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**A Talent Transfer Lifecycle Model in Sport**

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## **Abstract**

This thesis focussed on examining the talent transfer experiences as lived by the athletes whom went through transitions. The purpose was to examine why athletes chose to continue in their pursuit of international competition by switching sports as well as understanding how they managed the process and their own unique experiences.

Talent transfer is a process occurring when an athlete ceases or reduces their involvement in a sport in which they have invested significant time and concentrates their efforts in a sport that is new to them but involving similar skills. The process comprises of athletes who might be able to perform if fast tracked into other sports with sporting organisations seeing the benefits of this alternative talent identification (TID) system with specific examples of success. The first study (chapter 3) examined the athletes' experiences through the transition of talent transfer. Ten athletes were interviewed: five from a supported talent transfer programme (UK Sport/National Governing Body: NGB); and five that went through the process of their own accord (informally). The purpose of the second study (chapter 4) was to examine the subjective experiences and one athlete's meaning of the talent transfer process, who moved from judo to cycling and internationally medalled in both. A life history was chosen as the methodology in which to convey the information gathered through the process. The purpose of the third study (chapter 5) was to explore 10 purposeful athletes' experiences of the talent transfer process to understand their unique experiences within a supported NGB programme through unstructured interviews.

The results from all three studies are discussed and culminate in a model of the talent transfer process (chapter 6) with limitations and future research directions also discussed. In conclusion, the findings offer a unique examination into athletes' experiences through the Talent Transfer Lifecycle Model.

## Declaration

I declare that I alone composed this thesis and that it embodies the results of my own research. Where appropriate, I have acknowledged the nature and extent of work carried out by others in the thesis.

Signed \_\_\_\_\_ Tracy Rea

Date \_\_\_\_\_ 11<sup>th</sup> February, 2019

## Acknowledgements

The six years it has taken me to write this PhD has been a paradox: painful and wonderful at the same time. Writing this note of thanks is the finishing touch on my thesis. I would like to reflect on the people who have supported and helped me so much throughout this period.

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I would also like to thank my parents for their unwavering belief in me as well as the sacrifice they made to support me with the care of my daughter. They're tremendous understanding and encouragement allowed me to follow my dreams, enabled me to change my career and prove the hypothesis from this thesis in a professional environment. I was previously Performance Director of Scottish Gymnastics and now work as Head of Business Operations within IT at Lloyds Banking Group. What a remarkable talent transfer!

To my beautiful and precious 6-year-old daughter, Georgie. Thank you for your patience and understanding whilst I spent many weekends away from you sitting in the library and many weeks in London working. And no, I will not be able to care for patients in a hospital as a doctor.

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## **Chapter 1**

### **Introduction**

Talent is a set of personal characteristics that enhance one's ability to achieve expertise in an accelerated manner. These traits allow an athlete to improve at quicker rates than others in their field that are at the same level of expertise/fitness/skill, etc. This is because talent is one's ability to adapt to training and develop skills in their specialized field (Black, 2013). The presumption from the above is that athletic talent is based, at least in some part, on a genetic or innate predisposition that is responsive to training intervention. When these two come together, they create superior ability for a specific activity. This might only exist along with deliberate practice as this is when one's ability to adapt and improve is more clearly visible. Talent is not merely one's 'base' ability at a task – this comes about often as a result of exposure to skills and experiences in one's early days (Black, 2013). It is the author's contention that these theoretical positions are not mutually exclusive, with both genetic and sociological factors contributing to expertise. The relative contribution of each is likely to vary according to the unique characteristics and requirements of the particular sport.

Talent identification is the process of recognising current athletes that have the potential to excel within sport (Vaeyens, Lenoir, Williams & Philippaerts, 2008). Talent transfer is an alternative method to talent identification with UK Sport launching a number of initiatives to fast track athletes to another sport with the intention of winning medals on the world stage. However there is scarce research that examines this very specific transition and even less research that tries to understand athletes' unique experiences and appreciate how they have managed the process. There are examples of lifecycle models in the sport literature that consider career transitions, including Wylleman and Lavallee's (2004) Developmental model and Wylleman, Reints and De Knop's (2013) Holistic Athletic Career (HAC) model. These models identify levels (athletic, psychological, psychosocial, academic/vocational and financial) experienced by an athlete across a lifespan. They include normative transitions which are relatively predictable and anticipated in nature (Wylleman and Lavallee, 2004) with examples such as moving from junior to senior sport, as well as retiring from competitive sport. Non-normative transitions, on the other hand, do not occur in a set plan or schedule and are the result of important events that take place in individual's lives and their response to it. These include transitions such as a career ending injury or a coach that leaves the athlete. As a result, these transitions are generally unpredicted, unanticipated and involuntary (Wylleman & Lavallee, 2004).

Research questions were developed for this thesis with an overarching aim of developing a lifecycle model that captures the non-normative transition of talent transfer within the athletic level of the models. The original contribution of the Talent Transfer Lifecycle model to the research area of talent transfer in sport is important as there is no agreed framework or model currently in

circulation. Providing something that benefits the sports community and that can be practically applied is the 'so what' of this thesis. This author hopes that the results of this thesis provides a starting point that can be evolved and adapted as further research is undertaken.

The idea was nurtured when the author worked at the **sportscotland** Institute of Sport as a Performance Lifestyle Advisor in 2009. The Institute held testing events for talent transfer initiatives (judo, cycling and wrestling, amongst others) with the intention of athletes switching their expertise in a 4-5 year window, with the aim of competing at the Glasgow 2014 Commonwealth Games (a home games). The author vividly remembers discussing with her colleagues about a lack of theoretical literature at the time and that some vital lessons could be learnt along the way. The aim was to target athletes that were more experienced, potentially having already retired and then encourage them to trial for the targeted sports. It was never fully investigated why athletes put themselves forward for a talent transfer programme and felt as though they had more to give within competitive sport. Therefore this research hopefully bridges the gap somewhat.

The author's immersion into the area of talent transfer stimulated further action herself by moving between industries. Her last role within high performance sport was as Performance Director of Scottish Gymnastics. The author now work as Head of Business Operations within IT at Lloyds Banking Group. The potential to expand this research area across professions (and outwith sport) is significant and the author hopes it will provide invaluable insight and guidance to others who wish to change careers at a later stage in life. It may provide the foundation upon which a new psycho-educational curriculum for career transition practitioners can be utilised.

Literature addressing talent transfer has increased in volume over the last several years (Bullock, Gulbin, Martin, Ross, Holland & Marino, 2009; Collins, Collins, MacNamara & Jones, 2014; Hoare & Warr, 2000; MacNamara & Collins, 2015) reflecting a growing recognition of the importance of the identification of talent through alternative methods rather than the atypical developmental pathway. This awareness is increasingly extending to the community of professionals charged with producing medals on the international stage. Resultant programmes, designed around those factors deduced to be supportive of a successful transition, should be of value to sporting organisations, the athletes who aspire to improve their performance and those supporting them, and may help to minimise the talent loss which occurs before potential is realised.

Programmes designed to have facilitated athletes' transitions across sports have proven successful. Since 2007, the UK Talent Team have worked in partnership with 20 Olympic and

Paralympic sports, run 12 national athlete recruitment campaigns (including: Girls4Gold Army; Target Tokyo; Power2Podium: Skeleton; Girls4Gold Canoeing; Fighting Chance: Battle4Brazil; Talent 2016 Tall and Talented) and assessed over 7000 athletes (UK Sport, 2018). These campaigns have resulted in over 100 newly identified athletes entering the world class system across 17 sports with over 450 international appearances made and over 150 international medals won (UK Sport, 2018). A number of the athletes interviewed for this thesis were part of the programmes identified above. Three high profile athletes that were part of a UK Sport programme (but not interviewed for this thesis) include: Helen Glover who applied for the Sporting Giants scheme for rowing and won a gold medal at the London 2012 Olympics, 4 years after she started the sport in 2008; Lutalo Muhammad who joined the GB Taekwondo programme through the Fighting Chance campaign and won bronze at the London 2012 Olympics; and Lizzy Yarnold who applied for the Girls4Gold programme in 2008 and won gold in Skeleton in both Sochi (2014) and PyeongChang (2018) winter Olympics. Liz Nicoll, Chief Executive of UK Sport, said:

*“#DiscoverYourGold is all about ensuring young people with sporting talent get the opportunity to reach their full potential no matter what their background. We are looking for athletes with raw endurance, speed or power. You might be in the wrong sport, but with the potential, with access to the right training and support, to become a future Olympic medallist. If you are highly competitive, mentally tough and up for a challenge of a lifetime – we want to hear from you” (UK Sport, 2016b).*

This is the foundation for all of the talent identification campaigns and appeals directly to the athletes who wish to transfer their talents to another sport with the ambition of competing at an Olympic Games.

UK Sport’s talent recruitment and confirmation programmes are multi-phased. Campaigns start with a talent search, either with the general public or within the sport’s community (UK Sport, 2018). This involves submitting an application form to UK Sport where after careful analysis successful applicants are invited to the phase 1 testing events hosted in various locations around the country. The phase 1 selection process begins with a range of generic physical and skill based tests which may include: sprints, jumps, aerobic fitness and upper and lower body strength tests. These tests will vary from campaign to campaign depending on the sport. The selection process also includes an in-depth analysis of each athlete’s training and competition history (UK Sport, 2018). Phase 2–3 are designed to further assess an athlete’s suitability for a sport and better equip them for the journey ahead. The athlete’s pathway from identification to world class performance is also outlined. Sessions may include: functional movement screening; medical screening;

performance lifestyle workshops; and psychology and behavioural assessments (UK Sport, 2018). And lastly, there is the confirmation phase where selected athletes will embark on a 6–12 month programme and immerse themselves in the sport’s training environment. Athletes are exposed to a carefully constructed developmental experience and their rates of progression are tracked to further assess their suitability for the sport.

The latest Talent ID initiative driven by UK Sport is #DiscoverYourGold (2018: see Figure 1) and is currently open for applications (April, 2018). The programme is targeting short track speed skating, skeleton, sprint track cycling, rowing and women’s rugby sevens. There is an online form to complete and each application is assessed against the sport-specific profiles (below) where successful athletes will be invited to trials further in the year.

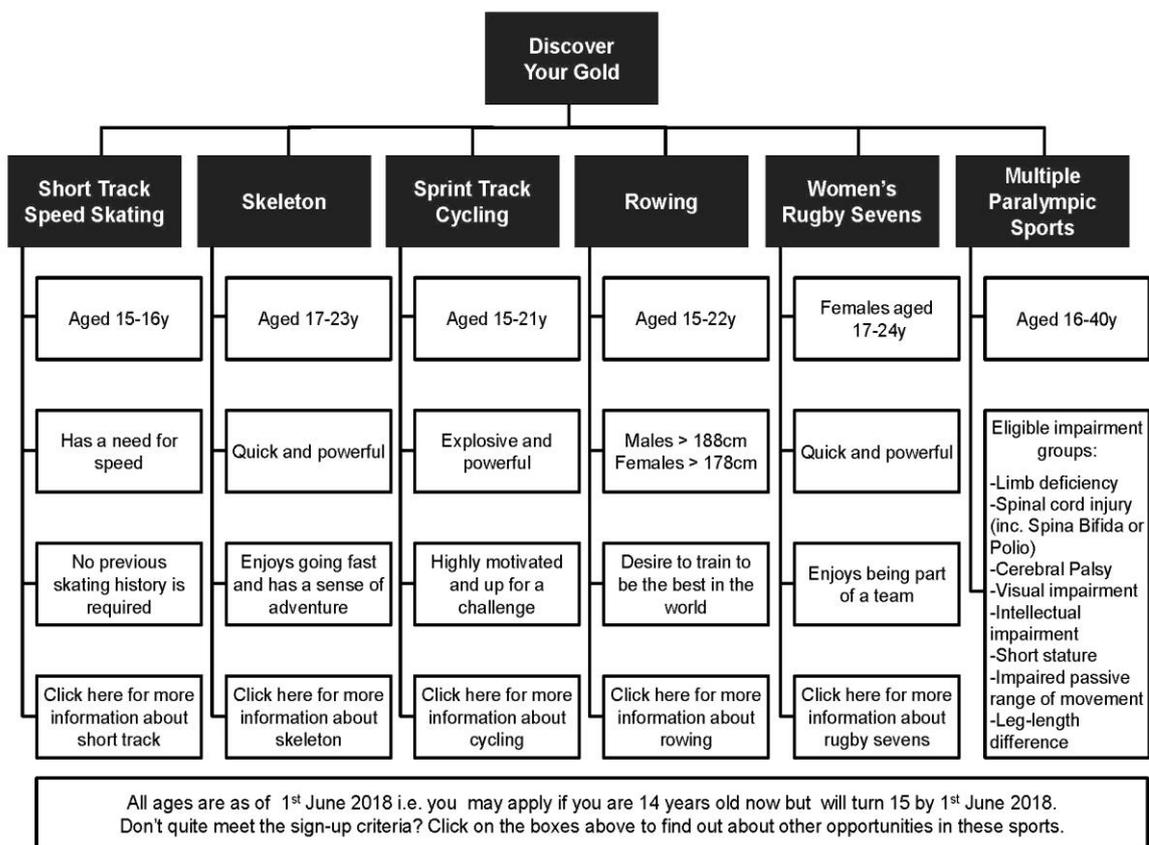


Figure 1: UK Sport #DiscoverYourGold Selection Criteria

Therefore, while such proactive talent identification systems may never take over as the sole process of athlete recruitment, they offer an additional avenue in support of existing programmes and procedures. As talent transfer becomes an increasingly attractive identification method (Vaeyans, Güllich, Warr & Phillipaerts, 2009) the hope is to continually evolve the model

and contribute to the research that will support more athletes in realising their potential. This is not only applicable to sport but the experience of moving between industries. The opportunity of guiding an individual to achieve their ambition is overwhelmingly exciting. As most researchers will agree, this thesis therefore ends where all good research should – with many more questions and much more work to be done.

## 1.1 Structure of Thesis

This thesis focussed on examining the talent transfer experiences as lived by the athletes who went through the transition. For the first study (chapter 3), 10 athletes were interviewed: 5 from a supported talent transfer programme (UK Sport/NGB); and 5 that went through the process of their own accord (informally). The subjective experiences from this study assisted the skeleton of the model to be created. The purpose of the second study (chapter 4) was to understand the subjective experiences of the talent transfer transition for one athlete who moved from judo to cycling and internationally medalled in both. The rich data from this life history approach added meat to the bones of the model and really brought to life the unique experiences that an athlete could experience. At this point, the excitement of what this lifecycle model could potentially bring to athletes and coaches intensified. It was felt as though there was a tangible outcome that would be created as a result of these interviews and the collation of the results from all three studies. The third study took a similar approach to the first study but the difference was twofold: firstly the ten purposeful athletes were part of (or had recently left) a formal/supported talent transfer programme through UK Sport/a NGB; and secondly the interviews were unstructured to ensure freedom for the athletes to share what they felt was important as part of their subjective experiences. The results provided the ability to flesh out more of the detail that culminated in the end to end lifecycle model to be completed. Chapter 6 provides an overall discussion of findings, highlighting the advancements and contributions made, as well as limitations, future research implications and conclusions drawn.

## **Chapter 2**

### **Literature Review**

In sport, significant resources are dedicated to the development of large groups of athletes in the hope of producing elite performers. It has been estimated that the expenditure required to achieve an Olympic gold medal is about A\$37 million dollars and \$8million per medal (Hogan & Norton, 2000). However, many identified athletes fail to reach their potential, which raises questions regarding the most effective and efficient use of resources to ensure optimal talent development, retention and ultimately successful athletic performance. If it were possible to minimize type II errors (e.g., those athletes who are already identified by the governing body and in the talent pathway but who do not successfully transition to senior level: Farrow, Baker & MacMahon, 2013), this would enable sporting bodies and agencies to focus expenditure on developing a smaller number of athletes and offer more focused coaching and resources in their quest for elite performance.

For more than a generation, sporting organisations, to get ahead of other respective countries and win medals on the world stage, have unwittingly called for a new capacity of talent. This talent would have the ability not just to demonstrate certain characteristics needed to perform with distinction, they would also be able to step outside the specific demands of one sport to validate their own capabilities to more steadfast characteristics needed to transfer their 'talent' to another domain.

The use of talent transfer is becoming increasingly common within high performance sport to help support medal-winning potential (Vaeyans et al., 2009). For example, China moved Chen Zhong from basketball to taekwondo as early as 1995 and within five years she had been selected for the national team. Zhong went on to win gold at the 2000 Olympics where taekwondo made its debut as an Olympic sport ([www.taekwondocoach.com](http://www.taekwondocoach.com), 2012). A high profile talent transfer in the UK was Rebecca Romero who first won silver for Britain, rowing the quadruple scull at the Athens Games in 2004 and then took up cycling in 2006, winning two golds for Great Britain at the 2008 Beijing Olympics ([www.theregister.co.uk](http://www.theregister.co.uk), 2012).

Prevalent initiatives such as UK Sport/English Institute of Sport's Tall and Talented (2012), the Australian Institute of Sport's Second Chance and Sports Draft programmes, the Canadian Sport Institute's Podium Search (including Row to Podium and Pedal to the Medal) and Germany's Row4Tokyo and Zero to Hero, are indicative of the investment given to sporting organisations with the intention of creating as many chances as possible of medalling within targeted sports for future Olympic games. Collins et al. (2014) analysed data from the 2010 and 2012 Olympic teams and found that from Australia, Canada, GB and USA, 174 (7.5%) athletes were identified as resulting from talent transfer. Furthermore, Collins et al. (2014) noted that Australia and the UK,

who have made significant investments in their formal talent transfer initiatives, converted 8% of their Olympic athletes as transfers. These statistics suggest the notion of talent transfer may be worthwhile for sporting organisations hoping to maximize identification and development of sporting talent.

To understand the possible role and impact of sporting organisations increasing their focus on talent transfer as an alternative talent identification option, it is important to recognize the significance of career stages and transitions occurring at different levels of development (Wylleman & Lavallee, 2004). Wylleman, Reints and De Knop (2013) have built upon Wylleman and Lavallee's (2014) Developmental model and created the Holistic Athletic Career (HAC) model. This model provides (a) a developmental perspective by considering the whole athletic career from the beginning to the end (including the post-athletic career), as well as (b) a holistic perspective by identifying transitions athletes could face throughout this development at five different levels, namely the athletic, psychological, psychosocial, academic/vocational, and financial level. While each level confronts athletes with specific challenges and transitions, these five levels will also interact with each other and the demands created by a transition on one level may have an impact on athlete's development at other levels (Wylleman et al., 2013). Furthermore, the extent to which the athletes are able to cope with the challenges posed by these multi-level stages and transitions (such as normative and non-normative transitions: Wylleman & Lavallee, 2004) may impact athletes' attitudes towards a possible talent transfer opportunity.

Thus, Lavallee and Wylleman's (2004) Developmental model and Wylleman et al.'s (2013) HAC model have both informed the design and research questions within this thesis. Research questions were developed for this thesis with an overarching aim of developing a Talent Transfer Lifecycle model that is applicable to the non-normative transition of talent transfer. Within Lavallee and Wylleman's (2004) Developmental model and Wylleman et al.'s (2013) HAC model, the athlete contemplating a talent transfer may have a different experience within the 'athletic level'. There are four stages identified: a) the initiation stage; b) the development stage; c) the perfection stage; and d) the discontinuation stage. Therefore an athlete could potentially transfer to another sport between the last three stages of the athletic level, dependent upon a number of factors (i.e. de-selection, a career ending injury or still having more to give) and their own unique experiences.

## 2.1 What Is Talent Transfer?

There are varying definitions of what talent transfer is. Collins et al. (2014) defined talent transfer as a recently formalised and highly structured process used to identify and develop talented athletes by selecting individuals who have already succeeded in one sport and transferring them to another. MacNamara and Collins (2015) took this definition one step further by describing talent transfer as an athlete that has competed at international, national or state level in both their 'donor' (sport 1) and 'transfer' (sport 2) sport. In simple terms, transfers were considered as between *sports* rather than between *events* conducted under the same governing body and/or international federation. A common example is a switch from gymnastics to diving.

At its most basic level, talent transfer occurs when existing high performance athletes are targeted and their skills are transferred to another sport. The New Zealand National Athlete Transfer System specifically targets athletes with a proven track record of performance at the international level or at the highest standard nationally (High Performance Sport New Zealand, 2013). Jaime Nielson, for example, showed promise as an Olympic rower for New Zealand before the opportunity to switch came through BikeNZ, which was running a programme called 'Power to the Podium'. Such talent identification and development initiatives increase the probability of identifying athletes who can attain senior expertise by minimizing adolescent maturational issues, reducing talent development time frames, and maximising return on the developmental investment already made in these older athletes (Gulbin & Ackland, 2009; Halson, Martin, Gardner, Fallon & Gulbin, 2006). Subsequently, talent transfer athletes can experience success in their new sport in relatively short time frames.

Targeting athletes who feel as though they have 'more to give' and/or are nearing retirement/have retired, are given a 'second chance' to switch sports and directly contribute to the success of achieving medals on the international stage. Conversely, as Vaeyans and colleagues (2009, p.1374) suggest, the "*structured recycling of talent*" in UK Sport programmes introduces a more proactive, systematic approach to delivering athletes already 'primed' for podium success.

## 2.2 Why Do Athletes Transfer?

Lavallee and Wylleman (2000) noted that some athletes struggle with the loss of sporting identity after the transition of retiring, whether resulting from a normative transition (chosen retirement due to age) or a non-normative transition (through a career ending injury). This clear focus that a person is 'not quite finished yet' is a determining factor as to why athletes might choose to stay within the field of competitive/international sport. Katie O'Brien is an example of

an athlete who had something more to give. O'Brien was identified through Cycling Canada's 'Pedal to the Medal' athlete identification programme. Previously she had been a 2014 Olympian in women's two-person bobsleigh. Within 10 months of dedicated track cycling training, O'Brien placed 12<sup>th</sup> at the 2015 World Track Cycling championships.

Of course, informal talent transfer has occurred for some time, when abilities are noticed by coaches or through an athlete looking for a new challenge. In study 1 (chapter 3), one athlete (who had a career ending injury within their previous sport) identified a key person within the training environment as being the catalyst to them undertaking a talent transfer process. This was based on their expertise as a strength and conditioning coach, but having the knowledge of 'key markers' that have been used with other athletes, a conversation transpired that was the prompt needed for the athlete to pursue another sport.

If the switch to a new sport was prompted by a plateau in performance, or limited opportunities for further development (e.g. an athlete who participates in a non-Olympic sport who dreams of winning Olympic gold), transfer to a new sport may lead to attainment of greater success at a higher level. Interestingly, Team USA does not have a formalised talent transfer programme, yet similar to Australia (7.4%) and the United Kingdom (8.4%), 6.9% of athletes competing at the 2012 London Olympics 'switched' sports somewhere in their development (Collins et al., 2014). These results suggest that talent transfer would seem to be effective but perhaps not solely as a formal initiative (Collins et al., 2014).

