, PSCS change over time, for example, perfectionism and self-monitoring. Therefore, a method of monitoring PSC development would be useful for players in a talent development environment. Monitoring PSC development could help identify areas that players need to work on or that coaches or sport psychologists may need to provide support on. Furthermore, it would ensure that PSCs development was consistently emphasised.

To improve the uptake of sport psychology services, sport psychologists need to work to communicate the benefits of performance enhancement and eliminate the stereotypes and myths of sport psychology consulting, such as it is a quick fix and only for those with problems (Martin et al., 2002). Coach and player education could play a significant role in improving the uptake of sport psychology services in Ireland by widely enhancing people's understanding of what sport psychology is and what it is not. Lack of resources for teams to employ sport psychologist is a issue and therefore, educating coaches how to develop PSCs in their players could further help them understand the benefits of it. Introducing sport psychology to player's when they are young in an accessible and interesting may help future reluctance in accessing it.. Currently, stigma towards sport psychology from coaches and players may exist due to the variety of titles used by sport psychology practitioners, which can make it difficult to know who offers what services. This lack of consensus about professional titles in sport psychology can also provide an opening for those who are not qualified to provide services to athletes and teams, creating negative perceptions of the profession (Murphy, 2009). Therefore, it is important to have more effective regulation of the profession (Green et al., 2012).

The findings of this research extend theoretical research in sport psychology by confirming and extending the results of previous research which have examined the PSCs of athletes in a talent development environment (e.g. Hill et al., 2015; Holland et al., 2010; Taylor & Collins, 2019). The findings from the current research indicated that the PSCs needed to successfully negotiate a professional rugby academy were similar to those identified in previous studies; determination and confidence (Holland et al., 2010), coping under pressure (Macnamara et al., 2010a; Macnamara & Collins, 2013; Newton & Holmes, 2017), resilience (Mills et al., 2012) and motivation (Forsman et al., 2016). Therefore, the current findings add additional weight to the importance of PSCs for talent development in rugby.

The current research confirmed previous findings of research such as ego orientation is positively correlated and extrinsic motivation is negatively correlated with success (Gould et al., 1992), which in this study was the number of playing caps the player earned. Perfectionism, self-monitoring, imagery in competition and relaxation in competition all decreased from the start to the end of the season. Whereas emotional control, activation in competition, self-talk in practice all increased from the start to the end of the season. These findings extend previous research that suggests that it is possible for PSCs to be developed and enhanced (Cobley & Till, 2017).

These findings of the current research also extend theoretical research by indicating that successful athletes are not always better at coping with adversity as has been suggested in previous research (Alfermann & Stambulova, 2007; Stambulova, 2009; Stoeger et al., 2015). Furthermore, basic need satisfaction is typically positively associated with success in sport (e.g., Cheon, Reeve, Lee, & Lee, 2015; Gaudreau et al., 2016). Nevertheless, the current research revealed that basic needs satisfaction is negatively correlated to the number of caps a player earned. These findings seem to confirm the notion that PSCs needed for development are context and sport-specific (Larsen et al., 2012).

Gagne's DMGT model underpinned the view of talent development in the current research. The findings of this research extend this model, as it indicates that PSCs and challenges impact the development process. Furthermore, the intrapersonal catalysts of DMGT highlight PSCs such as motivation, volitation, and awareness as important for talent development. The model is generalised as it aims to encompass talent development for a variety of domains. Therefore, the current research extends the model by providing evidence for a rugby specific psychological component.

PSCs that are important for success in a talent development environment are sport and context-specific. As players encounter many challenges throughout their time in a rugby talent development environment, a curriculum of PSCs should be deliberately taught to players at the various stages of the talent development pathway to deal with the challenges and reach their potential. PSCs should be developed early so players can implement them as they need them in the future. Table 4 illustrates the challenges of rugby pathway stages, i.e. age grade and regional academies, etc., professional academy and professional level. Furthermore, the table outlines the psychological charateristics needed at each stage and the psychological skills that can develop these characteristics. All PSCs needed for development in rugby cannot be taught at any one stage and therefore should be taught over time and across the stages. This research identified a list of PSCs specific to rugby (Chapter 3) as well as the specific challenges and PSC of a rugby academy (Chapter 4 and 5). Therefore, there is an emphasis on the academy stage in Table 4. The information outlined in this table will help sport psychologists and coaches to priortise which PSCs should be taught and enhanced at each stage. Although new PSCs are taught in later stages, those PSCs taught in earlier stages should be continued to be developed to ensure that the player continues to possess the necessary PSCs for any challenges they may encounter.

Table 11.1 Psychological Skills and Characteristics needed for the 15-18 years to professional stages of the rugby development pathway

Athlete Age (Approx)	**Rugby Development Pathway Stages**	**Challenges of stage**	**Psychological Characteristics**	**Psychological Skills**	**Specific Considerations for PSCs at Academy level**
15-18 years	UK: Age grade, School, club, Regional Academies Ireland: Regional development squads, Age grade, Sub Academy	Pressure to become bigger, stronger and faster High injury incidence rate Meeting requirements of their role Executing their game plan Switching between attack and defence Competing in multiple rugby programmes Competing in multiple sports Dealing with multiple coaching systems Balance rugby and education Burnout	Confidence Flexibility & Adaptability Focus Self-regulation Motivation Social Skills	Compartmentalization Goal setting Process orientation Relaxation Routines Self-talk Visualization Reflection on action Taking advantage of a supportive climate	
18-22 years	Professional Academy	Pressure to become bigger, stronger and faster High injury incidence rate	*Continue to develop characteristics introduced at previous stage* Coping	*Continue to develop skills introduced at previous stage* Coping Skills Distraction Control	***Particular focus should be given to the following PSCs in Year 3:*** Confidence

	Selection Balance rugby and education Meeting requirements of their role Executing their game plan Switching between attack and defence Transition to Academy Increases in the physical challenges of a first-team training and playing schedule A need to continually train and work hard to prove their value to the team The strain of developing new relationships with new coaches The pressure of performing at the highest domestic levels of their sports The challenges of earning respect from their more established yet unfamiliar peers. Social strains of significant others to	Commitment Resilience Emotional Intelligence Facilitative perfectionism Self-awareness Autonomy Competence Leadership Task Orientation Ego Orientation ***Self-belief*** ***Perfectionism*** ***Self-understanding*** ***Mental toughness*** ***Desire*** ***Work Rate***	Planning & Self Organisation Realistic Performance Evaluation	Intrinsic motivation to experience stimulation Extrinsic motivation identified Reflection ***Particular focus should be given to the following PSCs for players that are considered moderately likely to succeed:*** Coping with adversity ***Particular focus should be given to the following PSCs to ensure they develop throughout a season:*** Perfectionism Self-monitoring Imagery in competition Relaxation in competition Emotional control Activation in competition Self-talk in practice

		engage in distracting social activities Pressure from agents Financial pressure High levels of alcohol consumption and poor diets Lack of opportunity Lack of physical characteristics Lack social skills Lack of support and maladaptive family input ***Social isolation when moving countries*** ***Living away from home*** ***Becoming more independent*** ***Shifting Allegiances*** ***Readiness to Perform***			
23+ years	Professional Level	Increased ball in play time Pressure to increase Body mass increase High injury incidence rate Meeting requirements of their role Executing their game plan Switching between attack and defence	*Continue to develop characteristics introduced at previous stage* Relatedness Passion	*Continue to develop skills introduced at previous stages*	

	Commodity and securing contracts	
	Rehabilitating from Injury	
	Mental error	
	Physical error	
	Performance/outcome	
	Training	
	Coach/player criticism	
	Weather	
	Fatigue	
	Off-field stressors	
	Official	
	Opponent cheat	
	Team tactics	
	Opponent play well	
	Crowd	
	Negative team atmosphere	
	Being late/unprepared for start of match after pre-match warm up	
	Team selection	
	Letting family down	
	Being substituted	
	Poor communication	
	Having to work on a Saturday	
	Team mistake	
	Thoughts of match press conference	
	Letting teammates down	

6.8 Future Research

Future research should aim to monitor the PSCs of a larger sample of academy level, with an equal number across academy years, rugby players to see if the results highlighted in the current research are consistent. Future research should also monitor the PSCs of players over a longer time period that would encompass a player's progress throughout the three years of the academy and the transition to a professional level or deselection. This research would provide important information about what is thought of as the most difficult transition in sport, the transition to the professional level (Stambulova, 2009). Also, other PSCs that contribute to talent development could be monitored to explore their development over time. As previously suggested, the results of the current study may be limited by the use of self-report questionnaires. Future research could use mixed-method research that includes interviews to confirm and triangulate findings. Furthermore, future research could compare the PSCs of those selected and deselected during the talent development pathway to identify any differences between them. This information would inform future psychological skills training and support.

Future research should also aim to survey a larger population of coaches and players involved in rugby in Ireland, as well as other potential gatekeepers to sport psychology such as parents. There may be a variety of other barriers and reasons for the lack of uptakes in sport psychology among rugby coaches and player in Ireland; therefore, future research could explore these reasons. Furthermore, a longitudinal study on the impact on sport psychology use of an educational programme for rugby players and coaches on the benefits of sport psychology may be beneficial. Research examining the impact of a PSCs training programme suitable for a rugby context on the development of players would significantly contribute to this area.

6.9 Conclusions

The findings of this thesis advance knowledge in relation to PSCs and talent development in several important ways. A rugby specific list of PSCs was identified, which is important for providing a psychological programme to players in a talent development environment. Furthermore, the findings of this research suggest that PSCs can increase and decrease over time. Specifically, this research identified that perfectionism and self-monitoring can decrease over time. Also, players in the final year of the academy can be lower in confidence, aspects of motivation and self-regulated learning than those in their first year of the academy. Therefore, it is important for PSCs to be taught and developed throughout the talent development pathway.

Players need a range of PSCs to deal with the challenges that they face during the academy. Numerous challenges that players encounter while part of a professional rugby academy were revealed, such as experiencing proving their worth and social isolation. Nevertheless, although players indicated that they held a positive attitude towards sport psychology, they did not have enough access to psychological support in comparison to other sport science support. Further findings revealed that although rugby coaches and players in Ireland generally have a positive attitude towards sport psychology and demonstrate a willingness to use sport psychology for various reasons, the actual uptake on sport psychology services is currently low. The findings of this research can be used by sport psychologists and coaches to provide effective training and support to players throughout their development in a professional academy.

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Appendices

Appendix A

Test of Performance Strategies Questionnaire

Directions: Read each statement and circle the appropriate number to indicate how you usually feel.

		Never	**Rarely**	**Sometimes**	**Often**	**Always**
1.	I set realistic but challenging goals for practice	1	2	3	4	5
2.	I say things to myself to help my practice performance	1	2	3	4	5
3.	During practice I visualize successful past performances	1	2	3	4	5
4.	My attention wanders while I am training	1	2	3	4	5
5.	I practise using relaxation techniques at workouts	1	2	3	4	5
6.	During competition I set specific result goals for myself					
7.	My self-talk during competition is negative	1	2	3	4	5
8.	I rehearse my performance in my mind before practice	1	2	3	4	5
9.	During competition I have thoughts of failure	1	2	3	4	5
10.	I use practice time to work on my relaxation technique	1	2	3	4	5
11.	I manage my self-talk effectively during practice	1	2	3	4	5
12.	I visualize my competition going exactly the way I want it to go	1	2	3	4	5
13.	I am able to control distracting thoughts when I am training	1	2	3	4	5
14.	I get frustrated and emotionally upset when practice does not go well	1	2	3	4	5
15.	I have specific cue words or phrases that I say to myself to help my performance during competition.	1	2	3	4	5
16.	I evaluate whether I achieve my competition goals	1	2	3	4	5
17.	I set very specific goals for competition	1	2	3	4	5
18.	At practice, I can allow the whole skill or movement to happen naturally without concentrating on each part.	1	2	3	4	5
19.	I keep my thoughts positive during competitions.	1	2	3	4	5

20.	I say things to myself to help my competitive performance	1	2	3	4	5
21.	At competitions, I rehearse the feel of my performance in my imagination.	1	2	3	4	5
22.	I manage my self-talk effectively during competition	1	2	3	4	5
23.	I set goals to help me use practice time effectively	1	2	3	4	5
24.	At practice, when I visualize my performance, I imagine what it will feel like.	1	2	3	4	5
25.	During practice I focus my attention effectively	1	2	3	4	5
26.	I set personal performance goals for a competition	1	2	3	4	5
27.	I motivate myself to train through positive self-talk	1	2	3	4	5
28.	I have trouble maintaining my concentration during long practices	1	2	3	4	5
29.	I talk positively to myself to get the most out of practice	1	2	3	4	5
30.	I have very specific goals for practice	1	2	3	4	5
31.	I imagine my competitive routine before I do it at a competition	1	2	3	4	5
32.	I imagine screwing up during a competition	1	2	3	4	5
33.	I talk positively to myself to get the most out of competitions	1	2	3	4	5
34.	I don't set goals for practices, I just go out and do it	1	2	3	4	5
35.	I rehearse my performance in my mind at competitions	1	2	3	4	5
36.	I can control my emotions when things are not going well at practice	1	2	3	4	5
37.	My emotions keep me from performing my best at competitions	1	2	3	4	5
38.	My emotions get out of control under the pressure of competition	1	2	3	4	5
39.	At practice, when I visualize my performance, I imagine watching myself as if on a video replay.	1	2	3	4	5
40.	I can allow the whole skill or movement to happen naturally in competition without concentrating on each part	1	2	3	4	5
41.	I use relaxation techniques as a coping strategy at competitions	1	2	3	4	5

42.	I can psych myself to perform well in practice	1	2	3	4	5
43.	I am able to perform skills at practice without having to consciously think about them.	1	2	3	4	5
44.	I can get myself ready to perform when I am at competitions	1	2	3	4	5
45.	I have difficulty with my emotions at competitions	1	2	3	4	5
46.	During training sessions I use relaxation techniques to improve my performance.	1	2	3	4	5
47.	I need to monitor all the details of each move tosuccessfully execute skills in practice.	1	2	3	4	5
48.	I have difficulty controlling my emotions if I make a mistake at competitions	1	2	3	4	5
49.	My attention wanders during competition	1	2	3	4	5
50.	My emotions keep me from performing my best during practice	1	2	3	4	5
51.	I am able to control distracting thoughts during competition	1	2	3	4	5
52.	I have difficulty getting into an ideal performance state during training	1	2	3	4	5
53.	I can psych myself to perform well in competitions	1	2	3	4	5
54.	I use relaxation techniques during competitions to improve my performance	1	2	3	4	5
55.	I can get myself “up” if I feel flat at practice	1	2	3	4	5
56.	I am able to perform skills at competition without having to consciously think about them	1	2	3	4	5
57.	If I’m starting to “lose it” at a competition, I use a relaxation technique	1	2	3	4	5
58.	I can get my intensity levels just right for competition	1	2	3	4	5
59.	During practice, I can perform automatically without having to consciously control each movement	1	2	3	4	5
60.	I am able to trust my body to perform skills in competition	1	2	3	4	5
61.	I relax myself before competition to get ready to perform	1	2	3	4	5

62.	In competition, I am sufficiently prepared to be able to perform on automatic pilot	1	2	3	4	5
63.	I can get myself “up” if I feel flat at a competition	1	2	3	4	5
64.	I focus my attention effectively during competition	1	2	3	4	5
65.	My practice performance suffers when something upsets me at training 1 2 3 4 5	1	2	3	4	5
66.	I use workouts to practise relaxing	1	2	3	4	5
67.	I have trouble maintaining concentration during competition	1	2	3	4	5
68.	I can get my intensity levels just right for practice	1	2	3	4	5

Appendix B

Athletic Coping Skills Inventory

Instructions: The following are statements that athletes have used to describe their experiences. Please read each statement carefully, and then recall as accurately as possible how often you experience the same thing. There are no right or wrong answers. Do not spend too much time on any one statement.

Please circle how often you have these experiences when playing rugby.