### 2.3 How Does Talent Transfer Work?

Despite the increasing popularity of talent transfer amongst sporting organisations (Collins et al., 2014), there is little empirical evidence as to its efficacy or how it may be most efficiently employed. There are several areas identified below that support the process of talent transfer: 1) Previous Sporting Experience; 2) Age; 3) Selection Requirements/Protocols; 4) Selection Requirements/Protocols: Team Sports; 5) Deliberate Programming; 6) Competition; and 7) Support Services. Each is described below.

#### 2.3.1 Previous Sporting Experience

The New Zealand National Athlete Transfer System specifically targets athletes with a proven track record of performance at the international level or at the highest standard nationally. The New Zealand Institute of Sport (High Performance Sport New Zealand, 2013) states there is now "*sufficient evidence showing that athletes can progress in a new sport in a significantly shorter timeframe. This is because athletes can transfer some of the skills (physical and mental),*

*physiological attributes, and training ethic already required.*” Therefore, rather than undertaking a programme targeted to a specific sport (i.e. Sporting Giants, 2010, for volleyball and basketball in UK Sport), the New Zealand Institute of Sport “recommend one or more sports that best suit an athlete’s potential and will support them to make an informed decision” (High Performance Sport New Zealand, 2013).

Prior sporting experience is a prerequisite when transferring between sports, whether that is through physiological similarities, for example, gymnastics to freestyle aerial skiing, or psychologically where the transference is about similar athletic traits such as mental toughness and the resilience to compete and train at the required level. Targeting athletes who have previously been a part of a world class Olympic programme and who are ‘medal-capable’ can make the transfer considerably easier as the athlete understands what is necessary to train and compete on the world stage. Halson et al. (2006) described a 26-year-old female alpine skier with 5 years of international racing experience in the super giant slalom and downhill events who displayed an exceptional ability to produce power during a cycle ergometer 30 second sprint and was subsequently identified as one of 26 women with the potential to excel in the track cycling 500-m time trial event. Her previous sporting experience was evidently an advantage within her new sport.

Similarly Bullock et al.’s (2009) study of talent identification in skeleton offered a unique opportunity to target existing high performance athletes to transfer into this sport. The ability to utilize existing high performance athletes’ skills and competition experience gave them the capacity to exploit talent gaps at the World Cup level by possibly compressing the development time frame of these athletes. All 10 athletes chosen for this programme had achieved at least state level representation in their previous sport and as a result, had already experienced training at high intensities and competing under intense pressure, which assisted them in coping with the new sporting environment (Bullock et al., 2009).

Likewise, Hoare and Warr (2000) targeted 15- to 19-year-olds with a background in team ball sports or athletics to develop potential female soccer players. The authors decided to target athletes who had achieved success at a competitive level in a previous sport, based on the premise that athletes would have some existing attributes (a positive training ethic, as well as being competitive and athletic, amongst others) that may contribute to success in soccer. As such, they would be ‘ready-made’ athletes and attention could be focused on training them in the technical and tactical aspects (Hoare & Warr, 2000).

The three studies described above highlight the benefits of identifying athletes who already have a sporting background, especially for sporting organisations who can then justify the “recycling of athletes” due to maximising return on investments and resources that have been made over a number of years in the athlete’s earlier sport. However few researchers have examined how athletes transfer previous sporting experience to facilitate performance and adapt to a novel set of circumstances (Smeeton, Ward & Williams, 2004).

### *2.3.2 Age*

Hand in hand with previous sporting experience is the age of an athlete when undertaking the talent transfer process. Bullock et al.’s (2009) findings support aggressive talent identification and talent transfer approaches that identified successful senior athletes aged 22.2+5.1 years. In support of this accelerated talent transfer approach, an Australian Sports Commission (2012) study revealed that of 256 athletes in the national or state institute system who transferred to a new sport, 72 (28%) represented Australia in their new sport in less than 4 years (Australian Sports Commission, 2012). These quick developers started the sport at which they attained senior national status at an age of 17.1+4.5 years and on average had participated in three sports beforehand (Oldenziel, Gagné, & Gulbin, 2004). Collins et al. (2014) identified that 48.4% of transfers within their study occurred between the ages of 16 and 21, which they claimed could indicate an ideal bracket from which to recruit. Therefore, the less obvious, but notable benefit of talent transfer highlighted by these studies is the minimised adolescent maturational issues associated with talent development, as well as the athletes’ previous sporting experience (as identified above). Conversely, a limitation of this late selection is that the number of athletes to draw from is also very small, which may limit the overall breadth of talent.

### *2.3.3 Selection Requirements/Protocols*

In the UK, there seems to be several sport science disciplines involved in talent transfer, with skill acquisition/motor control and physiology the most prevalent (UK Sport Talent Team, 2013). Formal initiatives use the systematic selection of athletes based on defined protocols (MacNamara & Collins, 2015). Typically, talent transfer initiatives screen a large number of athletes based on performance (athletic background and sporting history) variables before inviting selected athletes to a testing day where they complete a number of physiological and performance tests. For example, UK Sport’s Power2Podium: Skeleton, was aimed at males and females aged 17-25 who were competing in any sport at a regional standard. Unlike UK Sport’s (2016a) Tall and Talented campaign which specifically asked for minimum height requirements, Power2Podium: Skeleton advertised questions such as “fast, powerful and strong?” as well as

“competitive and mentally tough?” to entice large numbers of athletes to apply. Using this approach, a number of physiological and psychological assessment methods may be utilised by sporting organisations to ‘sift through’ the scores of athletes applying. The specifics of how this is done, however, are still unclear and do not follow consistent criteria (at least none that have been made publicly known).

An example of this is Bullock et al.’s (2009) study where 26 athletes were recruited to a skeleton programme based on a variety of physical aptitude tests (30-m sprint), sport specific skill assessments (similar sled push and loading ability: the lower body power traits) and subjective evaluations (being a team player: how the athletes interacted with fellow competitors during the camp). During the 7-month selection process, the hopefuls were whittled down to 4 athletes to make the national team. The use of 30-m sprint times as a primary selection characteristic may have initially acted as an ‘filtering mechanism’ to select ‘already fast’ athletes, but other factors – creative thinking, decision making, attention, self-confidence, motor skills and coach interaction (Williams & Reilly, 2000) – were also considered for selection. This suggests that the selection of appropriate talent should involve a multi-dimensional approach involving more than just physical performance (Abbot & Collins, 2004; Nieuwenhuis, Spamer & Van Rossum, 2002; Reilly, Williams, Nevill & Franks, 2000; Staerck, 2003).

The challenge sporting organisations have across the globe is that they are unwilling to share the assessment methods/protocol used within talent identification initiatives in case it gives another country or agency an advantage. As a result, there is no agreed definition nor model that could help sporting organisations follow a consistent framework. It is only through studies like Bullock et al. (2009) and Hoare and Warr (2000) that researchers are able to read and share information about the process.

Consequently, sports scientists will have an opinion on the fluctuating protocols that governing bodies decide to utilise for the testing phase(s) of a talent transfer (e.g. Collins et al., 2014). The assessments can be critiqued as there is no universal agreement. MacNamara and Collins (2015) identified a number of limitations with the initial screening and selection process. They claimed that psychosocial variables (such as resilience and coachability, amongst others) that are more challenging to identify/assess, should be an integral part of the initial selection process. Van Yperen (2009) and Abbott and Collins (2004) both reasoned that talent transfer initiatives should consider whether potential transferees have the psycho-behavioural skills needed to successfully develop in the transfer environment. Furthermore Abbot, Button, Pepping and Collins (2005) argued that initial screening of athletes typically does not account for these (psychosocial)

process markers. Morgan (1979) and Orlick and Partington (1988) suggest psychological variables are a significant predictor of success (among a range of other physical and technical variables) and therefore should be a mandatory requirement in talent identification. Additionally, Vaeyans, Lenoir, Williams and Philippaerts (2008) contend that as talent transfer programmes target athletes increasing in age, the population of successful athletes becomes more homogenous with respect to their physical and physiological profiles. Perhaps this could/should also be the case for psychological profiles where sports scientists know which traits to assess when selecting athletes. For instance, determination and commitment as described in Collins et al.'s (2014) study.

British Shooting's Target Tokyo (UK Sport, 2020) campaign, in collaboration with UK Sport and the English Institute of Sport, saw shooters assessed on factors including their performance, commitment, motivation, coachability, learnability, skill acquisition and concentration (British Shooting, 2014). Similarly, the New Zealand Institute of Sport (2013) solicited athletes who were intrinsically motivated, had a strong work ethic, were passionate about succeeding and enjoyed competition, as well as being coachable, that is, prepared to listen to advice and try new skills (amongst other physiological requirements). UK Sport and the New Zealand Institute of Sport (amid others), may have identified a talent confirmation phase that incorporates these psychological factors from the outset, even if the assessment is just qualitative in nature.

MacNamara and Collins (2015) noted that another limitation with the process of screening and selection is the combination of factors that demonstrably underpin the successful transfer, with 'success' defined as competing at world/Olympic level within their donor sport. Examples of gymnasts transferring to diving or even aerial skiing are obvious – Alisa Camplin and Lydia Lassila are two Australian gymnasts who successfully transferred to become Olympic aerial skiing gold medallists. However, athletes do not always come from sports that are so clearly related. Collins et al. (2014) found that several successful transfer athletes lacked an obvious explanation from either a motor control or physiology perspective. Collins et al. (2014) suggested that they would not have been selected if the physiological standards currently in use had been applied to them, which raises the question: how many other athletes miss out on opportunities because of strict physical requirements?

Collins and MacNamara (2012) argued that a large number of potentially talented performers may have been excluded from talent identification and transfer programmes due to poor identification measures. For example, high profile athletes may not necessarily fail performance evaluation tests but there may have been (at the time) athletes who were marginally better but (they) could perhaps still achieve the criteria to secure selection for a talent transfer

programme. Phillips, Davids, Renshaw and Portus (2010) agreed that there are a large number of performers who are unsuccessful in transfer, or de-selected during identification, because of 'snapshot' approaches, on a small number of factors. MacNamara and Collins (2015) contend that identifying talent as a one-off anthropometric, physiological and performance snapshot (which most formal talent transfer programmes assess) means that some athletes may be overlooked who, at the time of testing, may not meet the prescribed standards, or predetermined profiles, but who may have the potential to develop in the future.

Thus, MacNamara and Collins (2015) argue that an exploration of the range of factors athletes perceive to support talent transfer would seem a logical step in providing an evidence base for applied initiatives or even improving their design and efficiency. Abbott and Collins (2004) state that in order to predict future accomplishments successfully, it is necessary to identify which characteristics indicate that an individual has the potential to develop in sport and become a successful athlete.

An integral element of talent transfer is that excellence in a sport is not idiosyncratic to a standard set of skills or physical attributes; it can be achieved in individual or unique ways through different combinations of skills, attributes and capacities (Feldman, 1986). In this manner, Gagné (1999) maintains that talent is understood to emerge from complex and unique choreographies between different groups of causal influences. Thus, there is clearly not a single genetic endowment underlying a talent domain, with neither talent nor untalented individuals emerging from genetically homogenous groups (Simonton, 2001).

#### *2.3.4 Selection Requirements/Protocols: Team Sports*

For a team-based approach to talent identification, Hoare and Warr (2000) used a quasi-applied research model based on anthropometric, physiological and skill attributes. Utilising objective assessment methods that measure tactical and technical competence enables researchers to develop and validate testing protocols that would support the transfer of athletes into team sports.

Hoare and Warr (2000) acknowledged that it has not yet been possible to develop objective and ecologically valid tests of psychological determinants, unlike that of anthropometric and physiological characteristics. Similarly, there is considerable evidence of the importance of perceptual-cognitive attributes in successful players (McMorris & Beazeley, 1997; Williams & Davids, 1998), but little understanding of how to use these as part of the identification process.

Moreover, there are additional challenges using team-based assessment protocols. Vaeyans et al. (2008) noted that unlike sports where the majority of variance in performance may be accounted for by a relatively small number of characteristics, these approaches have proven problematic in the majority of fast ball sports and team ball games. Thus, talent identification initiatives have previously focussed on sports that are individual, repetitive and/or where success has been related to specific anthropometric and physiological attributes (such as cycling, rowing and skeleton).

There is acknowledgement within the research community (e.g. Hoare & Warr, 2000) that limited attempts have been made to embark on talent identification programmes with team sports because of the difficulty in quantifying a suitable amount of variance in performance. Research that has been published is still largely focussed on anthropometric and physical performance characteristics (for example, Mohamed, Vaeyens, Matthys, Multael, Lefevre, Lenoir & Philippaerts, 2009 – handball) despite acknowledgements that determinants of success are multifactorial (Hugg, 1994; Hoare, 2000).

With the lack of a holistic perspective (incorporating physiological and psychological determinants) to identifying talent, Pinder, Renshaw and Davids (2013) argue that caution should be taken in emphasising some sub-disciplines over others. Attempts to target isolated psychological characteristics in talent identification programmes have led to psychologists repeating the same errors as their physiology counterparts (e.g. Weissensteiner, Abernethy, Farrow & Gross, 2012). This issue is only exacerbated by the adoption of mono-disciplinary approaches to sport science support work and strengthens the need for a multidisciplinary and holistic approach (Renshaw, Oldham, Glazier & Davids, 2004).

#### *2.3.5 Deliberate Programming*

Researchers continue to debate the elements essential for developing expertise (e.g. Baker & Davids, 2006; Tucker & Collins, 2012). However, most agree that expert level performance is not possible without a long-term commitment to training and practice (e.g. Baker & Young, 2014; Starkes, 2000). This suggests it would be impossible for an athlete with less accumulated practice in a particular sport to fast track or to perform at, or above the level, of individuals who started sport specific deliberate practice earlier and maintained maximal levels of deliberate practice.

Bullock et al. (2009) use the definition of 'deliberate programming' (rather than deliberate practice as proposed by Ericsson, Krampe, & Tesch-Römer, 1993) to encompass other planned

factors in addition to practice such as high quality strategic planning, access to quality coaching, equipment, the best possible (and many) competitions, and technical, financial and sport science and medicine support, to ensure athletes fulfil their potential. Using a deliberate programming model, their investigation explored the minimum exposure required for a novice selection athlete to reach an Olympic standard through intensified sport specific training.

This supports the notion that training experiences accumulated in many sports (within skeleton it was an accumulation of at least 15 years sporting experience in an array of sports) and adaptability may be an alternative pathway to expertise (Baker, 2007; Coleman, 2007; Runco, 2007). The concept of talent transfer and the aim of achieving excellence through late specialization and rapid development needs further exploration in relation to Bullock et al.'s (2009) definition of deliberate programming. In support of this concept is Canadian Clara Hughes, who won multiple medals in both speed skating and cycling, at the summer (1996, 2000, 2012) and winter (2002, 2006, 2010) Olympics. Evidently, the accumulation of hours training in both sports worked in Hughes' favour as she continued to train and compete in both sports over a number of years.

#### *2.3.6 Competition*

As noted above in Bullock et al.'s (2009) study on skeleton, competition appears to be an important element of deliberate programming to ensure athletes fulfil their potential. The developmental time frame was short (14 months) and exposed athletes to competition within two weeks of starting the sport with four athletes competing against senior elite athletes (World Cup) within one sliding season (Bullock et al., 2009). However while deliberate practice theory does not support the value of competition for becoming an expert (Ericsson et al., 1993), Bullock et al. (2009) emphasized competition as an essential element for athlete development to enhance the ability to perform at the highest level.

Within two competitive seasons of deliberate practice, their athletes achieved top six rankings in World Cups and one individual competed at an Olympic Games, which suggests that fast-tracking and surpassing more experienced competitors is achievable with late specialization (Bullock et al., 2009). Others have similarly emphasized the importance of competition (e.g. Baker, Côté & Abernethy, 2003). In particular, Starkes (2007) noted that a component of expertise is the athlete's ability to reliably perform the skill in a competitive setting, rather than excelling as a 'practice player'.

#### *2.3.7 Support Services*

This chapter has largely focussed on formal talent identification programmes but there is little documentation stating the specific detail of support services (i.e. physiotherapy, strength and conditioning, nutrition, psychology, performance lifestyle) given to the athletes to help them succeed with the transfer to another sport. These would include world class coaching and sports science and medicine support as part of a carefully planned training and competition programme, with the major goal of achieving selection and success for upcoming competitions.

Collins et al. (2014) also suggested that 'educated coaches' who have experience and understanding of the challenges faced by talent transfer athletes are an important element of the process. Chapter four explored one athletes' subjective experiences of a talent transfer process and access to high quality coaching appeared to be an integral component in maximising athlete development as well as the right environment to train and compete in to accelerate learning. In support of this, Bullock et al. (2009) acknowledged that a supportive and aggressive, but time-limited, learning environment was needed. This would be led primarily by a world class coach with previous Olympic medal success who knew what it would take for a high performance programme to succeed. The athletes would also have access to a team of sport scientists and practitioners on a daily basis to ensure an optimal daily training environment. These two combined factors (environment and coach) are needed to minimise mistakes and condense the time associated with the talent transfer process (Bullock et al., 2009).

#### 2.4 Summary

It has previously been suggested that talent transfer programmes are likely to be more successful in sports where the standard and international depth of competition is lower than in other sports (Baker, 2003; Hoare, 2000) and Skeleton has been identified to be in this position (Bullock et al., 2009). For the United Kingdom (23.1%) and Australia (26.5%), the number of talent transfer athletes in their winter Olympic squads (for Vancouver, 2010) suggests either that winter sports are more effective programmes to target (Collins et al., 2014) or that these countries were able to transfer athletes into sports where the talent pool is less competitive (MacNamara & Collins, 2011). As talent transfer initiatives expand and develop, the opportunities for continued growth could regress in terms of limited opportunities for individuals to compete at the highest level. For example, in skeleton a total quota of 50 athletes (30 for men and 20 for women) can compete at an Olympic games based on world rankings. In contrast, with the International Olympic Committee limiting the number of events a cyclist can compete in (each nation is limited to one athlete per individual event: *The Guardian*, 2012), there could be fewer opportunities to develop

athletes at the highest level as they simply cannot be selected based on availability of athletes per country, and sporting organisations cannot justify the investment.

Russell (1989) stated that the primary aim of talent identification is to recognize current athletes with the greatest potential to excel in a particular sport. Within talent transfer programmes, targeting 'experienced' athletes to concentrate their efforts in a new sport, within a limited time period (perhaps to target an impending 'games') means pursuing sports that are closed rather than open. As discussed above, the prediction of success is likely to be easier in more closed sports (rather than invasion games) because the movements are less affected by the environment and fewer components are likely to impact performance (Vaeyans et al., 2009). These constraints would likely explain why sporting organisations have invested more resources in talent identification models within sports such as cycling, rowing, canoeing, weightlifting and skeleton (Abbott, Collins & Martindale, 2002).

Countries like the UK have expanded talent transfer initiatives into more open sports for the 2016 Olympic games in Rio, for example handball, boxing and volleyball. The criteria on assessing physiological requirements needed for open sports are more challenging. Collins et al. (2014, p.1627) expressed concern for the transition some athletes might have to make when joining a highly skilled sport, stating that "*the complexity faced by a player, a team games player, is so substantial that they need experience of that and the training in that (sport)*". The full effect of these newly targeted identification programmes (e.g. UK Sport) have yet to be established for open/team sports. If a framework was created based on the length of time needed to 'upskill' an athlete in the technical requirements, there may be more opportunities of successful transfers between sports.

This thesis focuses on examining the talent transfer experiences as lived by the athletes whom went through the transition. The main purpose was to examine why athletes chose to continue in their pursuit of international competition by switching sports as well as understanding how they managed the process and their own unique experiences. There is a significant lack of literature within sport exploring the best way to support athletes through the process of talent transfer. As there is no agreed upon theoretical framework of talent transfer, it is difficult to establish a baseline to evaluate and build our knowledge of what a successful process might look like, therefore informing and educating sporting organisations, coaches or athletes to be able to undertake this process for themselves. Drawing upon Lavalley and Wylleman's (2004) Developmental model and Wylleman et al.'s (2013) HAC model, the design and research questions within this study has attempted to bridge the gap of talent transfer and it is hoped that this will

contribute to the dearth of research currently in the sporting domain of the transition within the athletic level of the developmental models identified above.

## 2.5 Other Performance Domains

As part of the exploration for this thesis, other performance domains were researched to investigate whether there were comparables to talent transfer in business, military and education. Within these domains the term 'talent transfer' is not specific for an individual moving between different environments and mastering another area. For example, there is no literature (that this author could find) that evidences someone who is 'gifted' within piano and transferring this talent to (for example) the violin. The literature follows the atypical performance pathway of talent identification and development.

However the military does reference adaptive competencies for leadership within the army, which is the closest literature this author could find as a comparable to the concept of talent transfer. Wyszynski's (2005) paper on "Adaptability: Components of the Adaptive Competency for U.S. Army Direct and Organizational Level Leaders" explores whether its leaders are equipped with the competency to adapt successfully in asymmetric environments, i.e. transferring skills into different operating environments. The Army has defined adaptive leadership as: "the capacity to recognize and respond to changing situations and variable circumstances within the operational environment and to proactively take steps to maintain the initiative and dictate the terms of the operation" (Field Manual, 1990, p. 2).

As a result of the Army's desire to support leaders in developing this capability, the Army Field Manual maintains the ultimate goal of its leadership programme is to develop "leaders who are self-aware, adaptive, competent and confident...Adaptive leaders have the ability to recognize change in their operating environment, identify those changes, and learn how to adapt to succeed in their new environment" (Field Manual, 1990, p. 8). Army leaders armed with competencies matched to the operating environment become aware of the need to develop new competencies in rapidly changing environments; know how to develop new competencies; and can transfer that learning within and beyond their own organization, for example self-awareness and adaptability (Wyszynski, 2005). The product of this transformed leader development plan will be leaders who are multi-functional, capable of full-spectrum operations in a joint multi-national environment, comfortable with ambiguity, information systems literate, systems of systems thinkers, and capable of intuitive assessments of situations for rapid conceptualization of friendly courses of action. This seemingly all-encompassing job description could generate an exhaustive list of competencies for adaptive leaders to master (Wyszynski, 2005). However this seems to be a work

in progress for the army and could be a whole research area in itself for a comparison between sport and the military.

In business the transfer of talent is often referred to as talent management with support often targeted at the leadership level. For example, the 9 Box Performance-Potential Matrix is often used to assess talented colleagues and whether they are ready for their next role as they have been identified as 'high potential' (Morrison, 2018). It is one of the most widely used tools in succession planning and leadership development and is a way to assess and differentiate a team or organization. It is used to assess individuals on two dimensions: their past performance and their future potential and usually culminates in a development plan that supports progression. However unlike the talent transfer initiatives in sport discussed earlier in this chapter where athletes know what sports they are trialling for, within the business context, you would need to be identified as 'top right' in the Performance Matrix before looking at where your next opportunity/role might be within the organization.

However JPMorgan recently triggered an "EU talent transfer" to prepare for consequences of Brexit. JPMorgan has asked several dozen employees to lead a first wave of relocations from Britain to continental Europe by early 2019, kicking off plans to protect its business post-Brexit (Cruise, 2018). The staff primarily work in client-facing or risk management roles in both the investment bank and asset management divisions, which are very specific. Therefore JPMorgan are not asking the staff to 'transfer their talent' but to relocate the talent they have internally to a different part of Europe to deliver its services.