1	On a daily or weekly basis, I set very specific goals for myself that guide what I do.	Almost never	Sometimes	Often	Always
2	I get the most out of my talent and skill. Almost	Almost never	Sometimes	Often	Always
	When a coach or manager tells me how to correct a mistake I've made, I tend to take it personally and feel upset.	Almost never	Sometimes	Often	Always
4	When I'm playing sports, I can focus my attention and block out distractions.	Almost never	Sometimes	Often	Always
5	I remain positive and enthusiastic during competition, no matter how badly things are going.	Almost never	Sometimes	Often	Always
6	I tend to play better under pressure because I think more clearly.	Almost never	Sometimes	Often	Always
7	I worry quite a bit about what others think of my performance.	Almost never	Sometimes	Often	Always
8	I tend to do lots of planning about how to reach my goals.	Almost never	Sometimes	Often	Always
9	I feel confident that I will play well.	Almost never	Sometimes	Often	Always
10	When a coach or manager criticizes me, I become upset rather than feel helped.	Almost never	Sometimes	Often	Always
11	It is easy for me to keep distracting thoughts from interfering with something I am watching or listening to.	Almost never	Sometimes	Often	Always
12	I put a lot of pressure on myself by worrying about how I will perform.	Almost never	Sometimes	Often	Always

13	I set my own performance goals for each practice.	Almost never	Sometimes	Often	Always
14	I don't have to be pushed to practice or play hard; I give 100%.	Almost never	Sometimes	Often	Always
15	15 If a coach criticizes or yells at me, I correct the mistake without getting upset about it.	Almost never	Sometimes	Often	Always
16	I handle unexpected situations in my sport	Almost never	Sometimes	Often	Always
17	When things are going badly, I tell myself to keep calm, and this works for me.	Almost never	Sometimes	Often	Always
18	The more pressure there is during a game, the more I enjoy it.	Almost never	Sometimes	Often	Always
19	While competing, I worry about making mistakes or failing to come through.	Almost never	Sometimes	Often	Always
20	I have my own game plan worked out in my head long before the game begins.	Almost never	Sometimes	Often	Always
21	When I feel myself getting too tense, I can quickly relax my body and calm myself.	Almost never	Sometimes	Often	Always
22	To me, pressure situations are challenges that I welcome.	Almost never	Sometimes	Often	Always
23	I think about and imagine what will happen if I fail or screw up.	Almost never	Sometimes	Often	Always
24	I maintain emotional control regardless of how things are going for me.	Almost never	Sometimes	Often	Always
25	It is easy for me to direct my attention and focus on a single object or person.	Almost never	Sometimes	Often	Always
26	When I fail to reach my goals, it makes me try even harder.	Almost never	Sometimes	Often	Always
27	I improve my skills by listening carefully to advice and instruction from coaches and managers.	Almost never	Sometimes	Often	Always
28	I make fewer mistakes when the pressure is on because I concentrate better.	Almost never	Sometimes	Often	Always

Appendix C

SRL-SRS for Sport Practice

Please read the following statements and choose the number that best describes the way you act when approaching challenges, difficulties, and/or tasks in rugby training.

Think about a challenge or difficulty you might face during practice. Think about when you have to overcome a difficult practice task. What do you do before you start? What do you do while you work out? What do you do after difficult practice tasks? And how often you act like this when approaching practice tasks? There are no right answers -- please describe yourself as you are, not how you want to be or think you ought to be.

Almost Never			Sometimes			Almost Always
1	2	3	4	5	6	7

1.	I determine how to approach a practice task before I begin.	1	2	3	4	5	6	7
2.	I put forth my best effort when performing tasks at practice.	1	2	3	4	5	6	7
3.	I check aspects of my workout while doing it.	1	2	3	4	5	6	7
4.	I double-check to make sure I did practice tasks right.	1	2	3	4	5	6	7
5.	I develop a plan for resolving difficulties at practice.	1	2	3	4	5	6	7
6.	Even when I don't like a task during practice, I work hard to do well.	1	2	3	4	5	6	7
7.	I keep working hard even when sport training tasks become difficult.	1	2	3	4	5	6	7
8.	Before practice tasks, I carefully plan my course of action.	1	2	3	4	5	6	7
9.	I don't give up at practice even if a task is hard.	1	2	3	4	5	6	7
10.	While I am engaged in a practice task, I know how much of it I still have to complete.	1	2	3	4	5	6	7
11.	I am willing to do extra practice on tasks to acquire more skill.	1	2	3	4	5	6	7
12.	I try to understand the goal of a practice task before I do it.	1	2	3	4	5	6	7
13.	If I'm not really good at a task, I can compensate for this by practicing hard.	1	2	3	4	5	6	7
14.	I ask myself questions about what a practice task requires me to do before I do it.	1	2	3	4	5	6	7
15.	I work as hard as possible on all tasks at practice.	1	2	3	4	5	6	7
16.	I check my work all the way through a practice session.	1	2	3	4	5	6	7
17.	I check how well I am doing during practice tasks.	1	2	3	4	5	6	7
18.	I clearly plan my course of action before starting practice tasks.	1	2	3	4	5	6	7
19.	I look back and check if what I did in practice was right.	1	2	3	4	5	6	7
20.	Before practice tasks, I figure out my goals and what I need to do to accomplish them.	1	2	3	4	5	6	7
21.	I work hard at practice on a task even if it is not important.	1	2	3	4	5	6	7

22.	I look back to see if I did the correct procedures at practice.	1	2	3	4	5	6	7
23.	Before I do a practice task, I think through the steps in my mind.	1	2	3	4	5	6	7
24.	After finishing, I look back on the practice task to evaluate my performance.	1	2	3	4	5	6	7
25.	When I am confronted with a difficulty during practice, I can usually find several solutions.	1	2	3	4	5	6	7
26.	When facing difficulties at practice, I can remain calm because I can rely on my coping abilities.	1	2	3	4	5	6	7
27.	I often think about my past experiences at practice to gain new insights.	1	2	3	4	5	6	7
28.	No matter what comes my way at practice, I am usually able to handle it.	1	2	3	4	5	6	7
29.	I am confident that I can deal efficiently with unexpected events at practice.	1	2	3	4	5	6	7
30.	When thinking about my training, I often reflect about my strengths and weaknesses.	1	2	3	4	5	6	7
31.	I know how to handle unforeseen situations during practice, because I am resource1ful.	1	2	3	4	5	6	7

Appendix D

Basic Psychological Need Satisfaction in General

Please read each of the following items carefully, thinking about how it relates to your life, and then indicate how true it is for you. Use the following scale to respond:

Not at All			Somewhat True			Very True
1	2	3	4	5	6	7

1.	I feel like I am free to decide for myself how to live my life.	1	2	3	4	5	6	7
2.	I really like the people I interact with.	1	2	3	4	5	6	7
3.	Often, I do not feel very competent.	1	2	3	4	5	6	7
4.	I feel pressured in my life.	1	2	3	4	5	6	7
5.	People I know tell me I am good at what I do.	1	2	3	4	5	6	7
6.	I get along with people I come into contact with.	1	2	3	4	5	6	7
7.	I pretty much keep to myself and don't have a lot of social contacts.	1	2	3	4	5	6	7
8.	I generally feel free to express my ideas and opinions.	1	2	3	4	5	6	7
9.	I consider the people I regularly interact with to be my friends.	1	2	3	4	5	6	7
10.	I have been able to learn interesting new skills recently.	1	2	3	4	5	6	7
11.	In my daily life, I frequently have to do what I am told.	1	2	3	4	5	6	7
12.	People in my life care about me.	1	2	3	4	5	6	7
13.	Most days I feel a sense of accomplishment from what I do.	1	2	3	4	5	6	7

14.	People I interact with on a daily basis tend to take my feelings into consideration.	1	2	3	4	5	6	7
15.	In my life I do not get much of a chance to show how capable I am.	1	2	3	4	5	6	7
16.	There are not many people that I am close to.	1	2	3	4	5	6	7
17.	I feel like I can pretty much be myself in my daily situations.	1	2	3	4	5	6	7
18.	The people I interact with regularly do not seem to like me much.	1	2	3	4	5	6	7
19.	I often do not feel very capable.	1	2	3	4	5	6	7
20.	There is not much opportunity for me to decide for myself how to do things in my daily life.	1	2	3	4	5	6	7
21.	People are generally pretty friendly towards me.	1	2	3	4	5	6	7

Appendix E

Sports Motivation Scale II

WHY DO YOU PRACTICE YOUR SPORT?

Using the scale below, please indicate to what extent each of the following items corresponds to one of the reasons for which you are presently practicing your sport.

1. For the pleasure I feel in living exciting experiences.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

2. For the pleasure it gives me to know more about the sport that I practice.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

3. I used to have good reasons for doing sport, but now I am asking myself if I should continue doing it.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

4. For the pleasure of discovering new training techniques.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

5. I don't know anymore; I have the impression of being incapable of succeeding in this sport.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot	Corresponds Exactly	
1	2	3	4	5	6	7

6. Because it allows me to be well regarded by people that I know.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot	Corresponds Exactly	
1	2	3	4	5	6	7

7. Because, in my opinion, it is one of the best ways to meet people.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot	Corresponds Exactly	
1	2	3	4	5	6	7

8. Because I feel a lot of personal satisfaction while mastering certain difficult training techniques.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot	Corresponds Exactly	
1	2	3	4	5	6	7

9. Because it is absolutely necessary to do sport if one wants to be in shape.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot	Corresponds Exactly	
1	2	3	4	5	6	7

10. For the prestige of being an athlete.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot	Corresponds Exactly	
1	2	3	4	5	6	7

11. Because it is one of the best ways I have chosen to develop other aspects of myself.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot	Corresponds Exactly	
1	2	3	4	5	6	7

12. For the pleasure I feel while improving some of my weak points.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot	Corresponds Exactly	
1	2	3	4	5	6	7