The review of literature across the different performance domains was essential to establish whether there were any initiatives that could be built upon and 'transferred' to high performance sport. The overall reading helped the author in gaining wider knowledge to support the writing of this thesis, but the conclusion was that there was nothing directly comparable that could be utilised to support athletes transferring their talent between sports and 'fast tracked' to achieve a specific target.

## 2.6 Theoretical Approach to Thesis

The presence of a basic system of ontological, epistemological and methodological assumptions with which researchers approach their research is widely accepted (Creswell, 1998, p. 74-77; Creswell, Hanson, Clark Plano & Morales, 2007, p. 238; Guba & Lincoln, 1994, p. 105; Patton, 2002, p. 266; Savage, 2006, p. 386). The challenge for all qualitative researchers is how to

sort out the tension between the supposed 'objectivity' that so-called scientific knowledge requires and the athlete's own 'subjectivity'.

Ontology and epistemology are two different ways of viewing a research philosophy. Ontology can be defined as "the science or study of being" (Blaikie, 2010) and deals with the nature of reality. Ontology is a system of beliefs that reflects the interpretation by an individual about what constitutes a fact. In other words, ontology is associated with a central question of whether social entity should be perceived as objective or subjective. The philosophical underpinning of the present study lies in subjectivism (also known as constructionism) and perceives that social phenomena are created from the perceptions and consequent actions of the athletes concerned with their existence. Formally, constructionism can be defined as "ontological position which asserts that social phenomenon and their meanings are continually being accomplished by social actors. It implies that phenomena is not only produced through social interaction but it is in a constant state of revision" (Bryman, 2012, p. 33).

This approach subscribes to ontological realism (i.e. there is a world which is independent of our knowledge of it) combined with epistemological constructivism (i.e. our knowledge remains subjective and incomplete). The epistemological stance is interpretivism. This is because in order to understand the talent transfer process, the viewpoints, experiences, feelings and interpretations of the athletes involved in the process needs to be the focus.

The analysis for this study will not only focus on delineating the narratives that are drawn upon in storytelling, but also on lived experience and authenticity in personal narratives. Douglas and Carless (2006) suggested that the dominant cultural narrative is that of "the performance narrative" a storyline focussed on single-minded dedication and pursuit of winning. As alternative narrative types, they identify discovery and relational narratives that gain meaning through life experiences gained in and through sport, or from the shared journey in sport with family or friends. Chapter 3 and 4 (studies one and two) examine the subjective experiences and chapter 5 (study three) explores the individual differences and shares experiences to capture the subjective interpretations of the athletes, as well as the individual factors that have influenced their talent transfer engagement.

### **Chapter 3**

#### **Study One: An Examination of Athletes' Experiences of the Talent Transfer Process**

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### 3.1 Introduction

*“It was the ‘Sporting Giants’ campaign, spearheaded by rowing, so my brother kind of saw it, I did not know it was going on and he said you can do it; you know these trials to do Great Britain (GB) rowing at 2012. And I was kind of like “you cannot do that!” You know...in five years time! And I laughed it off but between lectures I was bored with my mate and I said, I will sign up to this and see what we can do. And yes, I went through various testing things and I seemed to have what it took. But rowing kind of cut the level at 6ft 5in and we were all invited at 6ft 3in and above but then they said afterwards that it was kind of 6ft 5in they were taking and then canoeing kind of got a hold of me as sort of the dregs.” (Athlete 1).*

This event can be described as a turning point or a ‘talent transition’. The transition that is identified above is a non-normative transition where athletes from one sport have been specifically targeted to transit to another sport in the hope of winning medals. This transition has not been identified, defined or examined (in detail) within the arena of sport to date. There is a significant lack of literature within the high performance environment exploring the best way to support athletes through the transition phase from one sport to another. Despite the current lack of evidence, prevalent initiatives such as (UK) Sport’s Tall and Talented (2016a), the English Institute of Sport (EIS)/UK Sport’s Pitch to Podium (2010) programme and **sportscotland’s** Institute of Sport Gold4Glasgow (2014) initiative, are indicative of the investment placed within sport organisations with the intention of creating as many chances as possible of medalling within targeted sports for future Commonwealth and Olympic games. The use of talent transfer is becoming increasingly popular within high performance sport to help support medal-winning potential on the international stage (Vaeyans et al., 2009). UK Sport states (2012) that 7 talent identification and development (TID) campaigns have unearthed over 180 potential world class athletes across 17 sports over the past 4 years. In addition, 15% of UK Sport’s central funding and approximately 10% on each sport’s world class budget (UK Sport, 2012) are large financial allocations that have been dedicated to talent identification and development.

Talent identification and development models in sport have typically focused on junior age athletes and involve two basic approaches (Williams & Reilly, 2000): 1) athletes already competing within the sport (talent selection); or 2) an alternative pathway is the introduction of new talent into a sport if the individual demonstrated the desired multi-disciplinary, physical, psychological and skill required for inclusion in that sport (talent detection) (Hahn, 1990; Hoare & Warr, 2000). Thus, targeting athletes who are nearing retirement, or have retired, as well as

athletes who feel as they that they have 'more to give', are given a 'second chance' to switch sports and directly contribute to the success of an impending 'Games'. Or as Vaeyans and colleagues (2009, p1374) suggest, the "*structured recycling of talent*" in organized programmes (as identified above) would introduce a more proactive, systematic approach to delivering athletes already 'primed' for podium success, which as a result may turn a non-normative transition to a planned normative transition.

Rebecca Romero transferred from rowing where she had previously won silver at the Athens Olympic games in 2004, to cycling where she won gold at the 2008 Beijing Olympics ([martingough22.wordpress.com](http://martingough22.wordpress.com), 2011). This athlete had not retired from the sport but chose to 'try something new' as a challenge within her sporting career. One might take inspiration from this individual who had not accepted the conventional wisdom of 'succeeding' within sport (continuing on to another Olympics with the intention of another medal), who risked defeat, rejection and obscurity in order to pursue ideas which she (and perhaps a few followers) believed. Therefore it could be asked: what is distinctive about individuals who attempt to cross sporting domains? What is unique about them and their characteristics? Although she was not the first to transfer her talent, Romero was certainly the most prolific in the UK at winning on the world stage in two different sports. For Pinder et al. (2013) it remains clear that a number of questions have not received enough attention from sport scientists interested in talent development, including: 1) why is there so much wastage of talent in such programmes? And 2), why are there so few reported examples of successful talent transfer programmes?

Therefore, this study is intended to examine the athletes' experiences through the transition of talent transfer. To date, experience suggests that for these opportunities to work it needs a strong idea or interest from the athlete as to what they would like to do and a positive correlation between the previous abilities developed and the talent transfer sport (Australian Sports Commission, 2010). Understanding these areas could provide valuable information/insight to sporting organisations in identifying 'talent' and supporting more athletes onto their performance pathway, rather than comparing athletes against 'a model' (using discrete performance and anthropometric measures) which highlights the limitations of traditional attempts to identify talent at early stages of development (see Abbott & Collins, 2004; Helsen, Hodges, van Winckel & Starkes, 2000; MacNamara, Button & Collins, 2010a, 2010b; Musch & Grondin, 2001). Thus, this qualitative study aims to offer insight into the athlete's experience of the talent transfer process.

A transition generally results from one or a combination of events (Lavalley & Andersen, 2000; Taylor & Ogilvie, 2001) that are perceived by the athlete to bring personal and social disequilibria and are presumed to be beyond the ongoing changes of everyday life (Sharf, 1997) and cause “a change in assumptions about oneself” (Schlossberg, 1981, p5). These transitions are, among others, developmental in nature (Alfermann, 1995; Pearson & Petitpas, 1990; Wylleman, De Knop, Ewing & Cummings, 2000) and they can be characterized by predictability and developmental context of occurrence (Wylleman & Lavalley, 2004). For example, the transition from adolescence to young adulthood involves the development of, or replacement of, roles and is likely to be accompanied by a re-evaluation of beliefs, which may lead to the adjustment or abandonment of some beliefs (Shulman & Ben-Artzi, 2003).

Two types of transitions can be discerned: normative and non-normative transitions. During a normative transition a primary characteristic is their degree of predictability. Therefore the athlete exits one stage and enters another stage, which makes these normative transitions generally predictable and anticipated (Schlossberg, 1984; Sharf, 1997). Normative transitions are part of a definite sequence of age-related biological, social and emotional events or changes (Baltes, 1987) and are generally related to the socialization process (Wapner & Craig-Bay, 1992) and the organizational nature of the setting in which the individual is involved (e.g. school, family). Transitions that are fairly predictable are generally organisational and/or structural in nature and maybe related to changes in athletes’ level of athletic achievement or age (e.g. initiation into competitive sport or the transition from junior to senior level). In the athletic domain, normative transitions include, for example, the transition from junior to senior level, from regional to national level competitions, from amateur to professional status, or from active participation to discontinuation from competitive sport. Stambulova (1994; 2000) considered the athletic career as consisting of predictable stages and transitions and that the occurrence of these normative transitions underlines the developmental nature of the athletic career.

Non-normative transitions, on the other hand, do not occur in a set plan or schedule but are the result of important events that take place in an individual’s life. Transitions, which have a low degree of predictability, may occur unexpectedly. These latter transitions are called non-events (Schlossberg, 1984) and refer to those changes expected to take place, but which, due to circumstances, do not occur (Petitpas, Champagne, Chartrand, Danish & Murphy, 1997). For athletes, these transitions may include a season ending injury, the loss of a personal coach, or a deselection from a team. These idiosyncratic transitions are generally unpredicted, unanticipated, and involuntary (Schlossberg, 1984). Not making the first team although making the final pre-

selection, and not being able to participate in a major championship (e.g. the Olympic games) after years of preparation, are two examples of non-events.

Wylleman et al. (2000) identified and described the challenges presented within career transitions. The first transition a young athlete will face is that into organised sport. The second is that into an intensive stage of participation. And lastly the third transition is into high level competition. In identifying these transitions between developmental stages, Wylleman et al. (1999) created the foundations of a model of transition in sport from a lifespan perspective. Wylleman and Lavalée (2004) enhanced the stages of talent development advanced by Bloom (1985) and Cote (1999), through the addition of a discontinuation phase representing the important transition out of competitive sport. In doing so, they offered a model which encompassed the series of normative transitions (expected and planned for transitions) that occur during the athlete's career and which represent a function of the organisational nature of the setting (either in education, vocation or sport), the socialisation of the young athlete, and the athlete's psychological development.

The Developmental model proposed by Wylleman and Lavalée (2004) provides a useful overview of the transitions faced by an athlete during their development and importantly, draws attention to the interdependent nature of these transitions. By situating an athlete within the model, those supporting the athlete will be able to conceptualise the athlete's status and to consider the other developmental tasks which must be confronted. However the model is largely descriptive and athletes will experience additional normative and non-normative transitions within a stage. Furthermore, it provides little insight concerning the experience of within career transition; hence the literature remains deficient in this subject area. However, transitions within sports should be viewed as a series of events where athletes have to cope with new demands by finding a balance between these demands and the resources available to them (Schlossberg, 1981). Although the theoretical framework proposed by Wylleman and Lavalée (2004) situates the developmental, interactive and interdependent nature of transitions, the demands of each transition must be linked to the resources made available to athletes. As such, transitional challenges have the potential to be perceived as a crisis, a rite of passage, or another positive step on the ladder, depending on the individual's perception and skills (Pummell, Harwood & Lavalée, 2008; Sinclair & Orlick, 1993).

In addition, developing a high and exclusive athletic identity can also be dangerous concerning the aging body if at the end of a playing career, and an increased likelihood of injury, is seen as age related (Phoenix, Faulkner & Sparks, 2005). Athletes then view the aging process as

negative, and this will increase the chances of a crisis transition. Moreover, several different athletic career transitions such as being deselected from a team or an injury also oppose a threat if encountered by athletes with a high athletic identity (Brewer, Van Raalte & Linder, 1993). Athletes see these kinds of transitions as negative because it could mean the end of their athletic career. This would ultimately result in a disrupted self-definition and might even end up with an athlete in crisis (Stephan & Brewer, 2007). Could this be the reason why an athlete might transfer to another sport?

From a practical perspective of a normative transition, analysis of the lists of junior and adult athletes in many sports evidences a lack of transition from the junior to the senior ranks (Moesch, Elbe, Hauge & Wikman, 2011). As a consequence, young athletes (and coaches) subscribing to the view that early specialization is good, may 'over commit' years to a particular sporting pathway, when a more informed view would have redirected/transferred them to another potentially more fruitful sporting option. Thus, Moesch et al. (2011) supported Bompas and Haff (2009) indicating that in many sports, it is later rather than earlier specialization that leads to adult success. For example, in a major survey of almost 3,000 elite senior athletes in Germany, across a variety of sports, Güllich (2011) demonstrated that early specialization was positively correlated with early success (for example, medals at youth level) as a marker of efficacy for talent identification programmes would seem flawed, especially when such programmes are specifically focussed on senior elite achievement (UK Sport, 2012).

Talent transfer occurs when an athlete ceases or reduces their involvement in a sport in which they have invested significant time, hard work and resources, and concentrates their efforts in a sport that is new to them, but involves similar movement skills, physiological requirements, and/or tactical components of their earlier sport (ExpertAdvantage, 2011). A common example is a switch from gymnastics to diving. Similarity between sports is a key component of talent transfer as the focus is on capitalising previously learnt skills to fast track development in the new environment (ExpertAdvantage, 2011). Talent transfer frequently occurs informally, whereby the athlete initiates and co-ordinates the switch between sports themselves. Often the switch is prompted by an injury, a plateau in performance, a reduction in motivation or retirement. Talent transfer can also occur through formalised talent identification and development programmes that are co-ordinated by sporting organisations. In these structured programmes, existing high-performance athletes are targeted and their athletic ability is transferred to another sport (ExpertAdvantage, 2011). Programmes include(d): Talent 2012 Paralympic Potential; Talent 2012 Fighting Chance; Talent 2016 Tall and Talented; Girls4Gold; Pitch 2 Podium; Sporting Giants (UK Sport, 2016a). In either case (formal or informal), talent transfer athletes have typically

experienced some degree of success in their first sport before making the switch to a new sport and will often also experience quite rapid success in their second sport.

Consequently, talent transfer can occur whereby existing high-performance athletes are targeted and their athletic ability is transferred to another sport. Such paradigm shifts in talent identification and development increase the probability of identifying athletes that can attain senior expertise by minimizing adolescent maturational issues, reducing talent development time frames, and maximising return on the developmental investment already made in these older athletes (Gulbin & Ackland, 2009; Halson, et al., 2006). In support of this accelerated talent transfer approach, a retrospective analysis of Australian senior national athletes shows that 28% reached their elite status within 4 years of starting the sport for the very first time (Oldenziel, et al., 2004). These quick developers started the sport at which they attained senior national status at an age of 17.1+4.5 years, and on average have participated in three sports beforehand (Oldenziel et al., 2004). Thus, it would suggest that Ericsson et al.'s (1993) much re-iterated theory that 10 years or 10,000 hours of deliberate practise is essential for someone to reach high levels of expertise is critically flawed. For example, the 18-month pathway from novice to world podium reported by Bullock et al. (2009) in their study of Australian bob skeleton athletes or other examples they have reported with as little as 3 years of training. As a result, these examples supported the concept of talent transfer and the aim of achieving excellence through late specialization and rapid development. Bullock et al. (2009) take the examples one step further by arguing that deliberate programming encompasses other planned factors in addition to skill practice by providing high quality strategic planning, access to quality coaching, equipment, the best possible competitions and technical, financial and sport science and medicine support to ensure athletes fulfil their potential. Could these factors together help successfully support an athlete through a talent transfer process?

Because such little attention has been paid to within career transitions that occur as athletes move up, down, or horizontally in the sport system (Lavallee, Wylleman & Sinclair, 2000), researchers have little knowledge of the within-career transition experience on which to base their interventions. By developing a better understanding of the demands facing athletes at particular transitions, stakeholders (such as coaches and national governing bodies) can help to ensure that the necessary resources are available to athletes to support them at times of transition (Wylleman & Lavallee, 2004). Pinder et al. (2013) have recently argued that to understand the nature of talent wastage that might be occurring in high performance programmes in sport, future empirical work should seek to follow the career paths of 'successful' and 'unsuccessful' products of TID programmes. Thus, the purpose of this study is to examine the athletes' experiences when

transiting from one sport to another. It is to 'follow' (in some parts retrospectively) athletes through their journey (whether they are successful or not) to learn about their unique experiences. However, it should be noted some athletes that were interviewed for this study were still in the throes of trying to 'make it' by medalling at the Glasgow Commonwealth games in 2014 or an Olympic games.

### 3.2 Method

This research employed qualitative methods using a phenomenological approach. Phenomenology is "*the systematic attempt to uncover and describe the structures, the internal meaning structures, of lived experiences*" (Van Manen, 1990, p.10). Phenomenology has, as its primary objective, "*the direct investigation and description of phenomena as consciously experienced...*" (Spiegelberg, 1975, p.3). The purpose of this research was to examine the talent transfer process by understanding the journey as lived and experienced by a purposeful sample of athletes within the UK. Use of phenomenological research lends itself to this goal by seeking to gain a deeper understanding of the nature and meaning of everyday experiences (Van Manen, 1990).

In phenomenological research, language is the key construct that allows people to make meaning of their experiences (Van Manen, 1990). The experiences that participants chose to select, remember and describe are meaningful and telling because they have chosen those experiences to share. By allowing the athlete to explore those experiences, to begin to understand and make meaning of them, we are given a more complete understanding of the nature of what it means to be an athlete and can begin to understand the process of talent transfer for each of them. Therefore, using interviews as a tool to illicit this language was paramount to ensure that each athlete's sporting journey was captured and conveyed through their own unique experiences.

One of the main strengths of qualitative research is that it tries to understand and examine participants in their everyday surrounding and hence is more likely to leave the participant's opinions intact. The method types used in qualitative data, such as interviews, normally produces data that is rich in description and personal in nature. However, for researchers to achieve this, it is often necessary to use only a small population size, making generalisation difficult (Bryman, 2001). For this reason alone, qualitative research is often criticised.

Qualitative research has also been criticised as lacking external validity as it is seen as being too subjective and relying too much on the researcher's often unsystematic views on what

is deemed to be important (Bryman, 2001). Furthermore, the researchers themselves are the main instrument of data collection; therefore, it is difficult to replicate the findings as well as establish what the researchers actually did and how they came to their conclusions.

### 3.2.1 Participants

Table 1 illustrates the demographics of the athletes interviewed within this study. All athletes are UK based. Athletes 1-3 have been tested and were still being supported at the time of the study through a formal full time talent transfer programme. Athletes 4 and 5 were not successful through a testing phase, while athletes 6-10 were not tested through a formal talent transfer programme and initiated the transition of their own accord.

	Original Sport	Age at Transition	Transferred Sport	Age at Time of Interview
Athlete 1:	Rugby	19	Canoeing	24
Athlete 2:	Athletics	16	Canoeing	22
Athlete 3:	Athletics	21	Canoeing	22
Athlete 4:	Judo	21	Cycling	24
Athlete 5:	Hockey	19	Cycling	24
Athlete 6:	Judo	20	Wrestling	25
Athlete 7:	Skiing	20	Cycling	22
Athlete 8:	Skiing	35	Cycling	37
Athlete 9:	Athletics	25	Cycling	33
Athlete 10:	Athletics	23	Cycling	28

Table 1: Participants: Study One

10 (4 male/6 female) athletes aged 19 to 36 years were purposefully sampled to participate in this study from three different sports because they could offer a meaningful perspective on the topic at hand and they were a homogenous sample (i.e. athletes specifically targeted from a talent transfer programme/process). For inclusion in this study, and to ensure the credibility of the data emerging from the interviews, 5 athletes were chosen who had been tested through a formal talent transfer programme. The remaining 5 athletes were chosen because they had not been tested through a formal talent transfer programme. At the time of the interviews, all athletes were either preparing for the 2012 London Olympic games or the 2014 Glasgow Commonwealth games.

### 3.2.2 Procedure

The author made initial contact (through telephone or email) with the athletes and gave them a brief introduction and nature of the study and what it entailed for time commitments. Convenient times for the interviews were then agreed and informed consent was obtained before data collection. Once permission had been granted for an interview, the athletes were asked to pick a place/time to meet with the researcher which resulted in travelling the breadth of the UK. Athletes informed of the nature of the study were assured that their comments would remain anonymous and that data would be treated confidentially. An initial interview guide was pilot tested with an athlete who had recently undergone the transition of moving from one sport to another. One interview was conducted via Skype because of the international competition demands of the athlete.

### 3.2.3 Interview guide

Kvale (1983, p.174) defines the qualitative research interview as *“an interview, whose purpose is to gather descriptions of the life-world of the participant with respect to interpretation of the meaning of the described phenomena”*. This was gathered from the athletes using a semi-structured interview. The questions were flexible and open ended and the researcher adopted a stance which was facilitative rather than challenging. Cicourel (1964, cited in Berry, 1999) argues that the participant may well feel uneasy and adopt avoidance tactics if the questioning is too deep or confrontational. Thus, in-depth open-ended interviews allows data to be gathered, with topics and issues specified in advance, in an interview guide employing Rubin and Rubin’s (1995) guidelines for in-depth interviews. That is, three types of questions were used in the interview guide: main questions, probe questions and follow up questions (see Appendix B). This helped to ensure depth and authenticity of the participant’s responses. Thus, a degree of flexibility was available within the interview structure which reflected one of the major strengths of the interview as a tool for social research and one of the principal reasons for its usage in this study (Kvale, 1996). A semi-structured interview guide ensured all athletes were asked the same set of major questions. However, as participants were asked to elaborate, the researcher let the natural flow of conversation direct the discussion and explored athletes’ unique experiences in greater depth as they arose (Patton, 2002). Although, some writers have attempted to show how interviewer effects on participants can be minimised, usually in an attempt to provide ‘objective’ data within the context of scientific methodologies (Paterson, 1997). The assumption made here is that the researcher will always affect the interview interaction in some way, if not through conscious or unconscious verbal communication then through body language, social ‘position’, race or gender. Indeed, research by Cannell, Fisher and Marquis (1986) indicates that up to 50% of everything said by interviewers is something other than a specified question or probe.

At the first interview, specific questions were included to elicit information about why the athlete chose to transition from one sport to another, about the transferable skills and behaviours the athletes thought were needed to undertake the transition, support services and who successfully helped the athletes make the transition, and how each athlete described what 'success' would look like in their new sport. Athletes were also asked to describe their experiences before, during and after the transfer giving detail about why they made the transition (e.g. whether it was a career ending injury) and how they coped with the new demands. In addition to a change in identity, support structure variance (what supported/hindered the athlete to succeed, i.e. funding) and what skills/behaviours they employed to cope with these challenges were discussed.

Three broad areas were given to the athletes during the second meeting to help construct an individual 'story board' based on themes within a talent transfer definition: 1) Similarities between the sports; 2) Informal/Formal programme of support; and 3) Degrees of Success. Each paragraph of the transcribed interview was given to the athlete and discussed with the interviewer before being placed on the story board against any one of the broad themes above. This enabled an in-depth understanding of the athletes' thoughts and feelings as well as constructing additional themes under the headings above. A collaborative interview board placed in front of the athlete and interviewer facilitated the identification and organization of talent transfer by providing a visual display of the athletes' experiences through this process (Scanlan, Russell, Wilson & Scanlan, 2003).

#### *3.2.4 Data Analysis*

The Scanlan Collaborative Interview method (SCIM) was the analytical technique used on the interview responses to identify the main themes that emerged from the interviews. SCIM evolved to satisfy a need for a methodology capable of testing and extending existing theory with sufficient robustness to assess the hypothesized relationships while also revealing the underlying mechanisms at work (Scanlan et al., 2003). This methodology provides experimental rigor and generalizability combined with richness of detail, insight and personal meaning (Scanlan et al., 2003). It is an alternative to grounded theory (Strauss & Corbin, 1990). The author chose SCIM because this would give more attention to the procedural account of the analysis, in other words how we got to '*the what*' (Miles & Huberman, 1994) rather than qualitative research just focussing on presenting the findings. In their words, "*we rarely see data displays – only the conclusions*" (p. 262). Once a raw set of descriptors were generated, the interviewer and participant worked collaboratively to create inductive dimension 'themes' to form a preliminary picture of that

athlete's unique talent transfer experience (Lonsdale, Hodge & Raedeke, 2007). There are limited studies/methods using SCIM (Kerr & Mackenzie, 2012; Klug, 2006) especially within the sporting domain thus, further research is needed to understand the benefits this tool brings to understanding an athletes' individual experiences.

The average interview was 54 minutes in length and was tape recorded and transcribed verbatim by the interviewer. In preparation for the second interview, the interviewer cut up the transcription from the athlete and placed them in order for the athlete to sort into themes on the story board. Therefore, actively using the board, the athlete comprehensively summarized their journey through the talent transfer process and gave confirmation or correction of any discrepancies after all the quotes had been placed.

To ensure trustworthiness of the data [as recommended by Sparkes (1998) and Lincoln and Guba (1985)], and because analysis procedures needed to be created to accompany the SCIM method, it was critical to use consensus validation with another. Therefore an interview transpired and a story board created not only for validity and reliability but to help the thinking process. Also, athletes were given their transcripts in advance of the second interview to be given the opportunity to add or delete any data they felt did not accurately reflect their intended meaning (Miles & Huberman, 1994).

The analysis was inductive in that the overall areas of study were delineated by the interview guide. However, lower and higher order themes within each section emerged via inductive content analysis of the data, which Patton (1990) has suggested is a suitable method when analysing qualitative data. Inductive content analysis involves the organising of *"the selected quotes into interpretable and meaningful categories that emerge directly from the participant's own words"* (Scanlan, Stein, & Ravizza, 1991; p.106). Indeed, as the inductive approach evolved through the athlete, the themes emerged out of the data rather than being imposed before data collection and analysis. As a result, the raw data (the transcribed interviews) were divided into meaningful units, which would be a word, phrase or paragraph containing one idea (Tesch, 1990) which would result in common themes. The inductive process would then continue by comparing and contrasting emergent raw data themes to create higher order themes. This process would continue until it was no longer possible to create any further theme levels (Scanlan, Ravizza & Stein, 1989).

It has been suggested that the prior experience and knowledge of the interviewer might bias the emerging themes (e.g. Pidgeon & Henwood, 1997). However, as this was being led by the athlete to construct their own lower and higher-order themes, the concern of minimizing this

potential influence on the interpretation of the data recognized. Therefore, this phase of analysis involved the athlete grouping raw data themes with similar meanings into first order categories that captured the substance of the cluster of raw data themes (Miles & Huberman, 1994). This stage of data analysis was flexible and continued until theoretical saturation was met (Patton, 2002). For example, raw data responses such as ‘Learning new skills’, ‘Identification/Markers’, and ‘Physiology’, were grouped to create the higher-order theme ‘Physical’ under the general theme of ‘Similarities’.

### 3.3 Results

The results are presented in three sections as per the following definition of talent transfer: a process occurring when an athlete ceases or reduces their involvement in a sport in which they have invested significant time and concentrates their efforts in a sport that is new to them but involving similar movement skills and/or physiological/psychological requirements. First, athletes’ responses regarding whether there are similarities between the two sports they have transitioned between (see Figure 2 and 3). These are followed by data pertaining to whether they have made this transition through a formal support programme for example, UK Sport/NGB or home country Institute of Sport/Sport Governing Body) or informally of their own accord (see Figure 4 and 5). And lastly, the degree of success which the athlete felt they had achieved within their previous sport or what they feel they must achieve within their new sport to “make it” (see Figure 6 and 7). While the frequency of athletes’ responses does not necessarily equate to the importance of the theme, it has been suggested that the most cited themes are more likely to be transferable to other samples (Weinberg, Butt & Knight, 2001). As such, all high-order themes are discussed, with the most cited lower-order themes being explored in further detail. Below is a summary of the results:

General Dimension	Higher Order Theme	Raw Data Themes
Similarities	Physical	8
	Psychological	12
Support Structures	Formal	22
	Informal	12
Degree of Success	Process	23
	Outcome	12

Table 2: Summary of Results

#### 3.3.1 Similarities

Raw Data Themes

Higher Order Themes

Between training  
 Learning new skills  
 Pre games – honing skills  
 Skill acquisition  
 Physiology – endurance  
 Physical/somatic change  
 Core transferable skills

Physical



Figure 2: Physical Similarities Inductive Diagram

### 3.3.1.1 Physical Similarities between the Two Sports

All 10 of the athletes interviewed stated that they had something that they could physically transfer between the sports, whether that was, for example, power or endurance.

*“But also...my body shape for example, I had this huge upper leg. In ski racing I was always sitting back so the strength required to do that is extreme, it is ridiculous. And if you go on to a bike, this long lever, it is already extremely strong. So, because what I feel like held me back from my sort of engineering point of view in ski racing helps on the bike. So for me in particular, swapping over from ski racing to cycling is a perfect fit.” Athlete 7.*

In contrast, there was acknowledgement from three athletes that there are differences to ‘the norm’ (what a NGB might examine through anthropometric testing) or athletes that might get tested and not get into a programme like Tall & Talented (UK Sport, 2016) but still have something special.

*“...but I also think that what is great in this sport (canoeing) is that the physiological aspect is so broad. Because if we look at the 200 metre final, you have got some, you know, 6ft 5in massive beast and then the World Champion is kind of, you know, 5ft 7in and just quite a small little elf. So it is kind of turning.” Athlete 1.*

This athlete argues that an individual can change their physiological capabilities to suit the technique of the sport and that organisations should be more open minded in their testing requirements when considering athletes for initiatives/programmes. However, these examples are probably few in comparison to the testing norms and it would be difficult to predict which athletes might be successful if they do not sit within an expected range.

Raw Data Themes

Higher Order Themes

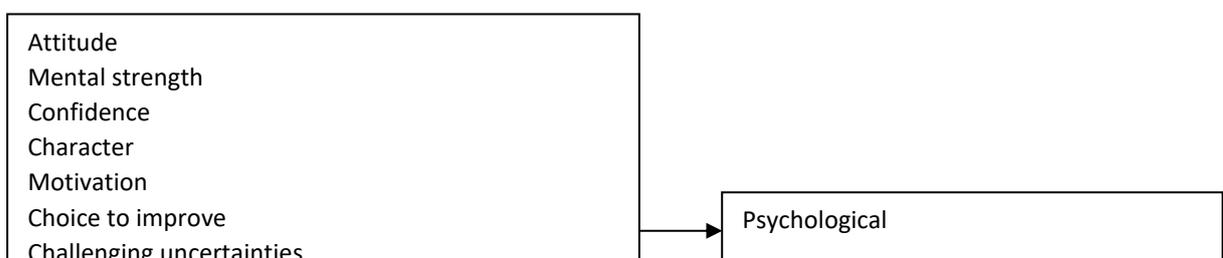


Figure 3: Psychological Similarities Inductive Diagram

### 3.3.1.2 Psychological Similarities

The same was attributable to something that could be transferred psychologically by the athlete. Every athlete clearly articulated that this was a key ingredient to successfully making the transition between two sports. This was described by athletes using varying words: attitude, mental strength, confidence, character and motivation (as show above).

*“So I had always, kind of had that confidence that you know transferring into something else I would probably be able to pick it up....I did not know why I could do that but it is just a trait that I have seen in myself over time.” Athlete 1.*

Psychological similarities would be challenging to compare within any environment, be it sport or business. However, it could be argued that the speed in which a person develops a skill is a psychological requirement and coaching an athlete within a short space of time could be measured to ascertain whether they are able to synthesize information or not. The confidence that an athlete has developed as a result of already mastering a skill would support them within their new sport and through the transfer process.

#### 3.3.1.2.1 Perseverance/More to Give

There were several athletes who clearly articulated that they had something more to give in terms of achieving success and working towards specific goals. They were clearly not ready to give up their aspirations of achieving on an international stage and had not *“reached their peak yet”*.

*“....because I don’t feel as though I have reached my peak yet. I am a big one for striving for the very best out of yourself, physically or mentally or whatever the task is that you are doing and pushing past the boundaries....” Athlete 4.*

Evidently, this clear focus that a person is 'not quite finished yet' is a determining factor as to why athletes might choose to stay within the field of sport. This athlete stated that they had not reached their potential within their previous sport and therefore strived to better themselves by continuing into older age the task of achieving their goals. This athlete firmly believed she could do it and wanted to prove others wrong that told her she could not.

*"If I can channel the emotions properly and do something constructive with my efforts then that will thank the people who have supported me in a positive way. And it will also be a big motivation for me because I am not quite finished yet and it is a good time to be in this sport with the commonwealth games around the corner."* Athlete 4.

A number of athletes articulated that they had something more to give/prove within sport and that they did not feel it was the right time to retire. In this athlete's case, it was a dual feeling of wanting to thank people who had supported them as well as their motivation to continue within sport because of a big opportunity/competition being hosted within the UK. This kind of motivation could be fuel for a number of athletes who thought that there was an opportunity that came along at the "right time" for them.

#### 3.3.1.3 Identity

The athletes viewed sport to be a very important part of their lives and the athletes had a clear athletic identity, which also showed a positive relationship with continuing within a high performance sporting environment and still wishing to achieve goals/aspire to something more. However there was a lack of consistency with the time frame it took for athletes to identify themselves with their new sport.

*"Five years on and I still didn't feel like a cyclist. When I rode in [a major international competition], I was a proficient cyclist, but if one of the journalists had asked me are you a judo player or are you a cyclist, I would have said both. It has only been in the last eighteen months that I felt I am now a cyclist."* Athlete 4.

With such strong and powerful emotions attached to an athlete's identity, the quote below typifies how an athlete perceives/labels themselves within the context of their new sport. The fact that these two athletes had won a medal at a major international competition still did not solidify their identity within their new sport.

*"Even though I had won medals at the commonwealth games I still did not feel like that. It still took about a year and a half after that for me to have gone through...I mean when I did the GB trials that I did last year the times that I did, were some of the best in the world, for*

*one of my events, I would still say I wasn't. My identity was not a cyclist at the time even with all those results."* Athlete 4.

It is a worthwhile study for the future to determine how long it takes athletes to identify themselves within their new sport and what degree of success they need to help cement this distinctiveness.

The additional raw data themes that were described by the athlete under psychological similarities (such as attitude, character, role models and choice to improve) contained some interesting data within the transcripts however it was not possible to highlight them all within the result section. These two themes were picked because they were mentioned by every athlete that was interviewed and thus, felt that they were two of the key ingredients that the athletes would identify in making a successful transition from one sport to another.

### 3.3.2 Support Structures

Raw Data Themes

Higher Order Themes

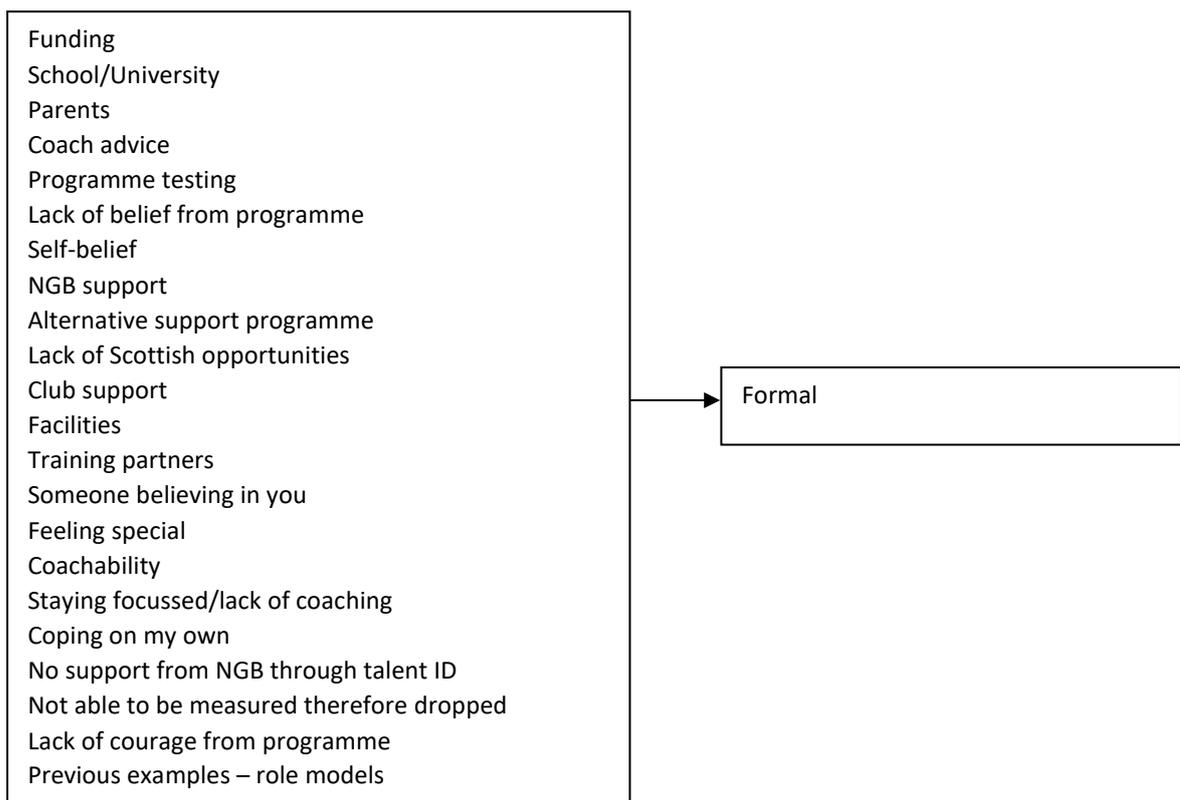


Figure 4: Formal Support Structures Inductive Diagram

#### 3.3.2.1 Formal Support Structure

From the three athletes that had been through a formal testing programme (through UK Sport/NGB) and were continued to be supported, there were a number of factors that were

prevalent in helping the athletes make a successful transition. They were NGB support through coaching expertise, facilities, Institute support staff (i.e. nutrition/strength and conditioning) and most importantly funding.

*“I guess, as far as canoeing goes, yes, I would not be here if it was not for, like...supporting (funding) the programme for starters....there is no way I could be canoeing for five years if it was not for the coaching, and support of the physio and nutrition all around me, telling me what to do. I had enough just trying to focus on paddling my boat, let alone getting fit, strong enough, and whatever....so there is no way I could have done it without their support.” Athlete 1.*

When asked whether it was important that the athletes knew of any successful examples of talent transfers and/or whether role models was an important facet, a few athletes acknowledged the existence of Rebecca Romero as being the most highly prolific example but very few athletes could come up with any others.

*“...I had been aware of Rebecca Romero on Beijing, but to me she was an elite athlete and it was kind of like, of course she can jump from one sport to another because she has just got that, you know that she is that elite and that good. But I think for me it was just a lot of the challenge, of being able to do it...I never really had a role model, it was just kind of I want it, and I thrive for the challenge and wanted to see if I could do it, more than anything.” Athlete 1.*

Positive support was noted by every athlete that went through the formal programme as being an important element of recognition. They appreciated that someone was noticing their ‘talents’ and it made them feel ‘special’. One athlete felt that it was the belief shown in/to them from the NGB and UK Sport through letters (from the programme) stating that they were impressed with their potential and that they could go to the Olympics. This was an important factor in continuing within the programme and being supportive of their progress. *“So yes, that belief was really important.” Athlete 3.*

### 3.3.2.2 Informal Talent Transfer Process

Raw Data Themes

Higher Order Themes

Coach support Parents Role models The team Nurtured competitiveness
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Figure 5: Informal Support Structures Inductive Diagram

For those athletes that made the transition of their own accord there were the following areas that either introduced them to another sport, supported them through the transition, were barriers to helping them achieve their goals, or were motivators to spur them on through rejection and ensuring they faced adversity.

This athlete identified a key person within the training environment as being the catalyst to them undertaking the process based on their expertise as a strength and conditioning coach and having knowledge of 'key markers' that have been used with other athletes.

*"We were having a conversation and he kind of just flipped his lid a little bit and he said "this is just a waste of possible talent, you have got this, this and this, and in terms of results, you should be giving this a go and it is time you sorted yourself out"....I am quite a deep thinker so I did not really react to him, just thought yes, ok. But when I went home it really bugged me that he had said that it was a waste (of talent), because I didn't like that so I got in touch with the governing body." Athlete 4.*

Funding was identified as a significant barrier to a number of athletes undertaking a talent transfer process as these athletes typically tend to be older and therefore might already have families, a mortgage and responsibilities. Therefore, financial support was sought from other sources as there was no recompense from any programmes as they were not financially being supported through a (UK Sport/NGB) Athlete Personal Award.

*"I would probably say my family, my mum and dad. I don't think I could have – they were unbelievably supportive, not just kind of mentally at keeping me going, but like financially as well. I would not have been able to have done it without their help." Athlete 3.*

Family was indicated as playing a significant part within the process of supporting most of these athletes. Athlete 4 felt that they owed family and friends a “*big bang kind of thank you*” for all the support received and this sentiment was echoed across the majority of interviews.

### 3.3.3 Degrees of Success

The athletes varied across the programmes as to whether their focus was process or outcome oriented. For example, some athletes very clearly had a major international competition on their radar for achieving a medal. Others wanted to see how far they could go in the sport and would just enjoy the process in what they could achieve. As a result, the degree of success of what they had achieved in their previous sport, or what they were aspiring to within the sport they had transferred to, was a determining factor as to whether they had ‘made it’ and the athlete considered a success or from the programmes they were being supported by.

#### 3.3.3.1 Process

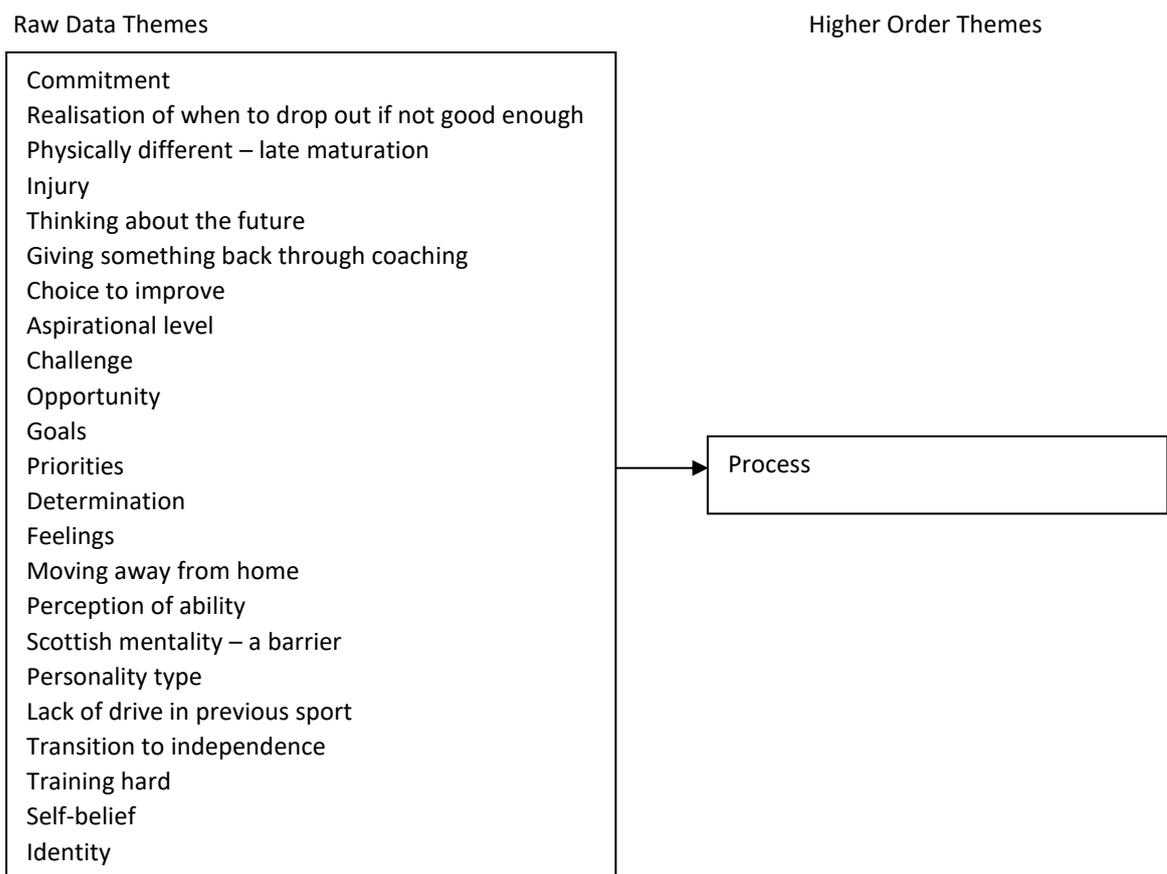


Figure 6: Degrees of Success (Process) Inductive Diagram

The athletes explained the effort involved in achieving what they defined as a degree of success and the importance they placed on themselves and their achievements as well as their ability to overcome adversity in a variety of endeavours (not necessarily about the winning).

*“For me as a latecomer, I feel like I had tons of successes, like everything I had managed was really earned. Like hard earned, like everything was on my own, like training every day at home, on my own. Like not a single help from anybody, so everything that I had managed has seemed a huge success to me.” Athlete 7.*

The process this athlete used to overcome the physicality of the more mature athletes meant that their mentality was a key factor in achieving success as a youngster.

*“Because I had to fight against the more physically matured kids, so I was not winning everything as a kid. But when I did grow and went full time training, it started kicking in, I think that helped a lot. Because those guys eventually were so used to winning, and you are moved up a level and (they) were getting their arse’s kicked. I still had that sort of mentality to keep fighting, which I think helped a lot.” Athlete 8.*

This athlete supported the notion that it was “not winning” at an earlier age that helped them succeed at a later stage. They believed that having “bigger guys” to compete against when they were younger was something to aspire to and overcome. It could be argued that training with older athletes is motivational and aspirational to achieve more at a younger age. There was more than one athlete who described this within their interview.