13. For the excitement I feel when I am really involved in the activity.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot	Corresponds Exactly	
1	2	3	4	5	6	7

14. Because I must do sports to feel good myself.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot	Corresponds Exactly	
1	2	3	4	5	6	7

15. For the satisfaction I experience while I am perfecting my abilities.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

16. Because people around me think it is important to be in shape.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

17. Because it is a good way to learn lots of things which could be useful to me in other areas of my life.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

18. For the intense emotions I feel doing a sport that I like.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

19. It is not clear to me anymore; I don't really think my place is in sport

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

20. For the pleasure that I feel while executing certain difficult movements.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

21. Because I would feel bad if I was not taking time to do it.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

22. To show others how good I am good at my sport.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

23. For the pleasure that I feel while learning training techniques that I have never tried before.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

24. Because it is one of the best ways to maintain good relationships with my friends.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

25. Because I like the feeling of being totally immersed in the activity.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

26. Because I must do sports regularly.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

27. For the pleasure of discovering new performance strategies.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

28. I often ask myself; I can't seem to achieve the goals that I set for myself.

Does not correspond at all	Corresponds a little	Corresponds moderately		Corresponds a lot		Corresponds Exactly
1	2	3	4	5	6	7

Appendix F

Task and Ego Orientation in Sport Questionnaire

Consider the statement "*I feel most successful in sport when…*" and read each of the following statements listed below and indicate how much you personally agree with each statement by entering an appropriate score where:

1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree

I feel most successful in sport when…

	I am the only one who can do the play or skill	1	2	3	4	5
	I learn a new skill and it makes me want to practice more	1	2	3	4	5
	I can do better than my friends	1	2	3	4	5
	The others cannot do as well as me	1	2	3	4	5
	I learn something that is fun to do	1	2	3	4	5
	Others mess up "and" I do not	1	2	3	4	5
	I learn a new skill by trying hard	1	2	3	4	5
	I work really hard	1	2	3	4	5
	I score the most points/goals/hits, etc.	1	2	3	4	5
	I am the best	1	2	3	4	5
	Something I learn makes me want to go practice more	1	2	3	4	5
	A skill I learn really feels right	1	2	3	4	5
	I do my very best	1	2	3	4	5

Appendix G

Sport Multidimensional Perfectionism Scale-2

INSTRUCTIONS The purpose of this questionnaire is to identify how players view certain aspects of their competitive experiences in sport. Please help us to more fully understand how players view a variety of their competitive experiences by indicating the extent to which you agree or disagree with the following statements. (Circle one response option to the right of each statement). Some of the questions relate to your sport experiences in general, while others relate specifically to experiences on the team that you have most recently played with. There are no right, or wrong answers so please don‘t spend too much time on any one statement; simply choose the how you view each statement.

	Strongly Disagree	**Disagree**	**Not Applicable**	**Agree**	**Strongly Agree**
1. 1.If I do not set the highest standards for myself in my sport, I am likely to end up a second-rate player.	1	2	3	4	5
2. 2. Even if I fail slightly in competition, for me, it is as bad as being a complete failure.	1	2	3	4	5
3. I usually feel uncertain as to whether or not my training effectively prepares me for competition.	1	2	3	4	5
4. My parents set very high standards for me in my sport.	1	2	3	4	5
5. On the day of competition I have a routine that I try to follow.	1	2	3	4	5
6. I feel like my coach criticizes me for doing things less than perfectly in competition.	1	2	3	4	5
7. In competition, I never feel like I can quite meet my	1	2	3	4	5

parents' expectations.					
8. I hate being less than the best at things in my sport.	1	2	3	4	5
9. I have and follow a pre-competitive routine.	1	2	3	4	5
10. If I fail in competition, I feel like a failure as a person.	1	2	3	4	5
11. Only outstanding performance during competition is good enough in my family.	1	2	3	4	5
12. I usually feel unsure about the adequacy of my pre- competition practices.	1	2	3	4	5
13. Only outstanding performance in competition is good enough for my coach.	1	2	3	4	5
14. I rarely feel that my training fully prepares me for competition.	1	2	3	4	5
15. My parents have always had higher expectations for my future in sport than I have.	1	2	3	4	5
16. The fewer mistakes I make in competition, the more people will like me.	1	2	3	4	5
17. It is important to me that I be thoroughly competent in	1	2	3	4	5

everything I do in my sport.					
18. I follow pre-planned steps to prepare myself for competition.	1	2	3	4	5
19. I feel like I am criticized by my parents for doing things less than perfectly in competition.	1	2	3	4	5
20. Prior to competition, I rarely feel satisfied with my training.	1	2	3	4	5
21. I think I expect higher performance and greater results in my daily sport-training than most players.	1	2	3	4	5
22. I feel like I can never quite live up to my coach‘s standards.	1	2	3	4	5
23. I feel that other players generally accept lower standards for themselves in sport than I do.	1	2	3	4	5
24. I should be upset if I make a mistake in competition.	1	2	3	4	5
25. In competition, I never feel like I can quite live up to my parents‘ standards.	1	2	3	4	5
26. My coach sets very high standards for me in competition.	1	2	3	4	5

27. I follow a routine to get myself into a good mindset going into competition.	1	2	3	4	5
28. If a team-mate or opponent (who plays a similar position to me) plays better than me during competition, then I feel like I failed to some degree.	1	2	3	4	5
29. My parents expect excellence from me in my sport.	1	2	3	4	5
30. My coach expects excellence from me at all times: both in training and competition.	1	2	3	4	5
31. I rarely feel that I have trained enough in preparation for a competition.	1	2	3	4	5
32. If I do not do well all the time in competition, I feel that people will not respect me as an athlete.	1	2	3	4	5
33. I have extremely high goals for myself in my sport.	1	2	3	4	5
34. I develop plans that dictate how I want to perform during competition.	1	2	3	4	5
35. I feel like my coach never tries to fully understand the mistakes I sometimes make.	1	2	3	4	5
36. I set higher achievement goals	1	2	3	4	5

than most athletes who play my sport.					
37. I usually have trouble deciding when I have practiced enough heading into a competition.	1	2	3	4	5
38. I feel like my parents never try to fully understand the mistakes I make in competition.	1	2	3	4	5
39. People will probably think less of me if I make mistakes in competition.	1	2	3	4	5
40. My parents want me to be better than all other players who play my sport.	1	2	3	4	5
41. I set plans that highlight the strategies I want to use when I compete.	1	2	3	4	5
42. If I play well but only make one obvious mistake in the entire game, I still feel disappointed with my performance.	1	2	3	4	5

Appendix H

Participant Information Sheet Study 1

UNIVERSITY of LIMERICK

OLLSCOIL LUIMNIGH

PARTICIPANT INFORMATION SHEET

An examination of psychological characteristics and skills of rugby players in a professional rugby academy.

Please read the information below thoroughly before deciding whether or not to participate in this study.

Introduction

You are being invited to participate in a study which will examine your transition through a talent development pathway. It will specifically examine the psychological aspects of your development (e.g., motivation, confidence etc.). The study is being carried out by Mark Campbell (Lecturer, University of Limerick), David Lavallee (Adjunct Lecturer, University of Limerick) and Julieanne McAuliffe (Postgraduate Researcher, University of Limerick).

What is the study about?

The study aims to investigate the psychological characteristics and skills of rugby players in a professional rugby academy and how they develop or change over the course of a season.

What will I have to do?

At the start of the season, you will be asked to complete a series of questionnaires relating to the psychological aspects of development including psychological skills, coping skills and motivation. This will take no more than an hour. Three time during the season you will be asked to complete shorter questionnaires that will take no more the 30 minutes.

What are the benefits?

Participating in this study will further our understanding of the development process of a rugby player and what psychological aspects can assist them in negotiating the talent development pathway.

What are the risks?

There are no risks to participating in this study. Participation in this study is voluntary and you can choose to stop your involvement in this study at any time.

What happens if I change my mind during the study?
At any stage should you feel that you want to stop taking part in the study, you are free to stop and take no further part. There are no consequences for changing your mind about being in the study.

What happens to the information?
Any information that is collected will be kept anonymously and stored on a password protected computer. Your name will not appear on any report produced from the data collected during this study. The information that is gathered in the study will be kept for seven years. After this time, it will be destroyed.

If you require further information, please contact:

Contact name and number of Project Investigators.

Julieanne McAuliffe (PhD Researcher)
Department of Physical Education and Sports Sciences
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Email: julieanne.mcauliffe@ul.ie

Dr Mark Campbell (Principal Investigator)
Department of Physical Education and Sports Sciences
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Prof David Lavallee (2nd Principal Investigator)
Professor of Duty of Care in Sport
Abertay University
Email: d.lavallee@abertay.ac.uk

This study has been approved by the ethics committee for the faculty of Education & Health Sciences. If you have any concerns about this study and wish to contact someone independent, you may contact The EHS Research Ethics Contact Point of the Education and Health Sciences Research Ethics Committee, Room E1003, University of Limerick, Limerick. Tel: (061) 234101 / Email: ehsresearchethics@ul.ie.