### 3.3.3.2 Outcome

Raw Data Themes

Higher Order Themes

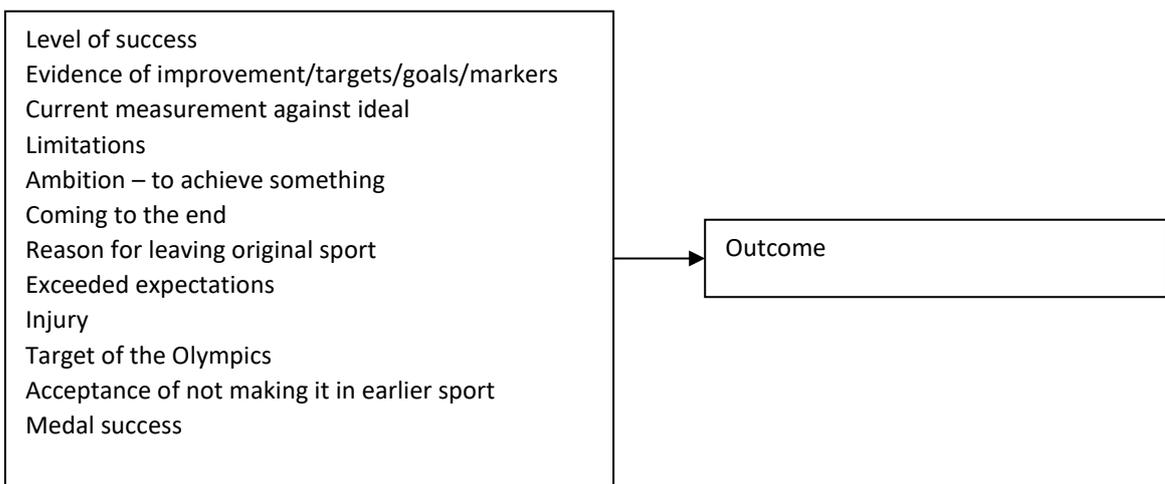


Figure 7: Degrees of Success (Outcome) Inductive Diagram

For some athletes, their degree of success was hindered by a career ending injury that ensured they would never progress within their previous sport. As a result, it was the catalyst for a number of athletes to consider the transition into another sport.

*“The year that I broke my leg was my transition year between junior and senior which is when it is really, really your toughest year so it is tough doing that when you are physically finding stuff hard already.”* As well as: *“So, part of it was to do with injury, I just did not feel like I was able to move or better my performance in the place that I was mentally, partly because of injury, partly because I had been doing it for a long time and could not really remember when I had breathing space, because it had been well from 12 I had been on GB youth squad and then junior through until you are eighteen or nineteen.”* Athlete 4.

For other athletes, the acknowledgement that they were not going to progress within their previous sport because they were not good enough was evidently a hard lesson and one that was a result of a variety of factors.

*“I definitely did reflect on my results and eventually I didn’t need to be told because I already had decided that this is not going to work out and I needed some breathing space.”* Athlete 4.

The decision to try another sport was compounded by the realization that one athlete was not going to succeed on an international stage. Once that acceptance had fermented, the suggestion to try another sport by other people was welcomed.

*“So it was, it did take a bit of kind of like, convincing that I could be good at something else....I was almost kind of accepting that I was not going to be, was not going to make it (at an international level) in athletics. Once I accepted that then I was like right, I am ready for something else now.”* Athlete 3.

For some athletes who were not on a formal programme of support and therefore had to set their own goals, the idea that they had ‘made it’ within their new sport resulted in attending the highest level of competition and achieving a medal. The results did not show that all athletes had achieved success (medalling at an Olympics or commonwealth games) within their previous sport and therefore wanted to equal this notion of ‘making it’ within their new sport. There were only three athletes throughout the ten interviewed that had won a medal within their previous sports.

### *3.3.4 Two Athletes that were not Selected from NGB Testing*

Within the results, there are a number of quotes from athletes who went through a testing phase of a talent transfer process, however within the final stages were not selected for the

programme. A number of quotes are worth highlighting because of the powerful emotions it drew from the athletes and what rejection can do in terms of spurring these athletes to go on and still achieve of their own accord. This athlete felt so strongly that having some form of rationale/justification was important for them not to be taken forward on the programme as their results suggested otherwise.

*“All they did was send out an automatic email to say that we did not get on [the programme, and did not give us reasons or anything, so I just think that is not right at all, after everything we have been through. Going through a process, you need a reason, you need to know why. They did not even give me a reason.” Athlete 5.*

And as a consequence, some athletes felt very strongly about wanting to do well because of the opportunity of a major competition in their country as well as fuelling their own motivation because of the commitment they had demonstrated to get this far.

*“Me, it is an opportunity...to do well in front of a home crowd .It is motivation to do well every time you go out and compete because of all the hard work and effort that has been put into getting this far.” Athlete 5*

International competitions have been identified as a key area for helping athletes to successfully transition into another sport. However, as there have been limited opportunities in the past, some are still limited and may not change in the near future:

*“It is difficult for some sports to find the monies, or even sponsorship, to send a team to international competitions and that is frustrating because we have some really good talent within our sport but some opportunities seem to be limited to us”. Athlete 5.*

Nevertheless particularly relevant for this study, the below quotes identify the need to specifically help target support at the older athletes that are willing to make the talent transfer transition at a later age and not follow the traditional model of talent development as it not comparable for these athletes.

*“Like I am of the opinion that it is all about practice, hours, quality of practice and opportunity. And when it is not, when you are not given the chance to do any of that with any backing whatsoever, of course you are not going to get people coming through, and of course you are not going to have success. The only success stories that we have are the ones that get in early so you have got these young, youngsters that are getting into the programme really, really early and can stay in the programmes and they get all the focus*

*and all the help. I would quite like to see just more help for the ones that start late, like myself, who start later.” Athlete 7.*

In addition to this quote, another athlete argues that the typical ‘pyramid model’ does not relate to a talent transfer athlete and therefore it is more challenging to statistically argue/prove that she can do the job.

*“They had one guy who has filtered through that came all the way up and who is now an Olympics medallist. I don’t know if that pyramid scheme has been in probably officially for maybe six or seven years, so they are only starting to see some of the guys coming through...but pyramid schemes don’t work for athletes like me because they are age based, and I was coming in at like level two, from the top and....I mean I did top ten world equivalent and I was not good enough, because they had someone sitting in the top three that they had already invested thousands of pounds in. But as a business man, I have somebody here I have invested thousands of pounds in to sit on the top three and we have already got all her data since she was fourteen or fifteen so we can predict her growth level, her performance currently is going to look like. They can’t predict mine.” Athlete 4.*

Therefore, talent transfer is seen as a model that should encourage a holistic perspective. From the descriptions within their interviews the athletes believe that they are not ‘predictable’ and therefore alternative testing/measures need to be taken into account for individuals who undertake a talent transfer process, rather than the traditional models of talent identification/development.

### 3.4 Discussion

The purpose of this study was to examine the athletes’ experiences through the talent transfer process. This was achieved through interviewing 5 athletes from a supported talent transfer programme (3 currently still on the programme) and 5 that went through the process of their own accord. The results showed common patterns that transcended across the groups of athletes but there were variances between how successful each athlete had been. It would be unfair to fully summarise whether the athletes had successfully completed the process as some were still in the throes of trying to ‘make it’ in their respective sports at the time of the study.

It was clear from the results that the athletes perceived this key transition as a process rather than an event (Schlossberg, 1981). 7 out of the 10 athletes had started their transition 5 years before a major competition (for example, an Olympics or the 2014 Commonwealth games)

and all athletes transitioned sports within 7 years. The timing of this transition was specifically about aiming for an international competition.

*“Yes, I think...I suppose it was the draw of 2012. It was the Olympics, I think I’ve always dreamed of going to the Olympics but I have never been good enough. ....And you know I love playing basketball, but I was not good enough for the NBA. But you know, 2012 and the home Olympics and then people supporting you on the way there, was just, I could not turn it down.” Athlete 1.*

In support of this accelerated talent transfer approach, a retrospective analysis of Australian senior national athletes showed that 28% reached their elite status within 4 years of starting the sport at which they attained senior national status at an age of  $17.1 \pm 4.5$  years (Oldenziel et al., 2004). Also, Bullock et al. (2009) findings provide support to an aggressive talent identification and talent transfer approach that identified successful senior athletes that were aged  $22.2 \pm 5.1$  for 4 athletes that represented Australia at World Cup competitions within 14 months. Out of the 3 athletes that were supported by UK Sport/British Canoeing and went through the Tall and Talented programme, 2 were successful in competing at the Olympics within 4.5 years. Although the athletes were aware of the end target (2012 Olympics), there were smaller competition goals they wanted to achieve first.

*“I mean I was obviously brought into the programme because they wanted people to medal at the Olympics, which obviously that is still my goal but in my head at the moment my next goal is trying to do, is to compete for Great Britain and then after that, the ultimate would be to win a medal at the Olympics.” Athlete 3.*

However there was not one example within the 10 athletes interviewed that achieved international success within their previous sport as well as the sport they had transitioned to, both at a senior level. The closest was a female cyclist (not supported through a programme) that achieved international junior success within her previous sport and then had achieved senior success within her new sport. Incidentally, the athlete who achieved World Championship qualification with only 10 weeks sliding experience was crowned a World Champion in her previous sport 5 months earlier (Bullock et al., 2009). Thus, in support of the athletes interviewed within this study, even though they had not all competed at an international level within their previous sports, prior sporting experience is preferential (as described in the results section) that are needed to transfer between sports and be competitive. Whether that is through physiological similarities or psychologically where the transference is about mental toughness and the confidence to compete and train at the level required.

This study supported the proposed talent transfer principles in Bullock et al.'s (2009) study as all athletes (bar one) were over 18 years old, which supports late specialization in a sport, but they had accumulated this through a number of years sporting experience in an array of sports. In line with the Developmental model presented by Wylleman and Lavallee (2004) athletes were in the perfection/mastery stage of their athletic development which could be argued as the most challenging and demanding in terms of their sport's career. According to Wylleman and Lavallee (2004) the transition into this stage occurs at 18-19 years old. Although this study shows that the athlete's transition could move back down to the development stage for a period of time before ascending back up to the mastery stage. NGB's need to be aware that making a within career transition may cause athletes to experience a range of additional, related (and sometimes non-athletic) stressors that add potential barriers to a successful transition (for example, having a family to support, monetary commitments to fund the transition).

*"And then funding would not have been so much of an issue either, it was the petrol down, the food down there, the hotels down there....you know it was quite tricky. That was, for me the barriers and it was hard coming from, and my age as well, coming from that level to no support. ....I mean I was aiming at such a high level....I think it should have been there to give me every chance possible. I mean, time was not on my side."* Athlete 8.

It would be a worthwhile study in the future to investigate specific time frames associated with different sports as to how long this transition between the two stages takes. Thus, there was a pattern in that all athletes made the talent transfer transition after the age of 18, bar one who was 16 when she made this transition. Whether this could be argued as choosing/mastering a sport rather than a specific talent transfer decision is acknowledged.

For this talent transfer study, the developmental time frame was less than the prescribed 10,000 hours argued to specialise within a sport. Therefore the 10 year deliberate practice theory is inconsistent with this evidential account of successful late specialization and rapid expert development. Moreover, it corroborates the current concept that deliberate practise accumulated in many sports may be an alternative pathway to expertise (Baker, 2007; Coleman, 2007; Runco, 2007). For similarities between the two sports and an athlete being able to transfer their skill set, this quote typifies an example of how the time frame of 10 years or 10,000 hours is not necessarily the key ingredient for an athlete to master their new sport. The below athlete came from a multi-sport background but only at a regional level. He played basketball, rugby, football to name but a few but all of those skills, combined with the right sort of mindset is what this athlete argued was needed to successfully transition between his two sports.

*“For me, to get fit, I think rugby is something I would have focussed on to try and get to an elite level, but I didn’t have the kind of years of playing the game, so that kind of just match experience was not really there. But, I still think you can do that in a short matter of time, I don’t think....there is a thing that people say that you need ten years in order to be an elite athlete, but I completely disagree with that. I think that you just need to have the kind of right mind set and right ways of trying to do that.” Athlete 1.*

The UK Sport (2012) Sporting Giant’s talent identification programme concluded that within 12 months, 17 of the rowers and canoeists reached national finals (Vaeyans, et al., 2009). It was just over 4 years of training and competing within his new sport, that it took this athlete to represent Great Britain at the 2012 Olympics. This sentiment was felt by another athlete within cycling who had a similar perspective on the 10 year rule.

*“There is this chat in the cycling communities that it takes – well there is the whole talent, you know Malcolm Gladwell’s book ‘Talent is Over-rated’ – the 10,000 hour road thing and some people say, depending on the averages that for a cyclist five years is the golden rule! However, that’s not how long it took me.” Athlete 4.*

This athlete took 3 years to make the transition and achieve a silver medal at a major, international competition.

Another common pattern was the career ending injuries and the acknowledgement that the athlete was not good enough within their previous sport. They were both a catalyst for the athletes to make the transition. As identified within the results section these were significant factors as to why the athletes chose (over a period of varying times) to pursue another sport, because they knew they were never going to fully recover from their last injury from their previous sport or improve upon their results (any more than they were capable of).

It is worth mentioning thanatology (the study of death and dying) within the context of deciding that an athlete will move to another sport as it is also deemed appropriate for application to athletic retirement since, by analogy, the exit from one sport may be deemed a form of ‘social death’ where the athlete experiences trauma due to a sense of isolation, of segregation from their former life and their identity (Sinclair & Orlick, 1993). Therefore the transition from one sport to another as a result of injury, de-selection or not meeting targets could result in a ‘social death’ but could also bring about a new identity with hope of progression in another sport.

*“Moving to another sport keeps you sane. Gives you – you have the – it’s like every day you are doing something for a sport. So if you just stopped completely – it’s kind of like,*

*it's like if you are a heroin addict and they give you methadone. That kind of thing.” Athlete 7.*

Another athlete described the transition:

*“There was a transition period to not training competitively and it was kind of a little bit like it was a loss, or a mourning because it is like the death of something. Not a huge one, but it was a big change for me. Because I had been doing it (my previous sport) for ten or twelve years, but it had meant that I had more mental energy to focus on what was important for me at the time which was to finish my honours degree.” Athlete 4.*

The severity of how these athletes had experienced such ‘loss’ was significant enough for them to transition to something else and try keep their identity associated with sport. Again, it would be worthwhile investigating the extent to which the athlete’s identity within their previous sport was a key motivator for them to pursue a different sport.

It is worth mentioning the two athletes that did not successfully achieve a place within a formally supported programme and the fact that they still went on to achieve success (and are still aspiring for more). MacNamara and Collins (2011) argued that a large number of potentially talented performers may have been excluded from talent identification and transfer programmes due to inappropriate identification measures. These high profile athletes had not necessarily failed performance evaluation tests but there were (at that time) athletes who were perhaps marginally better but (they) could perhaps still achieve a top ten placing on the world stage.

*“I trained with them for a bit and then came back and they basically gave me a training programme. And then the nationals were in September and they said you know if you do well enough in September we will take you onto the Academy programme....And I mean I got all PB’s at the nationals, did my best and I beat another GB athlete..., who just went to the Olympics and they were like the next best thing and I beat them and they still did not take me on. So I don’t know what happened there.” Athlete 5.*

Pinder et al. (2013) stated that these measures may have become prevalent because current identification of talent is based on structured and mechanistic attempts to maximise limited resources (e.g. physical, logistical, operational and financial). And as one athlete articulated it:

*“However we have got this person who has transferred from judo which is not a sport that has a logical pattern of their development because so much of it is individually factored in performance, who has no previous cycling data for us to analyse, who is older and we have*

*not invested any money in and yes, they have done quite well, but we have no prediction model of what is moving forward.” Athlete 4.*

Furthermore Phillips et al. (2010) argue that it is therefore unsurprising that there are such large numbers of performers that are being unsuccessful in transfer or de-selected during identification because of the ‘snapshot’ approaches, which are based on minimal factors. NGB’s are not able to align with a theoretical model for understanding expertise and talent development (also supported in the literature by Abbott et al., 2005). This therefore highlights that the selection of appropriate talent should involve a multi-dimensional approach involving much more than just physical performance (Abbot & Collins, 2004; Nieuwenhuis et al., 2002; Reilly et al., 2000; Staerck, 2003). However Pinder et al. (2013) argue that caution should be taken in emphasising some sub-disciplines over others. For example, attempts to target isolated psychological characteristics in talent identification programmes have led to psychologists repeating the same errors as their physiology contemporaries (e.g. Weissensteiner et al., 2012). This issue is only exacerbated by the adoption of mono-disciplinary approaches to sport science support work and strengthens the need for a multidisciplinary and holistic approach (Renshaw et al., 2004).

## **Chapter 4**

### **Study Two**

#### 4.1 Introduction

*“They (talent transfer recruitment tools) are kind of narrow and limited...they’re coming down to looking at physical and technical elements, almost in isolation of other things.”*

(Collins et al., 2014: p.1627)

For more than a generation, National Governing Bodies (NGBs)/sporting organisations, to get ahead of other respective countries and win medals on the world stage, have unwittingly called for a new capacity of talent. The talent would have the ability not just to author certain characteristics needed to perform with distinction but they would also be able to step outside of this comfort zone within one sport to re-author their own limitations to more steadfast characteristics needed for a talent transfer process. In other words, the type of person that NGBs are looking for in someone who can transfer sports, may need to be a person who has an ‘x’ factor which is hard to quantify ([www.athleteassessments.com](http://www.athleteassessments.com), 2015). It could be argued that an element of this ‘x’ factor is psychological in nature. Chapter 3 (study one) found that 10 of the athletes who went through a talent transfer process, found that there were psychological similarities, with athletes using words such as mental strength, confidence, attitude, character and motivation. As a result, initiatives such as UK Sport’s Girls4Gold and Tall and Talented have included assessments such as sport psychology/lifestyle measures as well as anthropometric and fitness tests (UK Sport, 2013). Thus, sporting organisations are asking more and more athletes who once performed within their sport successfully (even at a regional level) to shift their skill set and to stay involved in competitive sport for a longer period of time.

The use of talent transfer is becoming increasingly popular within high performance sport to help support medal-winning potential on the international stage (Vaeyans et al., 2009). Collins et al.’s (2014) study identified that Australia and the UK, who have made significant investments in their talent transfer initiatives, converted 8% of their Olympic athletes as transfers. Thus, targeting athletes who feel as though they have ‘more to give’ are given a ‘second chance’ to switch sports and directly contribute to the success of an impending ‘games’. This is supported by chapter 3 (study one) that identified that several athletes felt they had something ‘more to give’ in terms of achieving success on an international stage and had not ‘reached their peak yet’. Evidently, this clear focus that a person is ‘not quite finished yet’ is a determining factor as to why athletes might choose to stay within the field of sport. Hahn (1990) and Hoare and Warr (2000) have argued that this alternative pathway is the introduction of new talent into a sport if the individual demonstrated the desired multi-disciplinary, physical, psychological and skill required for inclusion (talent detection). Or as Vaeyans and colleagues (2009, p.1374) suggest, the

*“structured recycling of talent”* in organized programmes (such as UK Sport’s 2020: Target Tokyo) would introduce a more proactive, systematic approach to delivering athletes already ‘primed’ for podium success.

Conversely, there have been a number of athletes who have informally undertaken the talent transfer process which have been left undocumented and normally as a result of coaches identifying an innate talent within an individual or the athlete themselves feeling as though they had something ‘more to give’. Chapter 3 (study one) recognized one athlete who stated that they were *‘clearly not ready to give up their aspirations of achieving success on an international stage and had not reached their peak yet’*. This athlete (7) stated that they had not reached their potential within their previous sport and therefore strived to better themselves by continuing into older age (their 30’s) the task of achieving their goals.

This talent transfer transition has not been systematically identified, defined or examined within the arena of sport to date. There is a significant lack of literature within the high performance environment exploring how athletes should be supported through the transition (Park, Lavalley & Tod, 2013). Chapter 3 (study one) identified three factors associated with what is involved in the talent transfer process. First, athletes’ perception regarding whether there are similarities between the two sports they have transitioned between. Second, whether the athletes had made the transition through a formal support programme (for example, UK Sport/NGB or home country Institute of Sport) or informally of their own accord. And lastly, the degree of success which the athlete felt they had achieved within their previous sport or what they feel they must achieve within their new sport to ‘make it’. In addition to these results, Collins et al. (2014) evaluated the effectiveness and underlying mechanisms of successful talent transfer which provides additional scrutiny to the transition. However, more examination is needed within this area to understand how athletes can be supported effectively. Indeed, Pinder et al. (2013) argued that a number of questions have not received enough attention from sport scientists interested in talent development. Understanding these areas could provide valuable information/insight to coaches and NGBs in identifying ‘talent’ and supporting more athletes onto a performance pathway, rather than comparing athletes against ‘a model’ (using discrete performance and anthropometric measures) which highlights the limitations of traditional attempts to identify talent at early stages of development (see Abbott & Collins, 2004; Helsen, Hodges, van Winckel & Starkes, 2000; MacNamara, Button & Collins, 2010a, 2010b; Musch & Grondin, 2001).

A transition generally results from one or a combination of events (Lavalley & Andersen, 2000; Taylor & Ogilvie, 2001) that are perceived by the athlete to bring personal and social

disequilibria and are presumed to be beyond the ongoing changes of everyday life (Sharf, 1997) and cause “*a change in assumptions about oneself and the world and requires a corresponding change in behaviour and relationships*” (Schlossberg, 1981, p.5). These transitions are, among others, developmental in nature (Alfermann, 1995; Pearson & Petitpas, 1990; Wylleman, et al., 2000) and they can be characterized by predictability and developmental context of occurrence (Wylleman & Lavallee, 2004). Nevertheless, Alfermann and Stambulova (2007) described athletic transitions as turning phases that challenge athletes with a variety of demands related to practice, competition, communication and lifestyle that require effective coping in order to successfully continue to engage in the sport.

Two types of transitions can be discerned: normative and non-normative transitions. During a normative transition a primary characteristic is their degree of predictability. Therefore the athlete exits one stage and enters another stage, which makes these normative transitions generally predictable and anticipated (Schlossberg, 1984; Sharf, 1997) for example, initiation into competitive sport or the transition from junior to senior level. Non-normative transitions, on the other hand, do not occur in a set plan or schedule but are the result of important events that take place in an individual’s life. For example, a season ending injury or perhaps the loss of a personal coach.

Within elite sport, transitioning between key points in a career has been identified as crucial in determining an athlete’s continued success (Park et. al., 2013). The Developmental model proposed by Wylleman and Lavallee (2004) provides a useful overview of the transitions faced by an athlete during their development and importantly, draws attention to the interdependent nature of these transitions. By situating an athlete within the model, those supporting the athlete will be able to conceptualise the athlete’s status, and to consider the other developmental tasks which must be confronted. However the model is largely descriptive and athletes will experience additional normative and non-normative transitions within a stage. Furthermore, it provides little insight concerning the experience of within career transition; hence the literature remains deficient in this subject area. Critically, however, transitions within sports should be viewed as a series of events where athletes have to cope with new demands by finding a balance between these demands and the resources available to them (Schlossberg, 1981). As a result, the focus has now shifted from describing specific events to considering the processes athletes undergo, the coping strategies they use, the resources available to athletes, and potential interventions to assist in creating positive sports experiences (Samuel & Tenenbaum, 2011a; 2011b).