Appendix I

Participant Informed Consent Form Study 1

<u>Participant Informed Consent Form</u>

An examination of psychological characteristics and skills of rugby players in a professional rugby academy.

Name: ____

- I have read and understand the participant information sheet.
- I understand what the project is about and what the results will be used for.
- I am fully aware of all procedures involving myself and of any risks and benefits associated with the study.
- I know that my participation is voluntary and that I can withdraw from the project at any stage without giving any reason.
- I am aware that my results will be kept confidential
- I consent for the data to be used anonymously in report format and published output.

I the undersigned have been fully informed of and understand the nature of this study. I am aware of the risks involved and agree to be a participant in this project.

Signature of Participant: ____________________ Date: _______________

Contact name and details of Project Investigators:

Julieanne McAuliffe (PhD Researcher)
Department of Physical Education and Sports Sciences
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This study has been approved by the ethics committee for the faculty of Education & Health Sciences. If you have any concerns about this study and wish to contact someone independent, you may contact The EHS Research Ethics Contact Point of the Education and Health Sciences Research Ethics Committee, Room E1003, University of Limerick, Limerick. Tel: (061) 234101 / Email: ehsresearchethics@ul.ie.

Appendix J

Participant Information Sheet Study 2

UNIVERSITY of LIMERICK

OLLSCOIL LUIMNIGH

PARTICIPANT INFORMATION SHEET

The experiences and perceived attributes of rugby players in an academy of a professional team.

Please read the information below thoroughly before deciding whether or not to participate in this study.

Introduction

You are being invited to participate in a study which will focus on your experiences of the being in an academy and any personal attributes that you have that you feel have helped you to get to this stage in your development as a rugby player. The study is being carried out by Mark Campbell (Lecturer, University of Limerick), David Lavallee (Lecturer, University of Limerick) and Julieanne McAuliffe (Postgraduate Researcher, University of Limerick).

What is the study about?

The aim of this study is to find out about players experiences of being in an academy of a professional team and what they perceive is important in navigating this pathway to professional level rugby.

What will I have to do?

You are being asked to take part in an interview that will last no more than 30 minutes.

What are the benefits?

Participating in this study will further our understanding of the development process of a rugby player and what attributes assist them in negotiating the talent development pathway of an academy.

What are the risks?

There are minimal risks to participating in this study. There may be questions during the interview that you do not wish to answer. If this is the case you do not have to answer if you do not wish to.

What if I do not want to take part?

Participation in this study is voluntary and you can choose not to take part or to stop your involvement in this study at any time.

What happens if I change my mind during the study?
At any stage should you feel that you want to stop taking part in the study, you are free to stop and take no further part. There are no consequences for changing your mind about being in the study.

What happens to the information?
Any information that is collected will be kept anonymously and stored on a password protected computer. Your name will not appear on any report produced from the data collected during this study. The information that is gathered in the study will be kept for seven years. After this time, it will be destroyed.

If you require further information please contact:

Contact name and number of Project Investigators.

Julieanne McAuliffe (PhD Researcher)
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Dr Mark Campbell (Principal Investigator)
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University of Limerick
Email: Mark.Campbell@ul.ie

Dr David Lavallee (Principal Investigator)

This study has been approved by the ethics committee for the faculty of Education & Health Sciences. If you have any concerns about this study and wish to contact someone independent, you may contact The EHS Research Ethics Contact Point of the Education and Health Sciences Research Ethics Committee, Room E1003, University of Limerick, Limerick. Tel: (061) 234101 / Email: ehsresearchethics@ul.ie.

Appendix K

Participants Informed Consent Form Study 2

UNIVERSITY of LIMERICK

OLLSCOIL LUIMNIGH

<u>Participant Informed Consent Form</u>

The experiences and perceived attributes of rugby players in an academy of a professional team.

Name: ____

- I have read and understand the subject information sheet.
- I understand what the project is about and what the results will be used for.
- I am fully aware of all procedures involving myself and of any risks and benefits associated with the study.
- I know that my participation is voluntary and that I can withdraw from the project at any stage without giving any reason.
- I am aware that my results will be kept confidential
- I consent for the data to be used anonymously in report format and published output.
- I consent to having my interview audio recorded.

I the undersigned have been fully informed of and understand the nature of this study. I am aware of the risks involved and agree to be a participant in this project.

Signature of Participant: ____________________ Date: ________________

Signature of Interviewer: ____________________ Date: ________________

Appendix L

Interview Guide Study 2

Interview Guide

Preamble

We are interested in your experiences of the being in an academy and what you perceive as the attributes that are needed to make it through the academy. Are you happy to talk about this? Now as you can see I am going to record this interview – are you happy this? Just to inform you can stop the interview at any point without having to explain why, and you can withdraw your data from the study after the interview if you feel that you would like to. Are you happy with all this?

Initial rapport-building question might include:

1. How did you become involved in rugby?
2. How did you become part of the Munster rugby academy?
    a. What do you think about that process?
    b. Do you feel it has been an effective pathway for you? Why?
    c. How did you feel being offered a place in the academy?
    d. Can you take me through your decision to come to Munster?

3. What is your ultimate goal in rugby?
    a. How do you feel about where you are now in terms of achieving that goal?
4. Can you tell me about your season? (highs/lows/challenges, etc.)
    a. How do you feel the season was in terms of your development?
    b. Would you change anything about how the season has gone?
5. As you know this project is about you experiences of being part of the academy. Can you tell me what being part of the academy has been like for you?

Possible follow-up questions:

a. In general, what things do you consider to influence your development to this point?

b. Can you tell me what you think it takes to be successfully in the academy?

    i. What personal characteristics or qualities do you believe one needs to make it to the professional level?

c. What personal attributes do you think you have that helped you get to this point?/ and what will help you reach your goals?

d. What are the challenges of being in the academy?

    i. Can you give me an example of something you have found challenging in the academy?

    ii. How have you dealt with those challenges?

    iii. (How do you deal with injuries? How do you feel when you get them? Can you tell what it is like for you when you are out with injuries?)

    iv. Can you elaborate on the selection process?

    v. How do you feel when not selected?

e. Can you tell me about your experiences with the coaches? (how do you receive feedback? Is it made clear what you need to work on?)

f. Can you tell me about your experiences of psychological support/training in the academy? (Mental skills training, availability of a sport psych to deal with performance or other issues)

    i. How do you feel you apply what you learn in those session?
    ii. Any example of how you applied this to your mental preparation?

g. Who do you consider to play a significant role in the overall development process?

    i. Why do you think he/she is so significant?
    ii. Can you tell me about your experiences with the other players?

h. Can you describe a typical week for you? Training/college etc?

i. Anything else you would like to add?

Other probes…
How did you deal with that?
What do you feel about that?
What do you think about that?
What is your experience with that?
Can you elaborate on that experience?

Appendix M

Use of Sport Psychology in Rugby Union Ireland - Coaches Questionnaire

Q1 Please state your age.

____

Q2 Please select your gender.

- ○ Male (1)
- ○ Female (2)

Q3 How many years have you coached rugby?

____

Q4 What is your current coaching role?

- ○ Head Coach (1)
- ○ Assistant Coach (2)
- ○ Other (please specify) (3) ____

Q5 Which province do you currently coach in?

- ○ Munster (1)
- ○ Leinster (2)
- ○ Connacht (3)
- ○ Ulster (4)

Q6 What level you are currently coaching at?

- National Senior Team (1)
- Provincial Senior Team (2)
- Provincial Academy (3)
- National U20s Team (4)
- All Ireland League Division 1A (5)
- All Ireland League Division 1B (6)
- All Ireland League Division 2B (7)
- All Ireland League Division 2C (8)
- Women's All Ireland League (9)
- Schools Rugby (10)
- Other (please specify) (11) ____

End of Block: Default Question Block

Start of Block: Block 3

For the purposes of this research, sport psychology consultants are defined as persons with formal training in sport psychology who are capable of providing players with the psychological and emotional skills necessary for achieving peak performance and enhancing life quality.

Specific areas where sport psychology consultants can have an impact include:

- confidence
- motivation
- communication
- team cohesion
- leadership

Skills they are capable of teaching include:

- goal setting
- imagery
- relaxation techniques
- anxiety management

- coping with stress
- thought control
- recovery from injuries
- burnout

(Source: Donohue, B., Dickens, Y., Lancer, K., Covassin, T., Hash, A., Miller, A., et al. (2004). Improving athletes' perspectives of sport psychology consultation. Behavior Modification, 28(2), 182-193.)

Q7 Have you ever personally received services from a sport psychology consultant?

○ Yes (1)

○ No (2)

Skip To: Q10 If Have you ever personally received services from a sport psychology consultant? = No

---

Q8 How many times have you received services from a sport psychology consultant?

○ 1-3 (1)

○ 4-5 (2)

○ More than 5 (3)

Q9 How effective was your experience?

○ Not at all (1)

○ Slightly (2)

○ Moderately (3)

○ Highly (4)

○ Extremely (5)

Q10 Is a sport psychology consultant available for coaches and players on your team?

- ◯ Yes (1)
- ◯ No (2)
- ◯ Unsure (3)

Skip To: Q12 If Is a sport psychology consultant available for coaches and players on your team? = No

Q11 The sport psychology consultant is a: (check all that apply)

- ◯ Part-time employee (1)
- ◯ Full-time Employee (2)
- ◯ Contracted employee (3)
- ◯ Graduate Student (4)
- ◯ Volunteer (5)
- ◯ Do not know (6)

Q12 Have you ever referred one of your athletes to a sport psychology consultant?

- ◯ Yes (1)
- ◯ No (2)

Q13 How often has a sport psychology consultant met with your team?

- ◯ Never (1)
- ◯ 1-3 (2)
- ◯ 4-5 (3)
- ◯ More than 5 (4)

Skip To: Q16 If How often has a sport psychology consultant met with your team? = Never

Q14 Where did your team meet with the sport psychology consultant? (check all that apply)

- ▢ Team Meeting (1)
- ▢ Practice (2)
- ▢ Competition (3)
- ▢ Office (4)
- ▢ Other (5) ____

Q15 How effective was your experience?

- ◯ Not at all (1)
- ◯ Slightly (2)
- ◯ Moderately (3)
- ◯ Highly (4)
- ◯ Extremely (5)

Q16 How willing would you be to seek assistance for your players in the following situations?

	Not at all (1)	Slightly (2)	Moderately (3)	Highly (4)	Extremely (5)
Dealing with pressure (1)	○	○	○	○	○
Dealing with injury/rehabilitation (2)	○	○	○	○	○
Building confidence (3)	○	○	○	○	○
Improving focus (4)	○	○	○	○	○
Preventing burnout (5)	○	○	○	○	○
Communicating with coaches (6)	○	○	○	○	○
Communicating with teammates (7)	○	○	○	○	○
Dealing with personal issues (8)	○	○	○	○	○
Managing anxiety (9)	○	○	○	○	○
Increasing enjoyment of sport (10)	○	○	○	○	○
Enhancing performance (11)	○	○	○	○	○
Performing as well in competition as in practice (12)	○	○	○	○	○
Managing emotions during competition (13)	○	○	○	○	○
Building team cohesion (14)	○	○	○	○	○

Q17 How willing would you be to encourage one of your athletes to see a sport psychology consultant about personal concerns?

- ○ Never (1)
- ○ Doubtful (2)
- ○ Maybe (3)
- ○ Probably (4)
- ○ Definitely (5)

Q18 How willing would you be to encourage one of your athletes to see a sport psychology consultant about performance-related issues?

- ○ Never (1)
- ○ Doubtful (2)
- ○ Maybe (3)
- ○ Probably (4)
- ○ Definitely (5)

End of Block: Block 3

Start of Block: Block 2

Scenarios

The following three scenarios are examples of situations where sport psychology services might be beneficial. For each scenario, please indicate the extent to which you think the services would be beneficial to your coaches and/or players.

Q19 My team is approaching the conference tournament with an excellent winning percentage. Nevertheless, it appears that some of my athletes are becoming over confident and it's affecting others on the team. I don't want to see all our hard work, including my own, go down the drain. I want my team to be confident and highly motivated but am beginning to worry about their complacency, which could jeopardize our chances of doing well in the tournament.

- Not at all (1)
- Slightly (2)
- Moderately (3)
- Highly (4)
- Extremely (5)

Q20 One of my players sustained a serious injury during the off-season and is really struggling to accept the situation. Despite my reassurances that full recovery is likely, this person remains very negative and is beginning to talk about quitting. Such a negative outlook seems to be prolonging the rehab process and keeping this player from returning to action and contributing to the team.

- Not at all (1)
- Slightly (2)
- Moderately (3)
- Highly (4)
- Extremely (5)

Q21 I have had a great recruitment year and anticipate that the new players will have a chance to start. Unfortunately, some of our veterans seem to be worrying about losing their starting spots and are not showing their usual enthusiasm in practice. I am afraid that their listlessness could influence other team members.

- ◯ Not at all (1)
- ◯ Slightly (2)
- ◯ Moderately (3)
- ◯ Highly (4)
- ◯ Extremely (5)

End of Block: Block 2

Start of Block: Block 3

Q22 How beneficial do you feel it would be to have sport psychology services available to you and your players in your team?

- ◯ Not at all (1)
- ◯ Slightly (2)
- ◯ Moderately (3)
- ◯ Highly (4)
- ◯ Extremely (5)

Q23 How beneficial do you feel it would be to include a sport psychology consultant among your team support staff?

- ◯ Not at all (1)
- ◯ Slightly (2)
- ◯ Moderately (3)
- ◯ Highly (4)
- ◯ Extremely (5)

Q24 How beneficial do you feel it would be to have a sport psychology consultant present at training and matches?

- Not at all (1)
- Slightly (2)
- Moderately (3)
- Highly (4)
- Extremely (5)

Q25 Would you support the use of a sport psychology consultant in your team, if other teams in your league were doing so?

- Yes (1)
- No (2)
- Maybe (3)

End of Block: Block 3

Start of Block: Block 4

Psychological skills training refers to the systematic and consistent practice of mental or psychological skills for the purpose of enhancing performance, increasing enjoyment, or achieving greater sport and physical activity self-satisfaction.

Q26 Please indicate how much you agree with each of the statements below (1 = strongly disagree, 7 = strongly agree).

	Strongly Disagree (1)	Disagree (2)	Moderately Disagree (3)	Neutral (4)	Moderately Agree (5)	Agree (6)	Strongly Agree 7 (7)
Psychological skills training can help players improve their mental toughness. (1)	○	○	○	○	○	○	○
If a player on my team asked my advice about personal feelings of failure related to sport, I might suggest using psychological skills training. (2)	○	○	○	○	○	○	○
I would not want to use psychological skills training with my team because other coaches would harass me. (3)	○	○	○	○	○	○	○
There are certain problems that should not be discussed outside one's immediate family. (4)	○	○	○	○	○	○	○
A good idea for avoiding personal worries and concerns is to keep one's mind on the job. (5)	○	○	○	○	○	○	○

I would like to have the assistance of a sport psychology consultant to help me better understand my team. (6)	○	○	○	○	○	○	○
I would feel uneasy using psychological skills training with my team because some people would disapprove. (7)	○	○	○	○	○	○	○
There is something respectable in the attitude of players who are willing to cope with their conflicts and fears without resorting to professional help. (8)	○	○	○	○	○	○	○
If I utilized psychological skills training to help me coach better, I would not want other coaches to know about it. (9)	○	○	○	○	○	○	○

An athlete with emotional problems during sport performance would benefit from psychological skills training. (10)	○	○	○	○	○	○	○
Having used psychological skills training is bad for an athlete's reputation. (11)	○	○	○	○	○	○	○
There are experiences in my life that I would not discuss with anyone. (12)	○	○	○	○	○	○	○
If I was worried or upset about my team's performance, I could see the benefits of using psychological skills training. (13)	○	○	○	○	○	○	○
Emotional difficulties tend to work themselves out in time. (14)	○	○	○	○	○	○	○
I think psychological skills training would help my team perform better under pressure. (15)	○	○	○	○	○	○	○

I would not want someone else to know about my team's use of psychological skills training. (16)	○	○	○	○	○	○	○
Psychological skills training could help my team fine-tune their performance. (17)	○	○	○	○	○	○	○
If my team used psychological skills training, I would not want other coaches to know about it. (18)	○	○	○	○	○	○	○
At times I have felt lost and would have welcomed the professional advice of a sport psychology consultant. (19)	○	○	○	○	○	○	○
I would think less of my players if they were to use psychological skills training. (20)	○	○	○	○	○	○	○

Players with a strong character can get over mental conflicts by themselves. (21)	○	○	○	○	○	○	○

End of Block: Block 4

Start of Block: Block 5

Q27 Do you currently have a sport psychologist working with your team?

○ Yes (1)

○ No (2)

Skip To: Q30 If Do you currently have a sport psychologist working with your team? = No

---

Q28 What are the qualifications of the sport psychologist?