Although the theoretical framework proposed by Wylleman and Lavallee (2004) situates the developmental, interactive and interdependent nature of transitions, the demands of each transition must be linked to the resources made available to athletes. Sinclair and Orlick (1993) defined any successful or positive transition as one in which the athlete negotiated the transition and reciprocal changes without any professional assistance. Successful transitions are therefore associated with effective coping and the overcoming of related problems and barriers while a negative or 'crisis' transition (associated with ineffective coping) is one in which the athlete needs specific psychological support (Samuel & Tenenbaum, 2011b). As such, transitional challenges have the potential to be perceived as a crisis, a rite of passage, or another positive step on the ladder, depending on the individual's perception and skills (Pummell et al., 2008; Sinclair & Orlick, 1993). Potential reasons that were identified for ineffective coping with transitions include low awareness of transition demands, lack of resources, and inability to analyse the situation and to make a proper decision (Alfermann & Stambulova, 2007).

In order to understand this process Samuel and Tenenbaum (2011a) proposed a conceptual shift away from focusing specifically on the concept of transitions to investigating what they referred to as *change-events*. A change-event is not limited to a recognizable or distinct transition and encapsulates all events in the athletic engagement, including longitudinal processes as well as transitions and crisis transitions. Therefore, Samuel and Tenenbaum (2011a) present a framework of change (Scheme of Change for Sport Psychology Practice: SCSP) in the athletic career, which considers the nature of change-events, athletes' perceptions of events, environmental characteristics, athletes' characteristics, and athletes' reactions to events, as potential factors affecting the change process. However, this author wishes to acknowledge the concept of 'change-event' from within this framework as a positive connotation associated with the talent transfer process, rather than how it has been described (on occasions) as negative examples throughout Samuel and Tenenbaum's (2011a & 2011b) articles. For example a judoka consistently not being able to make a weight category is used; as an example of a forced change within basketball (Kobe-Shaq Feud, 2010); or Roy Keane and the Irish football team (Keane, 2008).

Throughout their careers, athletes may face various changes in their existing intensity and quality of the athlete engagement. Samuel and Tenenbaum (2011a) have argued that change can occur in diverse and even combined levels of the athletic experience (Finn & McKenna, 2010), such as the self-identity level (from amateur to professional level); the physiological level (e.g. meeting a weight target for a boxer); technical level (for example, Jessica Ennis changing take off foot for long jump within the heptathlon event because of injury: BBC Sport 2009); the performance level (not retaining a place within the squad); the organizational level (not receiving funding for another

year); and the personal level (a death in the family: Alfermann & Stambulova, 2007; Bruner, Munroe-Chandler & Spink, 2008; Eklund & Cresswell, 2007; Hanton, Fletcher & Coughlan, 2005; Poczwadowski, Barott & Henschen, 2002). Therefore, when athletes do experience events that create change in their existing athletic status quo, they may choose to either ignore the change, or to react to it by generating their own intra- and/or interpersonal change (Samuel & Tenenbaum, 2011a). For the athlete within this study, there was a period of time from the non-normative transition of injury forcing her out of one sport and making the decision to transfer to another. This change-event of choosing to investigate another sport took place over approximately 18 months and therefore was not an event but a process of decision making and investigation. Factors that contributed to the decision making process were: 1) comparisons of what worked well within her previous sport; and 2) trying to replicate that (the environment, coach etc.) within the new sport. The conceptualization of change suggested within Samuel and Tenenbaum's (2011a) framework does not limit change to a single human experience, but rather recognizes that change may occur in the level of athletic engagement. Therefore the SCSPP model (Samuel & Tenenbaum, 2011a) focuses on (a) the stages that unfold as athletes encounter change-events and react to them, and (b) the psychotherapeutic process that could be used to facilitate an effective and successful reaction to a change event. The SCSPP describes change-events and the typical characteristics of these, as well as the subsequent response in athletes.

Accordingly, talent transfer frequently occurs informally, whereby the athlete initiates and co-ordinates the switch between sports themselves. Often the switch is prompted by an injury, a plateau in performance, a reduction in motivation, or retirement. Consequently, talent transfer can occur whereby existing high performance athletes (dependent upon how that is defined) are targeted and their athletic ability is transferred to another sport (ExpertAdvantage, 2011). Such paradigm shifts in talent identification and development increase the probability of identifying athletes that can attain senior expertise by minimizing adolescent maturational issues, reducing talent development time frames, and maximising return on the developmental investment already made in these older athletes (Gulbin & Ackland, 2009; Halson et al., 2006).

Talent transfer has been defined as an athlete that has competed at international, national or state level in both their donor (sport 1) and transfer (sport 2) sport (MacNamara & Collins, 2015). In simple terms, transfers were considered as between *sports* rather than between *events* conducted under the same governing body and international federation. However, ExpertAdvantage (2011) states that a talent transfer occurs when an athlete ceases or reduces their involvement in a sport in which they have invested significant time, hard work and resources, and concentrates their efforts in a sport that is new to them, but involves similar movement skills,

physiological requirements, and/or tactical components of their earlier sport. A common example is a switch from gymnastics to diving. Formal programmes instigated by UK Sport (2014) to support identifying talent for an impending 'Games' include(d): Girls for Gold: Army; Target Tokyo; Power2Podium: Skeleton; Girls4Gold: Canoeing; Fighting Chance: Battle4Brazil; and Paralympic Potential: Bring on Brazil (to name but a few).

In the formal talent transfer systems (identified above), potential candidates are typically selected based on performance, anthropometric and physical profiles before talent confirmation and development phases at later stages of the process (MacNamara & Collins, 2015). Although identifying a combination of factors (Dickens & Flynn, 2001; Simonton, 2001) across a range of parameters is still unclear and therefore which athletes are likely to succeed through the process and achieve (more) medals is difficult to predict. Although criteria has been subjected to multidisciplinary research, the optimal test design for a reliable prediction of talent has not yet been found (Vaeyens et al., 2008; Davids, Araujo, Vilar, Renshaw & Pinder, 2013). In either case (formal or informal), talent transfer athletes have typically experienced some degree of success (chapter 3: study one) in their first sport before making the switch to a new sport and will often also experience quite rapid success in their second sport.

Collins et al.'s (2014) study argues that formal talent transfer processes are still young in their development and usage. The 'talent transfer-promotional' countries, the United Kingdom and Australia, had 8.4% and 7.4% successfully transferred athletes on their teams. Interestingly, 6.9% of Team USA (a programme without formal talent transfer prior to the 2012 Olympics) had successfully completed a transfer in order to compete. In similar fashion, 7.6% of Canada's Olympic team (also without a formalised programme), had completed a successful talent transfer (Collins et al., 2014). This study emulates Güllich's (2011) results which found a significant negative correlation between early specialisation and senior success, compared with a significant positive correlation between late specialisation and senior success. These results support the theoretical foundations of talent transfer (delaying selection until post-maturation) and the need to investigate optimal employment of talent transfer initiatives (Collins et. al., 2014).

Thus, the purpose of this study was to examine the subjective experiences and one athlete's meaning of the talent transfer process through a life history approach. The athlete chosen was interviewed within chapter 3 (study one) and therefore an insight into her experiences was already garnered. This chapter further explored the athlete's informal, non-normative talent transfer and her change-event experiences.

## 4.2 Method

A life history was the most appropriate methodology to use to gain the data needed in the depth that was required. A life history is the story a person tells about the life he or she has lived. For Atkinson (1998: p.8) it is *“a fairly complete narrating of one’s entire experience of life as a whole, highlighting the most important aspects”*. Personal experience incorporates system of meanings and wisdom a person has acquired by living through events of his or her life. Life history interviewing specifically focuses on how people make meaning of their lives (Sokolovsky, 1996). A life history approach allowed the author to explore this athletes’ individual experiences against the timeline in which she made a decision to transition to another sport and the catalyst for doing so, as well as the significant others that supported her and the environment that was created to help her succeed.

Therefore if a life history interview is to understand a particular person, a case study of one’s life, then this method allowed the author to understand the phenomenon from the point of view of the athlete across a timeline and how she successfully transitioned from the previous sport (judo) to her targeted/new sport (cycling) and medalled internationally within both. Orum, Feagin and Sjoberg’s (1991, p.2) definition of a case study is *“as an in-depth, multifaceted investigation”*. It can be argued that understanding of the uniqueness of each person is the goal of a life history interview. An implicit purpose of the research was to use this narrative as a means of empowering other athletes, who wish to target a talent transfer of their own, and to allow the athlete to tell her story and better understand how the experience has shaped her life. Furthermore, the specific quotes from the interviews were considered potentially salient to others who have incurred a similar transition or to those who assume a supportive role with an athlete who will choose to pursue this opportunity. The objective of the interviewer was to understand the phenomenon from the point of view of the athlete.

#### 4.2.1 Participants

One athlete (female) was purposefully selected because of her success representing her country internationally within both of the sports that she competed in (judo) and transferred to (cycling). The below table highlights the age at which critical events/decisions were made throughout the life history of this athlete. The table has been included as an overview for the reader to understand the timeline with the narrative in the results section.

Age	Decision
6	Introduced to judo
12	Represented Scotland in Judo

16	Represented GB in Judo
19	Broken leg
24	Tried cycling and athletics
25	Girls 4 Gold programme
26	Trials with GB Cycling
28	CWG Delhi 2010 for cycling
32	Competed at Glasgow CWG
34	Still cycling and counting!

Table 3: The Athlete's Sporting History Timeline

#### 4.2.2. Procedure

The author approached the athlete a month prior to the interview and was asked if she was willing to take part. At this time the athlete was given a brief overview of what the study entailed in terms of time commitments. These interviews were conducted over a 4 month period because of the athlete's training and the author's work commitments. The 5 interviews lasted from 39 to 72 minutes and covered 5 areas: introduction; pre; during; post talent transfer process and a summary. A dictaphone was used to record the interviews and then they were transcribed verbatim. This interview process was concerned with identifying and understanding the factors that the athlete felt had contributed to her successfully completing a talent transfer between two different sports.

#### 4.2.3 Interview Guide

The athlete was reminded that the purpose of this study was to gain an insight into her life history of sport and more specifically her experience of the talent transfer process and what she felt were significant factors that were prevalent to her being successful. The athlete was also reminded that any information discussed would remain anonymous and that the interview could be stopped at any time. The author gathered qualitative data from the athlete using a semi-structured interview (see Appendix 2). The interview started with general questions called ("*how were you introduced to sport as a child?*") to ensure that the athlete was free to discuss any issues that she felt were important and would add towards the content of her life history. The questions were flexible and open ended and the author adopted a stance which was facilitative rather than challenging. Open questions were followed by questions such as "*so it was a positive experience?*" until saturation was deemed to have occurred on a particular issue (Glauss & Strauss, 1967). In-depth open ended interviews allows data to be gathered, with topics and issues specified in advance, in an interview guide employing Rubin and Rubin's (1995) guidelines for in-depth

interviews. That is three types of questions were used in the interview guide: main questions, probe questions, and follow up questions. This helped to ensure depth and authenticity of the athletes' responses.

Hammersley and Atkinson (1983) have argued that this approach allows interviews to be reflexive in nature, allowing the author to be an active listener and adapt to and interpret the athlete's response. Patton (2002) supports this approach where the interviewer lets the natural flow of conversation direct the discussion and explores the athletes' unique experiences in greater depth as they arose. Thus, a degree of flexibility was available within the interview structure which reflected one of the major strengths of the interview as a tool for social research and one of the principal reasons for its usage in this study (Kvale, 1996). The athlete was asked to take her time to respond to questions and to state if she could not remember something rather than guess (Hindley, 1979; Moss, 1979). As well, the athlete was sent a copy of the transcriptions after each interview to check content (Campbell, 1997) and to be given the opportunity to add or delete any data she felt did not accurately reflect her intended meaning (Miles & Huberman, 1994).

#### 4.2.4 Data Analysis

This qualitative study was aimed at answering the primary research question of interest at an individual level: What were the subjective experiences of an athlete undertaking a talent transfer process? Therefore this study used a qualitative methodology with specifically the life history being used to tell the athlete's story. Although, oral history interviews are grounded in memory and memory is a subjective instrument for recording the past, always shaped by the present moment, they can also reveal how individual values and actions shaped the past, and how the past shapes present-day values and actions (Truesdell, 1999). Sparkes (1995, p. 116) suggests that the strength of the life history approach is its focus on "*central moments, critical incidents, or fateful moments that revolve around indecision, confusions, contradictions and irony.*" Life histories focus more on the experiences of an individual and what he or she felt as he or she passed through the different stages of life. They can tell us about life's passages and they can also provide a window on social change. So, when the athlete used the phrase 'the right coach' more than once, it became apparent that this was maybe a significant influence that has stayed with her; one that she would keep referring too throughout her athletic career, which shaped the following (and perhaps similar) situations that she had been in before.

Pidgeon and Henwood (1997) have suggested that the prior experience and knowledge of the interviewer might bias the emerging data from the interviews conducted. Therefore the personal biography for this author was a career history as a junior international athlete, a coach

and as a Performance Director within high performance sport, should be duly noted. Stroobants (2005) argues that the researcher has to be personally and critically engaged in the research process to do justice to the interpretation of the research subject and thus to the revelatory character and transformative power of their life story. Indeed, since the 1980's, it has become common practice for qualitative researchers in general to 'write themselves into' their research on the grounds that personal, background information will enhance the rigour of their work by making potential biases explicit (Atkinson, 1990).

Hence, the author felt it important that she wrote herself into the life history of the athlete so she could speak freely about people (that we both knew), situations (they had both similarly experienced) and use technical jargon (used throughout both of their sporting careers) knowing that it would be understood. The ease at which she spoke was evident (as can be seen by the large bulk of texts) and clarification was not needed as much. The athlete told the story in her 'own words' knowing the author's understanding of sport enabled her to tell the situation like it was at that time, not explaining situations in a language she thought the author might need to hear if she was a layman researcher with no background in sport. The author does not believe she would have got such rich, implicit data if she had not been involved in the domain of sport through being an athlete, coach and employment within high performance sport.

The semi-structured interviews were transcribed verbatim and analysed. There were three main areas identified from the results: the athlete; the coach (and support structure); and the environment (training and competition) following the procedures recommended by Miles and Huberman (1994). However, it was felt by the author that as this study focussed on one athletes' subjective experiences of a talent transfer process, the salience of the results came from the quotations themselves and the meaningfulness of the athletes' views rather than the focus of the areas identified. Sandelowski (1994) argues that quoting is a process that requires the achievement of the proper balance between the obligations of scientific reporting and the taking artistic licenses and that they are used to illustrate ideas and illuminate experiences. Therefore, this study identified three main areas (as identified above) and focussed the results section on utilising quotes from the interviews and the athlete's meaning, to advance knowledge of the talent transfer experience.

## 4.3 Results

### 4.3.1 *The Athlete*

The athlete was introduced to her donor (MacNamara & Collins, 2015) sport at the age of 6 by her parents who felt as though they needed “*something for me to channel a high energy into*”. But it was the formative years (6-12) within the club environment that developed characteristics within the athlete and here she describes the memories/feelings associated with that time.

*“The commitment and discipline and focus; that the kind of base layer foundation of things that you see in successful athletes, or adults, or successful business people in general. Those base layer foundational things were built during those six years (6-12). They were developed after that as well but the seed had been planted from that point in a way...so the foundations were set at that point I think in hindsight. I just did not know it.”*

The next significant factor in the timeline was when the athlete was selected to represent Scotland for the first time. It is worth noting how the athlete perceived herself as a young person being “*quite mature*” at the age of 12 and being able to cope with the demands of two significant change events (Samuel & Tenenbaum, 2011a). Being abroad without her parents for the first time in addition to her first international competition for Scotland.

*“And then at 12 I got picked up by the junior Scotland squad to fight in Sweden. I was the youngest member of the squad...the age gap between me and the next girl was two years, which when you are in your teens is quite a gap. So they had to have the conversation with my parents about whether I was mature enough to be able to cope with being in a foreign country without them...I mean I was always quite mature for my age anyway.”*

Although the next major change event was representing GB in judo at 16, it was the injury (at 19) that had significant implications as to the athlete’s decision to take some time to concentrate on her studies (whilst at university) rather than rush back into her sporting career.

*“It all came about in my transition year between junior and senior. That was the year that I broke my leg, and that transition year is very difficult usually for any athlete...it is always going to be the biggest jump that you have to make in terms of your form or your performance...because I was a very good junior, I was one of the top juniors in GB and fought very well in the, you know, the European World Cups and things like that at junior level and was a good hope for making it into the senior squad. So it was not like I suddenly went from amazing to crap overnight, or went from winning or losing, it...this gap appeared because of this injury and I had one year of university to go....I felt that I needed a break. I needed to just take a step away from it, so I could concentrate on finishing*

*university strong and I felt like taking a break was the right thing to do in terms of my sport and my career as an athlete...So taking a step back just allowed me to focus on something else for a little time and I kind of always knew I would be back. I had sort of left the door open for...it could have been judo, or it might have been another sport, that was kind of always in the back of my head. Even at that point.”*

Similarly to Knowles and Lorimer’s (2014) study on an athlete’s experience undergoing a series of unusual and highly significant change events (including a change of sports, a change in academic status and a reoccurring injury), this athlete faced a number herself that helped shape the journey from judo to cycling. This decision to change was supported by the availability and guidance of significant others (Performance Lifestyle Advisor and previous gym coach), and the motivation of the athlete herself to reintegrate into the sporting world. Her selected coping strategy for this was moderated by several factors (the significance of the transition, motivation and individual characteristics) which enhanced her impetus to try another sport.

*“There had been a few people making passing comments about my physical strengths and how they ran parallel with certain power sports, so I was...there was a track cyclist who I was training with...he noticed the muscle definition that I had in my legs...Even at school there was an athletics coach who tried to recruit me when I was, you know at high school. So probably over the years a variety of people: teachers, coaches, other athletes have drip fed that I had potential capabilities elsewhere so I never felt like my career ended when I finished...I just needed a rest at that point and that I would be back. What that looked like, I was not sure at the time.”*

So even at an early age, others were trying to recruit this athlete due to potential capabilities elsewhere. However at the time when the athlete had a choice to make about whether to transfer or not, there were a number of significant others who supported this athlete with the decision making process. Therefore, the support structure was identified as a considerable factor that would help to make the transition to another sport more successful.

*“I’d only do it if the support structure was already in place. The support structure as in the governing body, the coach and the family.”*

And as a result of previously competing at an international level, the athlete could compare what she knew was needed (the ‘foundations’) to succeed within the transfer (MacNamara & Collins, 2015) sport and it was this knowledge that helped the athlete with the decision making process.

*“And then I had a choice of cycling or athletics and both were kind of left fairly open...it was difficult for me to make a judgement about what one would be better for me than the other because I did not know either world particularly well. So I actually did a months’ worth of athletics training. However I only went to athletics for a month but it was enough to put me off. There were not the foundations there that I felt would see me progress quickly enough....or support me the way I needed to be supported.”*

This athlete had absolute clarity on what she was looking for within the new sport and with this clarity comes the confidence to know whether the coach and the infrastructure of the club would ultimately help her succeed. The confidence that an athlete has developed as a result of already mastering a sport (judo) would support the notion of them being an ‘expert’ about the sort of environment (high performance) and expertise (the coach) they were looking for.

*“You have to find the right place to go in terms of coaching support you know, like a club, that is really one of the important things. There was a transition gap where I actually went to athletics for a bit between my judo and track cycling and I did not follow up on the athletics because I felt like the coaching structure was not there and they didn’t support what I wanted to do. That was a potential transition that didn’t work for me because the coaching...the club set up and the infrastructure just did not feel right.”*

With being able to reference the experience of going through a world class programme (GB Cycling) and ultimately being able to benchmark against what the preferred coaching support and strength and conditioning training (S&C) contained, the athlete was looking for similarities that transcended across the programmes but did not find this within the athletic’s club she visited.

*“Yes, there were certain things that I thought ‘not’. Dark ages in S&C...oh my God I can’t believe you (the coaches) are still doing that! There were a few like epiphany moments where I thought ‘Oh my goodness, no’. So very quickly I was kind of like no, I cannot, there is nothing here that I could use to support me, to make a big leap. The foundations just were not there (within this athletic’s club).”*

#### 4.3.2 The Coach

As a result of this considerable experience the athlete contacted Scottish Cycling and they had a ‘Try the Track’ day for women and she quickly got ‘scooped up in their system’. Consequently it was the coach and their (lack of) knowledge that was a fundamental reason as to why the athlete did not choose athletics as her transfer sport. This coaching expertise is critical for an athlete to

transfer to a new sport and reach the mastery stage because of the limited amount of time, in relation to age and how many 'good years' the athlete has left, to compete at a performance level.

*"Also, it's the time frame that is really important in sport because it tends to be dominated by age. Eventually you are going to run out of steam and not be able to compete because of genetics....I'm just saying that you need to have the right coaching structure in place because we are not talking about an infinite amount of time. The time frame, especially for older athletes, the window is much smaller. So it is really important to have the support there."*

Thus, it was the athlete's relationship with her coach in the formative years that had a positive and lasting impact on the athlete and what she was now referencing against in her new support structure of the transfer sport. The athlete recalls her time with fond memories.

*"He was like a second dad to me and it was not like...it was not a fatherly relationship in terms of empathy or loving, it was a mentoring kind of...the thing that you would want, that your ideal coach to be. That is just a little bit closer to you than...not as close as your parents but not as far away as a coach that has normal connection. Sort of that in-between ground."*

The athlete wanted to try and recreate the relationship she had with the coach from her donor sport within the cycling environment and was looking for someone who would offer positive support and an important recognition of her 'talent' as well as the belief that she could successfully transfer and do well on the international stage. Yet, after a period of time within cycling, the athlete felt like she had become stagnant and wanted more from her coach in supporting her aspirations.

*"The coaching relationship kind of came to a natural end after the Delhi Games, sorry after my GB trials. So I started working with a new coach at the end of that year and within six months it just did not feel like things were working...I was stagnant."*

As a result, the athlete chose to do something about the coaching situation feeling as though she was not getting enough out of the relationship to keep her moving forward.

*"It kind of hit crisis point this summer (2013) when nothing had really moved for me in about a year. I did my gym coach first and then after I finished racing at my peak in September I did my bike coach and hired a new one and that was a big risk for me. I thought maybe it was too late....But I think the biggest contributing factor has been me changing that coach. Because if I had not changed then my training would not have changed."*

At this point of her sporting career, the athlete chose to make two changes to her support structure: the bike coach and the gym coach. The athlete felt that time was running out (in her goal of achieving qualification standard for the 2014 Commonwealth games in Glasgow) and hence, decided to take *“destiny into my own hands”* by making what she felt, was a positive change, to help her succeed by not continuing to work with the NGB and support staff. The athlete felt that the previous coach did not have the technical expertise/knowledge tailored for her and she needed to find the right person who could help her make the transition faster and more efficiently by perhaps *“thinking outside the box”* and utilising any training strategy that may have performance gains in a shorter period of time.

*“The governing body...they want to see their athletes qualify (for CWG’s) but it feels that there is a gap sometimes in their interest in each individual athlete. The programme is too generic. Whereas both my new coaches specifically have a vested interest in me and they genuinely believe and have confidence in me that there is more to give, because they have confidence in my abilities, which then feeds me energy and confidence.”*

This example is a powerful consideration for athletes when making this transfer. It would be a significant factor for any potential athlete to consider regardless of where they are within the talent development framework/timeline (for example, 15 years old in tennis and choosing which coach would better suit their individual style of play). And this athlete felt as though it was a significant factor in helping her with selection for the 2014 Glasgow Commonwealth games:

*“So it was kind of a big shock and I thought, Jesus that was two major career defining moments that I took a risk on sacking and hiring. And it looks for both it has been the right decision and it has just come right in the nick of time. So I am sure in a couple of years I will have some wonderful insights and hindsight to the situation, but at the moment it feels to be moving in the right direction. It was a big risk but it seems to be working out.”*

Interestingly, most athletes (one would assume) would not have the luxury or even freedom of ‘breaking away’ from the NGB to make such a monumental decision to their support structure. This athlete could be labelled as brave for having a clear rationale as to why she made the decision. Also, having a clear time frame in mind (qualification for the CWG) with a *“nothing to lose”* attitude might also influence the motivation. Again, the experience that an athlete carries over from one sport to another and knowing what it takes to succeed is significant within this journey. Once again, for an athlete undertaking the talent transfer process, they do not have the luxury of time to reach the mastery level of the new sport.

*“It is not so much there when you are a junior because there is that nice ease in, when you are fighting or you are racing against people that are the same age as you and you just work your way through those age groups. But when you have come into a sport at 23, fresh, you are going straight into senior competitions where the standards are very different depending on what level of competition you are entered into.”*

This is reiterated on numerous occasions by the athlete as to the time limit someone would have to compete within a shortened period at senior level.

*“In transition from one sport to another, you will want to try and shorten that learning curve as fast as possible, because you want to be moving into a higher performance environment as fast as you can. And the quickest way to do that is to put you through that experience.”*

#### 4.3.3 The Environment

The environment was also identified as a significant factor in which to help the talent transfer process and give the athlete the opportunity to train, but more importantly compete, at a high performance level. Competing as often as possible was identified as key areas by the athlete in successfully achieving the transition.

*“In hindsight, I should have done more racing. Just to gain experience about all of the different elements that take into account cycling....I was very quick to sort of put myself in a box and not do any other racing outside of that box. You would basically go through a learning curve really quickly.”*

Retrospectively the athlete acknowledges that not undertaking as many competitive races was a shortcoming in her experiences and something she would do differently if she had her time again. And offering advice to anyone else thinking of undertaking a transfer to another sport, she articulates this as follows.

*“My advice for being successful would be to compete as often as you can and learn; learn from those lessons. Mainly because for me it is the very best way to learn. Well you can learn in training as well. Find the ways to fail, whether that is training or competition and just always try and get better. And if you can seek out the right coach from the offset then you could end up shortening the length of your journey by a massive amount.”*

#### 4.4 Discussion

The purpose of this study was to examine (through a life history approach) the subjective experiences of an athlete having successfully undertaken the talent transfer process from representing Great Britain in judo to winning silver for Scotland at a Commonwealth games in cycling. This was achieved through purposefully sampling one athlete from the 10 that were interviewed within the first study (chapter 3) of this thesis. The athlete was selected because of her success representing her country internationally within both sports. The results showed three main themes that emerged from the interviews that were significant factors in successfully completing the talent transfer process: 1) the athlete and her past experience; 2) the coach; and 3) the environment.

It was clear from the interviews that the athlete perceived this key transition as a process rather than an event (Schlossberg, 1981). This non-normative transition (changing sports) took place in addition to an academic normative transition of finishing university which reflects Wylleman and Lavallee's (2004) Developmental model. Although, the athlete took over 18 months and went through a "*bit of exploration of pros and cons*" to what her options were, as she did not have the knowledge of which sport she would be better suited to and therefore sought counsel from others (Performance Lifestyle Advisor and previous gym coach): "*I think I went through me joining the judo programme again, having a look at the track cycling stuff, and had a look at some athletic stuff as well.*" This supports Samuel and Tenenbaum's (2013) study that found when athletes perceived the new situation as significant and felt they had available resources of professional support, they were more likely to consult with others than to ignore the situation or cope with it independently. Furthermore, athletes who decide to consult with others also tended to make the decision to initiate change (Samuel & Tenenbaum, 2013) which was the case with this athlete. Moreover, it was the athletes need to maintain her athletic identity (Brewer, Van Raalte & Linder, 1993) and the desire to pursue a new athletic goal that contributed to her decision to change. This supports Samuel and Tenenbaum's (2013) study that suggests that athletes who tend to identify strongly and exclusively with the athletic role also perceive change-events in their careers as more significant, and they are more concerned about solving them. The athlete responded to this pivotal change-event with a positive coping response (i.e. higher motivation) where key factors influenced her decision as to which sport to pursue.

Important psychosocial factors influencing talent development have been found with respect to the environment, institutions, the coach and fellow participants (Anshel & Lidor, 2012; Burgess & Naughton, 2010; Gould, Dieffenbach & Moffett, 2002; Durand-Bush & Salmela, 2002) because they are likely to affect the athlete's decision making, motivation, habits, training and skill development (Burgess & Naughton, 2010; Balish, Eys & Schulte-Hostedde, 2013). As Howe,

Davidson and Sloboda (1998, p.403) states: *“early ability is not evidence of talent unless it emerges in the absence of special opportunities to learn”*. It was very clearly articulated by the athlete that the coaching expertise at the athletics’ club was lacking and therefore the opportunity to learn would have hindered her prospects of accelerating within the sport: *“my cycling career is probably one third of what my judo career was”*. Consequently, the coach-athlete relationship would be an important factor in assisting an athlete’s transition to an elite training environment (Poczwadowski, Diehl, O’Neill, Cote & Haberl, 2013).

Therefore having the ‘right coaching support’ and resource provision (Baker & Horton, 2004; Cote, Salmela, Trudel, Baria & Russell, 1995; Gilbert, Cote & Mallett, 2006; Hollings, 2002), was a significant factor in supporting a successful talent transfer as this could affect an athlete’s progression and transition along the performance continuum: *“I was getting to probably mid-point in my sporting career and I did not have ten years as a kid to hang around and wait while some people (coaches) woke up or I happened to find a club that knew...I was not going to get that quantum leap gains that you should get when you join a new sport if the match is right in terms of physical and mental capabilities.”* The athlete was very astute on what she was looking for in a coach and their capabilities. This is reflected in the strength of the quote and the numerous points made about finding a coach that was a suitable match. In Gulbin, Oldenziel, Weissensteiner & Gagne’s (2010) study, athletes were asked to report whether they encountered any significant obstacles regarding their talent development. At level 1 (basic competition), the environmental catalysts of ‘quality coaching’ and training facilities were the top ranked obstacles by athletes. This would be similar to an athlete starting on an informal talent transfer process if they did not have access to the coaching expertise and training environment, which was the case with this athlete and her exploration of which sport to transfer to. And given that a coach normally constructs a high percentage (in some cases virtually 100 percent) of an athlete’s practice time, the ability of the coach to devise an environment that fosters optimal learning becomes a significant key to athlete development (Baker & Horton, 2004).

In Gould et al.’s (2002) study, they found that the ability of a coach to understand his or her athlete provided the athlete with a level of trust and self-confidence that guided the athlete to excellence in the Olympic games. Additionally, multiple empirical studies in sport psychology have supported the link between the coach-athlete relationship and subsequent athletic performance (e.g. Durand-Bush & Salmela, 2002; Gould et al., 2002; Greenleaf, Gould & Dieffenbach, 2001; Hays, Maynard, Thomas & Bawden, 2007). This athlete *“never felt 100% connected to the coach”* that she was previously working with in cycling. As time went on she thought *“maybe it was just because I did not know him really well when I first started working with*

*him, that we would develop a good working relationship as the time passed and that really went on six months longer than it should have".* As a result, the athlete chose to find another coach to work with, especially as time was running out in qualifying for the Glasgow 2014 Commonwealth games. As articulated within the results section (*"you need to have the right coaching structure in place because we are not talking about an infinite amount of time here"*), the athlete knew the importance of the coaching expertise needed especially to reach the mastery stage because of the limited time frame. This also supports Samuel and Tenenbaum's (2011a) study which found that for individual sport's athletes, a change event may reflect the decision of athletes to leave a club that is associated with a certain coach (perhaps due to a dispute). Therefore, the coach was the first significant factor identified to support the athlete through this talent transfer process.

The environment was also considered to be a substantial factor in supporting a successful talent transfer for this athlete. It is equally important to understand how the broader environment can also transform development as it has been argued that access to training facilities and coaches play a crucial role in the development of elite sport performance (Holt & Dunn, 2004; Van Yperen, 2009; Baker & Horton, 2004). This may include the physical atmosphere in terms of training and competition environment, or the peers with which the athlete trained/raced with and against. *"In hindsight, I should have done more racing, just to gain experience about all of the different elements that take into account cycling. You would basically go through a learning curve really quickly."* Cote, Baker and Abernethy (2007) hypothesize that for early talent development the learning environment plays a more important role in transforming potential into achievement than individual attributes, as the resources offered by the training and competitive environments play an especially important role at the start of the transition. Talent development programmes should focus less on current abilities but more on providing athletes with appropriate practice conditions to promote their future potential in a given sport (Anshel & Lidor, 2012). Talented performance therefore derives from an increasingly functional fit of an individual and a performance environment. In support of this, Collins et al. (2014) interviewed 7 successfully transferred, world class level athletes and found that the athletes attributed their success to psycho-behavioural and environmental factors and therefore argue that the discrepancy between their findings and the processes that underpin formal talent transfer initiatives demonstrate the need for a stronger evidence base when taking athletes through this process. And perhaps a relevant question could be: what connections exist between properties of a specific performance context and a given talent, for specific achievement?

In support of this accelerated talent transfer approach, a retrospective analysis of Australian senior national athletes (Oldenziel et al., 2004) showed that 28% reached their elite

status within 4 years of starting the sport for the very first time and on average have participated in three sports beforehand. Furthermore, in their study of Australian skeleton athletes, Bullock et al. (2009) reported that the 18 month pathway from novice to world podium was with as little as 3 years of training. In the UK, the Sporting Giants talent identification programme concluded that within 12 months, 17 of the rowers and canoeists reached national finals (Vaeyans et al., 2008). Strong validation for the notion that competition is one of the factors needed in place to help an athlete successfully achieve a talent transfer: *“Because sometimes bullying them about the track and making them feel awkward and putting them into a position that is uncomfortable is going to be the only difference between you winning and them losing, and that is the only way to get real competition experience”*. Although most researchers support the notion that a number of factors are important to understanding talent, some (e.g. Ericsson et al., 1993; Howe et al., 1998) have argued that attention to appropriate high quality training and competition is sufficient to explain differences between performances of experts and their lesser skilled counterparts. And Gulbin et al.’s (2010) study reinforces this notion but takes it one step further by arguing that as competition levels increase, the required qualities of coaches to optimally support the development of the athletes in their care, changed from more pedagogical qualities (ability to motivate/encourage) to more technical qualities (detailed knowledge of the sport and strong insistence on perfection). Therefore, it can be argued that this demonstrates the critical importance of coaching in development at all competition levels and matching the key attributes of coaches with competition level is of paramount importance (Gulbin et al., 2010).

The environment and learning contexts are not only important for talent development, but they also make up an integral part of what a successful talent transfer looks like. In education, Plucker and Barab (2005), for example, have called for investigating giftedness transactions rather than gifted individuals. Therefore, should we not also analyse the talent transfer process in a similar vein and support the athletes in their transactions in the varying environment and learning contexts? Rather than assess them based on just anthropometric measures? Phillips et al. (2010) argue that it is unsurprising that there are such large numbers of performers that are being unsuccessful in transfer or de-selected during identification because of the ‘snapshot’ approaches, which are based on minimal (normally anthropometric) factors. NGB’s are not able to align with a theoretical model for understanding expertise and talent development (also supported in the literature by Abbott et al., 2005). This highlights that the selection of appropriate talent should involve a multi-dimensional approach involving more than just physical performance (Abbot & Collins, 2004; Nieuwenhuis et al., 2002; Reilly et al., 2000; Staerck, 2003).

The author acknowledges that the athlete is implicit to the success of the talent transfer process and a fundamental element to this are the attributes the individual themselves would bring to the process, as well as the past experience of a high performance environment, the coach, and the programme. This may include (and could be basis for future research): psychological traits that were nurtured at an early age (past experience); any previous psychological support that was given; or even adaptive behaviours that are integral to the whole experience.

It was the experiences at the athletic's club that 'steered' the athlete into making her decision (not to continue with this club/coach/environment) due to her previous experience and knowledge of training within a high performance environment and understanding what she wanted and needed to accelerate the learning process. This supports Collins et al.'s (2014) study that found the experience and knowledge athletes obtained from being within the competitive world of elite sport positively influenced the transfer process.

Successful talent development results in emergence of adaptive behaviours for use in a range of performance contexts. Adaptive behaviour is an important characteristic of talent because constraints of the environment, task requirements, and an individual's intentions and motivations alter continuously (Araujo & Davids, 2011). A major challenge in expertise research is to understand how each individual uniquely adapts their behaviours in complex environments to consistently achieve specific task outcomes (Phillips et al., 2010). This athlete successfully adapted her behaviour within two sporting environments and therefore it could be argued that it is this skill (that has evolved with past experience) that has helped her win medals internationally where others have not. Furthermore it could be argued that what makes one's behaviour more talented than another is not some possessed ability, but its contextualized functional value: its usefulness in particular performance contexts (Araujo & Davids, 2011). The development of talent involves becoming better able to engage in interactions embedded in subsequent achievement experiences, and not treating the performer as an object to be changed.

In summary, there is clear evidence within this athlete's experience that talent transfer is a process which takes place between the individual, the environment and the coach. Access to high quality coaching would appear to be an important component in maximising athlete development as well as the right environment to train and compete in to accelerate the learning experience. Sports can be proactive in matching up quality talent with quality coaches. Given the favourable 'major impact' attributed to the chance meeting with the right coach, such serendipitous events are inefficient for sports to realise a fortuitous athlete-coach interaction when these can often be planned in advance (Gulbin et al., 2010). Indeed, such an approach is the

cornerstone of talent identification programmes, whereby quality athletes are inducted into a highly specialised talent development programme under the auspices of an expert coach (Bullock et al., 2009; Vaeyens et al., 2009). Notably, this process is worthy of investigation from NGB's and Institutes of Sport who target, identify and then develop athletes within a pathway.

**Chapter 5**

**Study Three**

## 5.1 Introduction

The purpose of this study was to explore 10 purposeful athletes' experiences of the talent transfer process to understand their unique narrative within a supported NGB programme through unstructured interviews. The difference between chapter 3 (study one) and this study was two-fold: 1) all athletes within this study are either on or have been part of a formal/supported programme (rather than doing it of their own accord); and 2) the interviews were unstructured. Additionally, the timeline between interviews from study one to this study was 3 years. More UK Sport initiatives have been launched in the past 3 years (such as Tall and Talented, Target Tokyo, #DiscoverYourGold) and therefore the experiences of the athletes will have evolved during this time as well as the structure of the support programme provided by the NGB. Thus the results would provide further insight on the athlete's unique transition.

## 5.2 Method

### 5.2.1 Participants

Consistent with qualitative methodologies (Patton, 2002), there were 10 athletes (6 female and 4 male) purposively selected because they had been, or were still a part of, a formal NGB talent transfer programme within the UK. All the athletes from this study have represented their home country within one of their sports. At the time of the interviews, 6 of the athletes were still in the talent transfer process with 4 having retired from competing within their second sport. The athletes were aged between 22 and 38 years of age and had competed within their previous sport for between 8 and 22 years. See table below.

	Original Sport	Age at Transition	Transferred Sport	Age at Time of Interview
Athlete 1	Judo	32	Cycling	38
Athlete 2	Athletics	30	Cycling	37
Athlete 3	Athletics	22	Cycling	26
Athlete 4	Judo	20	Wrestling	26
Athlete 5	Athletics	25	Cycling	27
Athlete 6	Badminton	23	Bob Skeleton	25
Athlete 7	Athletics	27	Bob Skeleton	29
Athlete 8	Athletics	28	Bobsleigh	33
Athlete 9	Athletics	27	Bobsleigh	34
Athlete 10	Athletics	29	Bobsleigh	32

Table 4: Participants: Study Three

### 5.2.2 Procedure

Athletes took part in an unstructured interview which lasted between 38 and 91 mins, either by phone or face to face, with the author. Qualitative interviews are generally deemed to be semi-structured or unstructured (Holloway & Wheeler, 1996). Conversational interviews are characterized by an unstructured form and interactive nature that allows participants to exert greater control of the conversation (Gubrium & Holstein, 2002) with the freedom to explore emerging concepts, rather than being constrained by a strict interview schedule (Potter & Hepburn, 2005). This type of interview gave the athletes an opportunity to stress points they believed were most important rather than rely on the author's notion of relevancy (Dexter, 1970) and invited rich, personal story-telling. The phenomenological researcher Giorgi (1997, p.245) stated that *"questions are generally broad and open ended so that the subject has sufficient opportunity to express his or her view point extensively"*. Nesti (2004) concurred stating that the phenomenological interview is a powerful technique for obtaining rich, descriptive accounts of participants lived experiences.

Benner (1994) recommended that questions be asked in the vocabulary and language of the individual being interviewed. The author's experiences as a former Performance Director in Gymnastics, and having worked previously with in high performance sport for over 10 years, meant that there was already an understanding of the language and terminology used by the athletes and across the sporting fraternity. Indeed these experiences allowed the author to demonstrate an empathetic stance towards the athletes' experiences.

Athletes were presented with an outline of the research project, were told that all data would be treated confidentially, as well as being informed that they could withdraw from the study at any time, as per Harriss and Atkinson's (2013) paper on ethical standards in sport and exercise science. Rapport building questions were used to build trust between the interviewer and athletes (Kvale, 1996). Indeed, Connelly and Peltzer (2016) reported the importance of developing rapport with participants to encourage open and honest involvement in the interview process. Overall, this insider status to sports culture and to the transition between sports, increases the participant's openness and facilitator trust and rapport throughout the interview process (Carless & Douglas 2013a).

Athletes were asked to reflect on their experiences holistically and were encouraged to bring forward narratives that reveal multiple, intersecting layers of experience. The length of the interview was influenced by the comfort level of the athlete with the topics and the level of self-reflection they felt was necessary (Polkinghorne, 1989). Each interview began with the question:

*“Please describe how you were first introduced to sport and take me through your life journey?”*

The interview was directed by the athletes depending upon their responses (Patton 1990) to follow up questions and probes that were used by the author to elicit deeper information (Kvale, 1996). Despite reaching saturation, the author acknowledges the findings might only represent a partial insight into the participants ‘full, rich, and lived lives’, to the extent that each life is unique, no data are ever truly saturated: *“there are always new things to explore”* (Wray, Markovic & Manderson, 2007, p.1400). Each interview explored the talent transfer process and what elements the athletes felt were important to include as part of their experiences. All interviews were audio-recorded with the permission of the athlete and transcribed verbatim. The athletes were given a chance to clarify any points from the interview (McAdams, 2008) after the transcript was sent to them by email to ensure the content was captured accurately.

### *5.2.3 Data Analysis*

The unstructured interviews were transcribed verbatim and then each transcript was read through by the author and athlete several times to obtain a sense of the whole (Dale, 1996). This helped to not only become familiar with each transcript, but to notice links between what was said at different points in the interviews. However, categories of information were not predetermined before the analysis.

Inductive analysis was used to explore the specific, detailed nature of the data, in which the interviews were examined for undiscovered patterns (Patton, 2002; Thomas, 2006). Therefore commensurate with phenomenological principles, an iterative process was employed of data analysis to identify the raw themes before grouping common concepts into categories. A thematic analysis is useful where participants may have similar lived experiences and the common components across research participants is sought (Riessman, 2008; Bold, 2012). By thematically analysing data, Riessman (2008, p.1) suggests the *“emphasis is on the context of a text, “what” is said more than “how” it is said, the “told” rather than the “telling”*”. This line by line analysis highlighted specific and similar experiences and eventually a number of categories were agreed. Where minor disagreement existed relating to sub-themes the transcripts were re-examined and coding decisions discussed to reconcile analytical divergences (Allen-Collinson, 2013). Using this content analysis, the independent themes that emerged were contextualised (Smith & Sparks, 2012) to ensure they made sense as part of the broader narrative and then the richness of each theme was examined.

#### 5.2.4 Trustworthiness

The term trustworthiness describes strategies adopted by the researcher to enhance quality in their work (Sparkes & Smith, 2014). It is achieved in qualitative research when “researchers show that their data were ethically and mindfully collected, analysed, and reported” (Carlson, 2010: p.1110). Consequently, the interview transcripts were returned to the athletes before the data analysis took place so they could authenticate the content, a process entitled member checking (Lincoln & Guba, 1985). According to Harper and Cole (2012, p.1) member checking is an “important quality control process” in qualitative research. All of the athletes expressed satisfaction with the transcripts as they were presented. The author was also transparent with the athletes about her background within sport and subsequently developed a solid rapport with them. Further, specific criteria for athlete selection, data collection and data analysis procedures were adhered to (as outlined above), facilitating a replicable and robust process.

In this study, it is the athletes’ experiences of a talent transfer process that is examined. Given athletes who move between sports as a result of talent transfer are an under-researched group, this research allows for the collection of detailed, personalised narratives to be gathered to provide important understanding of their lived experiences. The results are presented below.

#### 5.3 Results and Discussion

Consistent with the main aims of this research (to explore the individual differences and shared experiences that exist between 10 athletes across different sports), the following section provides a discussion of athlete experiences of talent transfer, with verbatim quotes used to ‘give voice’ to athletes. There were significant amounts of raw data themes (103) that created the 7 general dimensions, therefore not all can be deliberated within this study. However, some of the more common themes have been picked for discussion.