○ Psychological Society of Ireland Accredited (1)

○ Irish Institute of Sport Accredited (2)

○ Masters in Sport Psychology (3)

○ I do not know (4)

○ Other (5) ____

Q29 What does the role of the sport psychologist working with your team entail?

○ Enhance player performance (e.g., assist players in developing coping mechanisms, enhance player confidence) (1)

○ Player development and well being (e.g., enable athletes to disclose issues, ensure welfare is monitored, address non-sport issues) (2)

○ Coach support (Help coaches understand the demands on the players, support for organizational demands on coaches) (3)

○ Coach development (e.g., help coaches integrate psychology into training, deliver coach-education workshop) (4)

○ Support for other groups (e.g., provide parental sessions) (5)

Q30 What reason would you give for not using having a sport psychologist working with your team? (Please check all that apply)

▢ Lack of access to sport psychologist (1)

▢ Not relevant (2)

▢ Too expensive (3)

▢ Other (4) ____

Q31 Do you think you and your players have enough access to sport psychology services?

○ Yes (1)

○ No (2)

Q32 Please provide any additional comments regarding the use of sport psychology consultants in your team (optional):

____

End of Block: Block 5

Appendix N

Use of Sport Psychology in Rugby Union in Ireland - Players

Q1 Please state your age.

____

Q2 Please select your gender.

- ○ Male (1)
- ○ Female (2)

Q3 How many years have you played rugby?

____

Q4 What is your current playing position?

- ◯ Prop (1)
- ◯ Hooker (2)
- ◯ Second Row (4)
- ◯ Flanker (5)
- ◯ No. 8 (6)
- ◯ Scrum Half (7)
- ◯ Out Half (8)
- ◯ Winger (9)
- ◯ Full Back (10)
- ◯ Centre (11)

Q5 Which province do you currently play in?

- ◯ Munster (1)
- ◯ Leinster (2)
- ◯ Connacht (3)
- ◯ Ulster (4)

Q6 What is the highest level are you currently playing at? Please tick all relevant answers.

▢ National Senior Team (1)

▢ Provincial Senior Team (2)

▢ Provincial Academy (3)

▢ National U20s Team (4)

▢ All Ireland League Division 1A (5)

▢ All Ireland League Division 1B (6)

▢ All Ireland League Division 2B (7)

▢ All Ireland League Division 2C (8)

▢ Women's All Ireland League (9)

▢ Schools Rugby (10)

▢ Other (please specify) (11) ____

End of Block: Default Question Block

Start of Block: Block 3

For the purposes of this research, sport psychology consultants are defined as persons with formal training in sport psychology who are capable of providing players with the psychological and emotional skills necessary for achieving peak performance and enhancing life quality.

Specific areas where sport psychology consultants can have an impact include:
- confidence
- motivation
- communication
- team cohesion
- leadership

Skills they are capable of teaching include:
- goal setting
- imagery
- relaxation techniques
- anxiety management
- coping with stress

- thought control
- recovery from injuries
- burnout

(Source: Donohue, B., Dickens, Y., Lancer, K., Covassin, T., Hash, A., Miller, A., et al. (2004). Improving athletes' perspectives of sport psychology consultation. Behavior Modification, 28(2), 182-193.)

Q7 Have you ever personally received services from a sport psychology consultant?

- ○ Yes (1)
- ○ No (2)

Skip To: Q11 If Have you ever personally received services from a sport psychology consultant? = No

Q8 Approximately, how many times have you received services from a sport psychology consultant?

- ○ 1-3 (1)
- ○ 4-5 (2)
- ○ More than 5 (3)

Q9 Overall, how effective was your experience?

- ○ Not at all (1)
- ○ Slightly (2)
- ○ Moderately (3)
- ○ Highly (4)
- ○ Extremely (5)

Q10 Have you ever had a dissatisfying experience with a sport psychology consultant?

- Yes (1)
- No (2)

Q11 Are you currently receiving services from a sport psychology consultant that works with your team?

- Yes (1)
- No (2)

Skip To: Q15 If Are you currently receiving services from a sport psychology consultant that works with your team? = No

---

Q12 How often are you receiving services from a sport psychology consultant working with your team?

- Weekly (1)
- Monthly (2)
- As needed (3)

Q13 How effective are your experience(s)?

- Not at all (1)
- Slightly (3)
- Moderately (4)
- Highly (5)
- Extremely (6)

Q14 How did you find out about the services offered by your sport psychology consultant? (check all that apply)

- ◯ Referral by coach (1)
- ◯ Referral by athlete/teammate (2)
- ◯ Referral by support staff (3)
- ◯ Team Meeting (4)
- ◯ Other (5) ____

Q15 How often has a sport psychology consultant met with your team?

- ◯ Never (1)
- ◯ 1-3 (2)
- ◯ 4-5 (3)
- ◯ More than 5 (4)

Skip To: Q17 If How often has a sport psychology consultant met with your team? = Never

Q16 Where did your team meet with the sport psychology consultant? (check all that apply)

- ◯ Team Meeting (1)
- ◯ Practice (2)
- ◯ Competition (3)
- ◯ Office (4)

Q17 How willing would you be to seek assistance for help with the following situations?

	Not at all (1)	Slightly (2)	Moderately (3)	Highly (4)	Extremely (5)
Dealing with pressure (1)	○	○	○	○	○
Dealing with injury/rehabilitation (2)	○	○	○	○	○
Building confidence (3)	○	○	○	○	○
Improving focus (4)	○	○	○	○	○
Preventing burnout (5)	○	○	○	○	○
Communicating with coaches (6)	○	○	○	○	○
Communicating with teammates (7)	○	○	○	○	○
Dealing with personal issues (8)	○	○	○	○	○
Managing anxiety (9)	○	○	○	○	○
Increasing enjoyment of sport (10)	○	○	○	○	○
Enhancing performance (11)	○	○	○	○	○
Performing as well in competition as in practice (12)	○	○	○	○	○
Managing emotions during competition (13)	○	○	○	○	○
Building team cohesion (14)	○	○	○	○	○

Q38 How beneficial would the following services/skills be to you?

	Not at all (1)	Slightly (2)	Moderately (4)	Highly (5)	Extremely (6)
Dealing with pressure (1)	○	○	○	○	○
Dealing with injury/rehabilitation (2)	○	○	○	○	○
Building confidence (3)	○	○	○	○	○
Improving focus (4)	○	○	○	○	○
Preventing burnout (5)	○	○	○	○	○
Communicating with coaches (6)	○	○	○	○	○
Communicating with teammates (7)	○	○	○	○	○
Dealing with personal issues (8)	○	○	○	○	○
Managing anxiety (9)	○	○	○	○	○
Increasing enjoyment of sport (10)	○	○	○	○	○
Enhancing performance (11)	○	○	○	○	○
Building team cohesion (12)	○	○	○	○	○
Managing emotions during competition (13)	○	○	○	○	○

End of Block: Block 3

Start of Block: Block 2

Scenarios

The following three scenarios are examples of situations where sport psychology services might be beneficial. For each scenario, please indicate the extent to which you think the services would be beneficial to you and/or your teammates.

Q19 I am experiencing real difficulty controlling my emotions during competition. I am having trouble focusing effectively. If something goes wrong, I get very anxious and angry. As a result, I make bad decisions at vital times.

- ○ Not at all (1)
- ○ Slightly (2)
- ○ Moderately (3)
- ○ Highly (4)
- ○ Extremely (5)

Q20 My coach and I have not been able to see eye to eye, and I am performing worse than ever. I'm not ready to transfer yet, but I know I have to do better. I need to find a way to get things turned around with both my coach and my performance. I don't know where to turn.

- ○ Not at all (1)
- ○ Slightly (2)
- ○ Moderately (3)
- ○ Highly (4)
- ○ Extremely (5)

Q21 I suffered an injury in the off-season and went through rehab. Then I had another injury early in the season that knocked me out for most of the year. After two surgeries and extensive rehab, I have lost all my confidence, and I don't know how to get it back. I'm not sure I ever want to compete again.

- Not at all (1)
- Slightly (2)
- Moderately (3)
- Highly (4)
- Extremely (5)

End of Block: Block 2

Start of Block: Block 3

Q22 How beneficial do you feel it would be to have sport psychology services available to you and your teammates?

- Not at all (1)
- Slightly (2)
- Moderately (3)
- Highly (4)
- Extremely (5)

Q23 How beneficial do you feel it would be to include a sport psychology consultant among your team support staff?

- Not at all (1)
- Slightly (2)
- Moderately (3)
- Highly (4)
- Extremely (5)

Q24 How beneficial do you feel it would be to have a sport psychology consultant present at training and matches?

- ○ Not at all (1)
- ○ Slightly (2)
- ○ Moderately (3)
- ○ Highly (4)
- ○ Extremely (5)

Q25 Would you support the use of a sport psychology consultant in your team, if other teams were doing so?

- ○ Yes (1)
- ○ No (2)
- ○ Maybe (3)

End of Block: Block 3

Start of Block: Block 4

Psychological skills training refers to the systematic and consistent practice of mental or psychological skills for the purpose of enhancing performance, increasing enjoyment, or achieving greater sport and physical activity self-satisfaction.

Q26 Please indicate how much you agree with each of the statements below (1 = strongly disagree, 7 = strongly agree).

	Strongly Disagree (1)	Disagree (2)	Moderately Disagree (4)	Neutral (5)	Moderately Agree (6)	Agree (7)	Strongly Agree (8)
A sport psychology consultant can help athletes improve their mental toughness. (1)	○	○	○	○	○	○	○
I respect the opinions of people of my own race or ethnicity more than those people from another group. (2)	○	○	○	○	○	○	○
If an athlete asked my advice I might recommend that he/she see a sport psychology consultant. (3)	○	○	○	○	○	○	○
I would not go to a sport psychology consultant because other athletes would harass me. (4)	○	○	○	○	○	○	○
There are certain problems that should not be discussed outside one's immediate family. (5)	○	○	○	○	○	○	○

The athletes that I associate most are of the same race or ethnicity as me. (6)	○	○	○	○	○	○	○
A good idea for avoiding personal worries and concerns is to keep one's mind on a job. (7)	○	○	○	○	○	○	○
To help me better understand myself as an athlete, I would like the assistance of a sport psychology consultant. (8)	○	○	○	○	○	○	○
I would feel uneasy going to a sport psychology consultant because some people would disapprove. (9)	○	○	○	○	○	○	○
There is something respectable in the attitude of athletes who are willing to cope with their conflicts and fears without resorting to professional help (10)	○	○	○	○	○	○	○

There are great differences between people of different race and ethnicity. (11)	○	○	○	○	○	○	○
I would feel most secure in receiving help from a sport psychology consultant. (12)	○	○	○	○	○	○	○
Having seen a sport psychology consultant is bad for an athlete's reputation. (13)	○	○	○	○	○	○	○
There are experiences in my life that I would not discuss with anyone. (14)	○	○	○	○	○	○	○
If I was worried or upset about my sport performance, I would want to get help from a sport psychology consultant. (15)	○	○	○	○	○	○	○
I would not want someone else to know about my team's use of psychological skills training. (16)	○	○	○	○	○	○	○

Emotional difficulties tend to work themselves out in time. (17)	○	○	○	○	○	○	○
I think a sport psychology consultant would help me perform better under pressure. (18)	○	○	○	○	○	○	○
I would not want someone to know about me receiving help from a sport psychology consultant. (19)	○	○	○	○	○	○	○
If I went to a sport psychology consultant, I would not want my coach to know about it. (20)	○	○	○	○	○	○	○
A sport psychology consultant could help me fine-tune my sport performance. (21)	○	○	○	○	○	○	○
If I went to a sport psychology consultant, I would not want other athletes to know about it. (22)	○	○	○	○	○	○	○

At times I have felt lost and would have welcomed professional advice for a personal problem. (23)	○	○	○	○	○	○	○
My coach would think less of me if I went to a sport psychology consultant. (24)	○	○	○	○	○	○	○
Athletes with a strong character can get over mental conflicts by themselves (25)	○	○	○	○	○	○	○
I would be more comfortable with a sport psychology consultant if he/she were the same race or ethnicity as I am. (26)	○	○	○	○	○	○	○

End of Block: Block 4

Start of Block: Block 5

Q27 Is there a sport psychologist currently working with your team?

○ Yes (1)

○ No (2)

Skip To: Q31 If Is there a sport psychologist currently working with your team? = No

Q28 What are the qualifications of the sport psychologist?

- ○ Psychological Society of Ireland Accredited (1)
- ○ Irish Institute of Sport Accredited (2)
- ○ Masters in Sport Psychology (3)
- ○ I do not know (4)
- ○ Other (5) ____

Q29 In what ways has the sport psychologist worked with you/team?

- ▢ Individual Support (1)
- ▢ Group Support (2)
- ▢ Education Session (3)
- ▢ Practical Sessions (Integrating sport psychology into training) (4)

Q30 Please tick all that are relevant in terms of the sport psychologist's availability to the team:

- ▢ Partial Contact (i.e., when required) (1)
- ▢ Present at Training and being around the training environment (2)
- ▢ Present at matches (3)
- ▢ Available to meet coaches or players outside the sport environment (4)
- ▢ ESupport (i.e., emails, text messages, Skype, etc) (5)

Q31 Do you feel you have enough access to sport psychology services within your team?

- ○ Yes (1)
- ○ No (2)

Q32 Please provide any additional comments regarding the use of sport psychology consultants in rugby in Ireland (optional):

____

End of Block: Block 5

Appendix O

Participant Information Sheet Study 3

UNIVERSITY of LIMERICK

OLLSCOIL LUIMNIGH

PARTICIPANT INFORMATION SHEET

An examination of the use sport psychology within rugby union in Ireland

Please read the information below thoroughly before deciding whether or not to participate in this study.

Introduction

You are being invited to participate in a study which will examine the use of a sport psychology in rugby union in Ireland. The study is being carried out by Mark Campbell (Lecturer, University of Limerick), David Lavallee (Adjunct Lecturer, University of Limerick) and Julieanne McAuliffe (Postgraduate Researcher, University of Limerick).

What is the study about?

The study aims to investigate your attitude towards sport psychology and how you use sport psychology.

What will I have to do?

You will be asked to complete an online questionnaire that should take no more than 10 minutes to complete.

What are the benefits?

Participating in this study will further our understanding of how sport psychology is used within rugby union teams in Ireland. This information is important so that future sport psychology services can be tailored to best meet the needs of coaches and players.

What are the risks?

There are minimal risks to participating in this study. There may be questions that you do not wish to answer. If this is the case you do not have to answer if you do not wish to.

What happens if I change my mind during the study?

At any stage should you feel that you want to stop taking part in the study, you are free to stop and take no further part. There are no consequences for changing your mind about being in the study.

What happens to the information?

Any information that is collected will be kept anonymously and stored on a password protected computer. Your name will not appear on any report produced from the data collected during this study. The information that is gathered in the study will be kept for seven years. After this time, it will be destroyed.

If you require further information please contact:

Contact name and number of Project Investigators.

Julieanne McAuliffe (PhD Researcher)
Department of Physical Education and Sports Sciences
University of Limerick
Email: julieanne.mcauliffe@ul.ie

Dr Mark Campbell (Principal Investigator)
Department of Physical Education and Sports Sciences
University of Limerick
Email: Mark.Campbell@ul.ie

Prof David Lavallee (2nd Principal Investigator)
Professor of Duty of Care in Sport
Abertay University
Email: d.lavallee@abertay.ac.uk

This study has been approved by the ethics committee for the faculty of Education & Health Sciences. If you have any concerns about this study and wish to contact someone independent, you may contact The EHS Research Ethics Contact Point of the Education and Health Sciences Research Ethics Committee, Room E1003, University of Limerick, Limerick. Tel: (061) 234101 / Email: *ehsresearchethics@ul.ie*.

UNIVERSITY of LIMERICK

OLLSCOIL LUIMNIGH

Appendix P

An examination of the use sport psychology within rugby union in Ireland

Participant Informed Consent Form

Name: ____

- I have read and understand the participant information sheet.
- I understand what the project is about and what the results will be used for.
- I am fully aware of all procedures involving myself and of any risks and benefits associated with the study.
- I know that my participation is voluntary and that I can withdraw from the project at any stage without giving any reason.
- I am aware that my results will be kept confidential
- I consent for the data to be used anonymously in report format and published output.
- I consent to having my interview audio recorded.

I the undersigned have been fully informed of and understand the nature of this study. I am aware of the risks involved and agree to be a participant in this project.

Signature of Participant: ______________________ Date: _________________

Contact name and details of Project Investigators:

Julieanne McAuliffe (PhD Researcher)
Department of Physical Education and Sports Sciences
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Dr Mark Campbell (1st Principal Investigator)
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Prof David Lavallee (2nd Principal Investigator)
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This study has been approved by the ethics committee for the faculty of Education & Health Sciences. If you have any concerns about this study and wish to contact someone independent, you may contact The EHS Research Ethics Contact Point of the Education and Health Sciences Research Ethics Committee, Room E1003, University of Limerick, Limerick. Tel: (061) 234101 / Email: *ehsresearchethics@ul.ie*.