There were 7 general dimensions identified:

1. Previous Sport
2. Catalyst for Change
3. Considerations Before Action
4. Testing/Selection
5. New Sport/Training
6. Competition
7. Degree of Success

### 5.3.1 General Dimension 1: Previous Sport

Raw Data Themes

Higher Order Themes

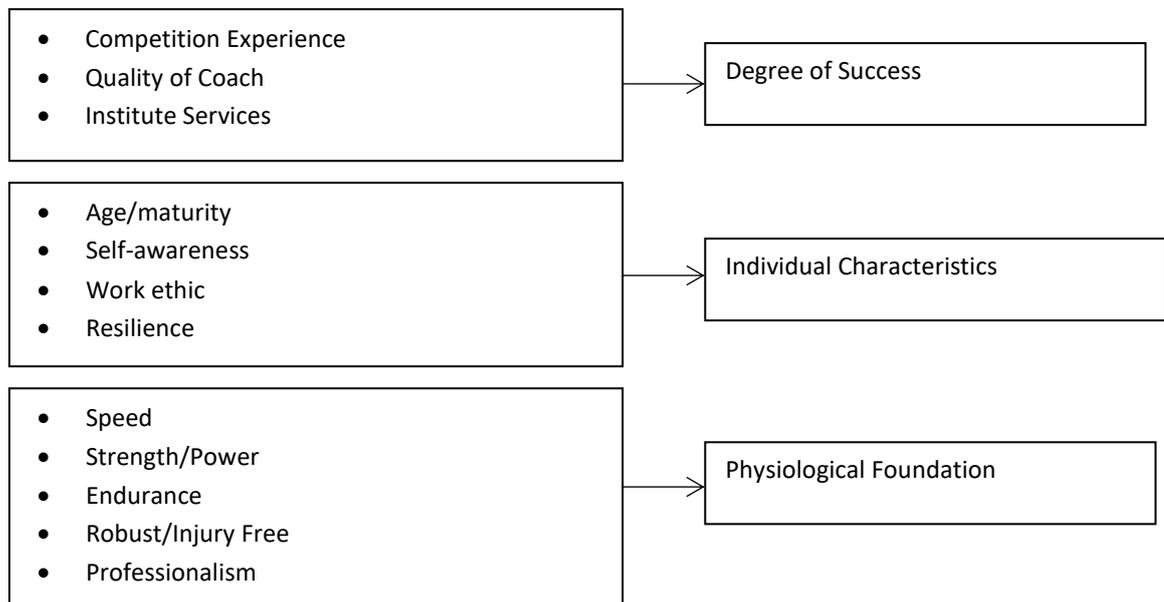


Figure 8: Previous Sport Inductive Diagram

Prior sporting experience is a prerequisite when transferring between sports, whether that is through physiological similarities, for example, gymnastics to freestyle aerial skiing, or psychologically where the transference is about similar athletic traits such as work ethic and the resilience to compete and train at the required level. Gulbin, Croser, Morley and Weissensteiner (2013) found that athletes with previous sporting histories effectively ‘switched’ pyramids and built upon skills gained in one or more sports and then applied these experiences to a new sporting environment, even after 30 years of age.

*“They said that because I knew how to train hard and knew the commitment required to succeed at that level that they (NGB) were willing to invest in me. So that put me at ease which helped...So yeah, I would say that having that previous experience, and the commitment required in terms of training, absolutely helped.” Athlete8.*

Targeting athletes who have previously been a part of a world class Olympic programme and who are medal-capable can make the transfer considerably easier as the athlete understands what is necessary to train and compete on the world stage. Halson et al. (2006) described a 26-year-old female alpine skier with 5 years of international racing experience in the super giant slalom and downhill events who displayed an exceptional ability to produce power during a cycle ergometer 30 second sprint and was subsequently identified as one of 26 women with the

potential to excel in the track cycling 500m time trial event. Her previous sporting experience was evidently an advantage within her new sport. This is similar to the results in this study. Athlete 6 reflected on his previous sporting experience (from badminton) and what he felt had helped him get through the physical testing to be part of the British Skeleton team: *“That’s the comparable that I brought across from badminton, that springiness and quick feet.”*

Similarly Bullock et al.’s (2009) study of talent identification in skeleton offered a unique opportunity to target existing high performance athletes to transfer into this sport. The ability to utilize existing high-performance athletes’ skills and competition experience gave them the capacity to exploit talent gaps at the World Cup level by possibly compressing the development time frame of these athletes. All 10 athletes chosen for this programme had achieved at least state-level representation in their previous sport and as a result, had already experienced training at high intensities and competing under intense pressure, which assisted them in coping with the new sporting environment. Athlete 10 concurred with this sentiment and reasoned: *“I definitely think being successful at your previous sport is certainly helpful in the transition of talent transfer.”* Athlete 10 competed internationally within athletics as well as bobsleigh.

Likewise Hoare and Warr (2000) targeted 15 to 19 year-olds with a background in team ball sports or athletics to develop potential female soccer players. The author decided to target athletes who had achieved success at a competitive level in a previous sport, based on the premise that athletes would have some existing attributes (a positive training ethic, as well as being competitive and athletic, amongst others) that may contribute to success in soccer. As such, they would be ‘ready-made’ athletes and attention could be focused on training them in the technical and tactical aspects of soccer (Hoare & Warr, 2000).

The three studies described above highlight the benefits of identifying athletes who already have a sporting background, especially for sporting organisations who can then justify the ‘recycling of athletes’ due to maximising return on investments and resources that have been made over a number of years in the athlete’s earlier sport. However few researchers have examined how athletes transfer previous sporting experience to facilitate performance and adapt to a novel set of circumstances (Smeeton et al., 2004). One athlete within this study argued that he did not think you had to be successful in your previous sport to undertake a talent transfer, but it does help.

*“You have to have knowledge of how to get improvements. You can have them without being good, but being good gives you more exposure on how to do that, rather than the learning that is required to understand the new sport.”* Athlete 10.

Therefore fast-tracking an athlete with a successful sporting background will support the acceleration of their success due to learned experienced (of training and competition) within the previous sport. The study of talent transfer provides an interesting insight into those factors that enable skilled athletes to apply their existing knowledge to new experiences.

Hand in hand with previous sporting experience is the age and maturity of an athlete when undertaking a talent transfer. In the sport context, it is important to note that athletes may be labelled as 'old' in their late 20s and are considered veterans in their mid-30s (Messner, 1992; Phoenix & Sparkes, 2006b; Tulle, 2008). Sir Bradley Wiggins competed at the 2017 British Rowing Indoor Championships after transferring from cycling. He was 37 and his aim was the 2020 Tokyo Olympics, when he would be 40 by the date of the competition; or to put it more crudely, two years older than Sir Steve Redgrave when he won his fifth gold medal in Sydney. Athlete 4 acknowledged her age and stated:

*"I was an older athlete going in, so my transition was quicker because although my starting point physically was further away, mentally it was closer."*

This athlete felt that her experience and age were positive factors from a psychological perspective which helped accelerate her transition. Despite some sports cultures, which positioned them 'done' as athletes, talent transfer is a solution that allows them to resist that narrative. Athlete 9 concurred:

*"...me being 30 and being a little further on in life also has its advantages because you really know yourself and what you are capable of and what you are willing to work for. There was no real tactic or strategy of me leaving it till my 30s to try another sport. It was only by luck that I heard about in the first place."*

This self-awareness as an athlete can only come with experience and it was seen by all 10 athletes within this study as a positive contribution to them transferring between sports.

Bullock et al.'s (2009) findings support aggressive talent identification and talent transfer approaches that identified successful senior athletes aged 22.2+5.1 years. In support of this accelerated talent transfer approach, an Australian Sports Commission (2012) study revealed that from 256 athletes in the national or state institute system who transferred to a new sport, 72 (28%) represented Australia in their new sport in less than 4 years. These quick developers started the sport at which they attained senior national status at an age of 17.1+4.5 years and on average had participated in three sports beforehand (Oldenziel et al., 2004). Rea & Lavallee (2015) also identified the age range of the athletes in their study as between 19 and 36 years and Collins et

al. (2014) identified that 48.4% of transfers within their study occurred between the ages of 16 and 21, which they claimed could indicate an ideal bracket from which to recruit. However, the 10 athletes interviewed for this study were all over the age of 24 when they started their talent transfer. Therefore, the less obvious but notable benefit of talent transfer highlighted by these studies is the minimised adolescent maturational issues associated with talent development, as well as the athlete's previous sporting experience (as identified above). Conversely however, a limitation of this late selection is that the number of athletes to draw from is also very small, which may limit the overall breadth of talent to source from this group.

*"Unless you have something that can already be utilised you are basically starting out at square one which would take years for you to master. So there needs to be a foundation for the athlete and coach to work on because remember, we are not starting as a teenager and I am already in my mid-twenties so I do not have time to be spending years on all the foundation training. I need to accelerate through the process if I'm to stand any chance of medalling at any point."* Athlete 5.

This athlete was extremely aware of her age and realistic about the time frame required to achieve success. One could argue that the maturity of the experienced athlete means that they are acutely aware of themselves (physically and mentally) and already have a target/competition in mind to achieve their criteria of success. This drive and autonomy to achieve success was articulated by all 10 of the athletes within this study. Their previous sporting (training and competition) and life experience was highlighted as a positive contribution to talent transfer.

*"For me, I am an older athlete and while some would argue that I have a ceiling, my life experience and the competition experience I have means I am more resilient and robust than others. I know what I need to do and can be independent making things happen and committing to my training etc."* Athlete 1.

This clarity in thought and action to achieve their definition of success was the foundation for all athletes. All 10 athletes within this study had a minimum of national sporting experience within their first sport. The athlete's age and experience helped fast track their talent transfer and therefore was captured under general dimension 1.

### 5.3.2 General Dimension 2: Catalyst for Change

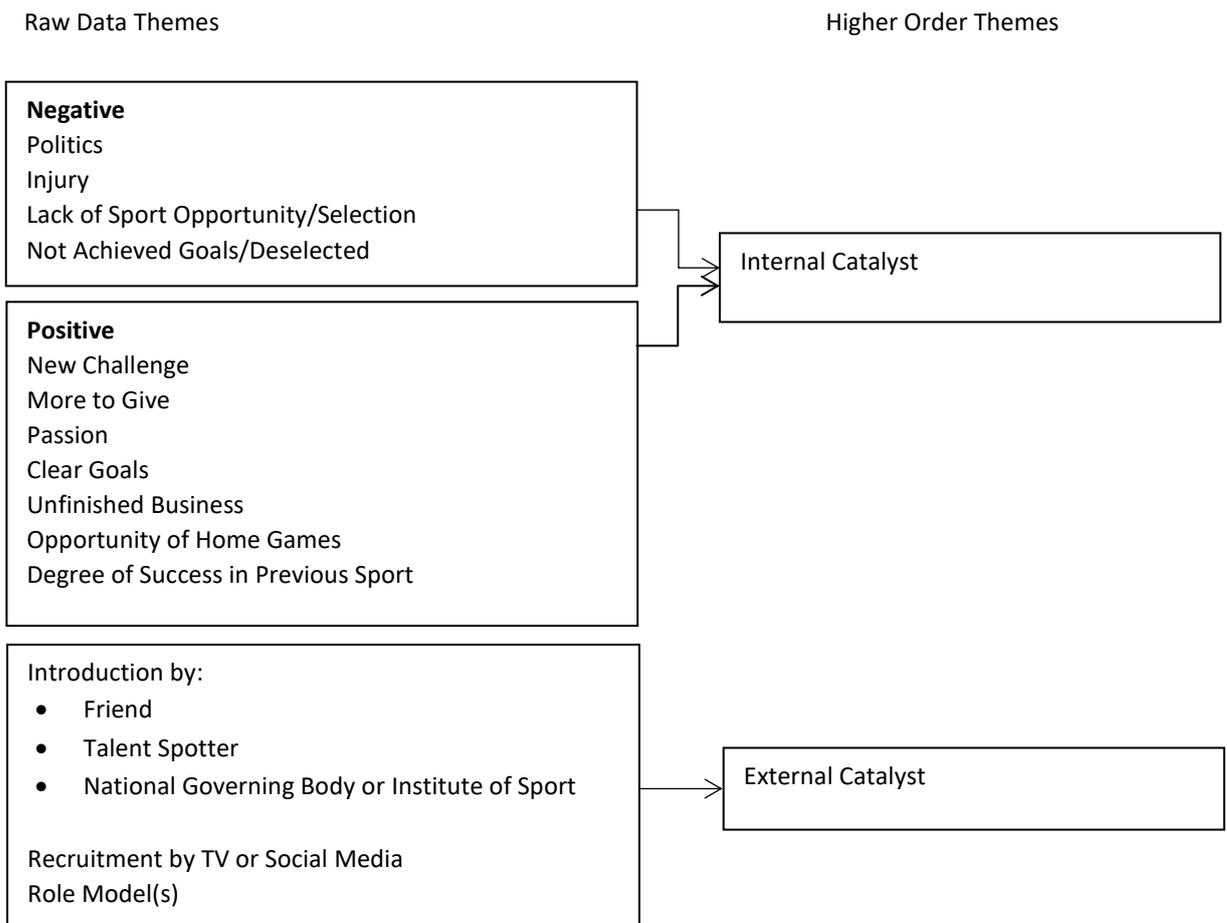


Figure 9: Catalyst for Change Inductive Diagram

General dimension 2 produced two higher order themes: 1) Internal Catalyst (Negative and Positive); and 2) External Catalyst.

A common thread throughout athletes' narratives was the belief that despite their previous career in one sport being over, they were not yet finished playing sport competitively and had not achieved their sporting goals. One of the difficulties faced by deselected athletes is the dissatisfaction with their elite sports achievements (Hatamleh, 2013). While this stage can be difficult for athletes who are unable or unwilling to accept they are no longer athletes (Butt & Molnar, 2009), moving to a different sport offers them a means through which they can maintain their athletic identity. All 10 athletes acknowledged the significant influencing factor in the decision to return to elite competition was that they felt physically and mentally capable of continuing and succeeding internationally.

Elite competition occurs within a structured environment in that athletes know when and where training and competitions take place and are often used to a predictable, set routine of practice (Petitpas, 2009). When retirement is perceived as involuntary or that is forced (for example due to injury) rather than through personal choice (Kuettel, Boyle & Schmid, 2017) it can become even harder for athletes to adjust to the transition and therefore a negative catalyst in their decision to move to another sport (amongst others). The loss experienced by athletes at the end of their elite career has been likened to the same loss people feel as they grieve the loss of a loved one (Ellis, 2015). Thus, loss can occur when someone recognizes that they will not be able to do something they thought they would be able to do, or when something happens that will likely make their future have something missing.

*“I got to the point when injury was forcing me to choose. Either leave the sport and retire, or find something else”. Athlete 9.*

Therefore talent transfer could potentially have a positive impact on an athlete with the opportunity of continuing within high performance sport. As retirement from sport can bring about dramatic changes to the social and psychological world’s athletes inhabit (Lally, 2007), this can pose significant challenges to former athletes, such as a crisis of identity, relationship conflicts and breakdown, and adapting to cultures away from the high performance socio-cultural realm (e.g. Kerr, Berman & De Souza, 2006; Barker-Ruchti & Schubring, 2016). Thus targeting a sport that would enable an athlete to continue and not be impacted by their original injury is a win-win solution.

*“For me cycling is non-impact, which is why I did it in the first place. I wanted to get my fitness up but had to make sure that I was not putting stress through my legs as they wouldn’t take it. So I had to choose the right sport where I thought I could meddle and there was nothing else that fit. Like I can’t swim. And I can’t run the distances because of my injury. So this really felt like the only option for me. So cycling it was. Injury was the main factor though.” Athlete 5.*

From a NGB perspective, full disclosure of all significant injuries would be necessary to ensure transparency through testing and selection. This would need to be investigated by the NGB/Institute of Sport under the “Testing/Selection” dimension. Athlete 7 supported this sentiment and argued that an athlete would need to be robust in terms of the susceptibility to injury.

*“You would need to declare your injury history. So you have an injury that persisted and would affect you in the sport because those are the sort of things that a new programme really doesn’t want to have to deal with. It’s like you’re already spending money because you have the injury. So there would be no return on investment for the sport.”*

This athlete is extremely aware as to why they have been brought onto the programme. She elaborated the point further:

*“They (the athlete) would only be able to go so far in the programme and it would be a waste of time and investment. The sport would not be able to justify the funding if they did not deliver some outcomes in terms of medals.... I’m part of the programme but I am an asset that they hope is going to deliver one day and they invest in that. They invested in my potential.” Athlete 7.*

Thus it is the responsibility of the athlete to be open and transparent with the NGB if they want to compete at the highest level again.

The positive internal catalyst for change included raw data themes such as ‘wanting a new challenge’ and ‘having more to give’ for their athletic goals. It was particularly important for athletes within this study in justifying their decision to continue their athletic careers to their family and friends. Athlete 2 stated:

*“So I still feel as though I have a lot more to give, a lot more to achieve. I think that as I came to the sport late that this is where I want my focus to be. I think I can do really well as I have the commitment and determination to do well and I know what I am capable of in terms of athletics. But the cycling I am determined to do more; excited to do more. And I know that my family will give me the support I need as this is really important to me.”*

Agnew, Marks, Henderson and Woods (2018) paper examined the experiences of Australian footballers who are deselected from elite competition and return to sub-elite competitions. Even though this is not synonymous with a talent transfer programme, the research supports the notion that elite players feel there is ‘still more to give’ as identified in the title of their study.

*“I still had more to give so felt as though the chapter on this book was not written yet. I just knew that deep down there was so much more in me that I could give and achieve to sport.” Athlete 1.*

Consequently, significant others who advise athletes with future aspirations (such as a coach or Performance Lifestyle Advisor) could introduce them to talent transfer programmes rather than just considering retirement options out of sport.

Within the external catalyst for change, the athletes were introduced to a talent transfer programme through either a friend, a talent spotter or through TV/social media.

*“I was watching the Sochi Olympics, in 2014 obviously, watching Lizzy (Arnold) actually win the skeleton. Now I already knew about skeleton because I went to Bath University and I was there when Amy Williams won gold in Vancouver. So I had like an interest and I was aware that we had another girl that was going to potentially be an Olympic medallist so I was paying attention to the skeleton and I just saw, after the broadcast finished, an advertisement from UK Sport and British Skeleton, saying they were doing a new search for the next Lizzy Yarnold or however they worded it.” Athlete 7.*

As the author is finalising this study, the 2018 Winter Olympics is currently on TV and Lizzy Yarnold has just won gold again in skeleton. Additionally, UK Sport is advertising their current talent ID campaign: #DiscoverYourGold 2018. Questions such as: “Do you have the drive and desire to train to be the best in the World?” and “Do you aspire to represent Great Britain at the Olympic or Paralympic Games?” piques the interest of any lay person to go onto the website and find out more information. Let’s hope that Lizzy winning a second gold medal is the catalyst for more athletes to consider transferring sports and applying for a place on the programme.

### 5.3.3 General Dimension 3: Considerations before Action

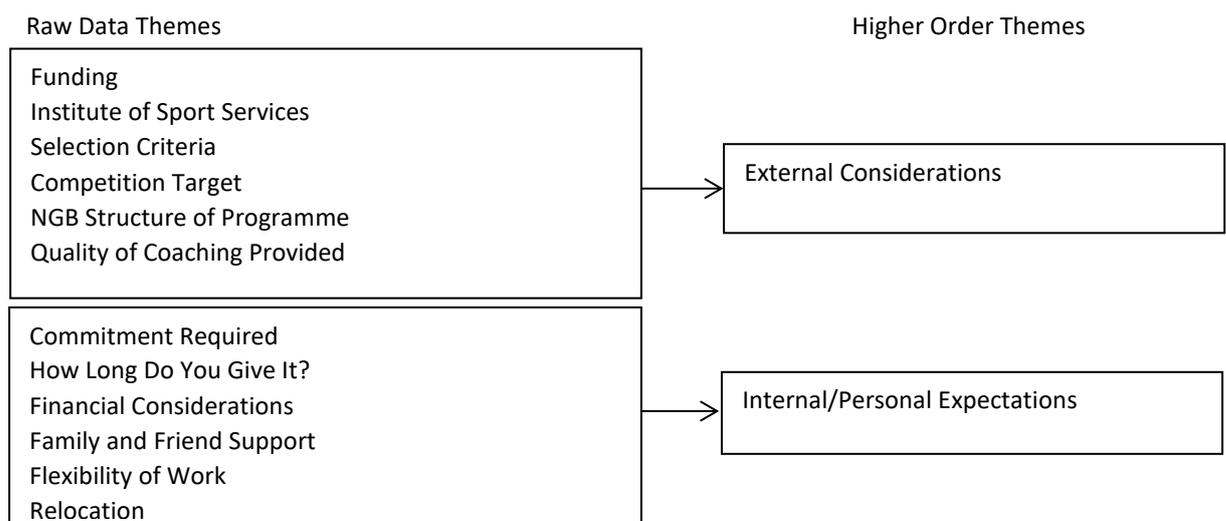


Figure 10: Considerations before Action Inductive Diagram

For the general dimension of “Considerations before Action”, the athletes were extremely aware of the areas that needed to be thought through if they were going to succeed with their talent transfer. For example, for the higher order theme of external, the raw data themes captured were: how many places there are available on the programme; the selection criteria; the quality of the coaching provided; funding; and Institute of Sport support. Athlete 9 wanted to advise other athletes on what should be considered before taking any action for selection criteria.

*“So before you change sport and start looking for another opportunity, make sure you have done your research on how many places are available and what you were up against in terms of criteria. I would imagine that to change sports for an opportunity and then plod away at it for years and years and not get anywhere, it would be difficult to imagine, what that person would go through. There has to be a games (Commonwealth or Olympics) for you to work towards between sports. I can’t imagine an athlete choosing a sport because they like the look of it. More like you actually see the opportunity and you are more targeted in your approach and how you are going to make the opportunity really materialise in terms of results..... So if there are only two spots available at the Olympics but they are picking 20 athletes, then just think about the odds on that and be aware of what you are up against.”*

Athlete 6 concurred with these suggestions on selection and places available:

*“I think what’s been an interesting part of this journey with British Skeleton is how it’s an individual sport but how few places there are available for selection at the Olympic Games. You’re effectively competing against all the people that you train with but there are potentially two places. But at the moment that means eight or nine athletes which are racing and competing against each other and all trying to prove themselves.”*

Consideration was given by these athletes in targeting a sport that meant a realistic opportunity of competing at the highest level. However, it could be supposed that NGB’s who ran a talent transfer programme, did not have the pipeline of talent to choose from and therefore by default, there may be more opportunities to succeed within that sport due to the dearth of talent by the traditional development/age group pipeline.

*“I think one of the big draw factors for me was that British Bobsleigh, you know the history and success. The back-to-back gold medals, got me very curious and I sort of researched where British Bobsleigh had come from. I felt that if I was ever going to reach athletic*

*potential and be at the highest level, that they were a programme that could definitely facilitate that.” Athlete 6.*

It has previously been suggested that talent transfer programmes are likely to be more successful in sports where the standard and international depth of competition is lower than in other sports (Baker, 2003; Hoare, 2000) and bobsleigh and skeleton have been identified to be in this position (Bullock et al., 2009). For the United Kingdom (23.1%) and Australia (26.5%), the number of talent transfer athletes in their winter Olympic squad (for Vancouver, 2010) suggests either that winter sports are more effective programmes to target (Collins et al., 2014) or that these countries were able to transfer athletes into sports where the talent pool is less competitive (MacNamara & Collins, 2015). As talent transfer initiatives expand and develop, the opportunities for continued growth could regress in terms of limited opportunities for individuals to compete at the highest level. For example, in skeleton a total quota of 50 athletes (30 for men and 20 for women) can compete at an Olympic games based on world rankings. In contrast, with the International Olympic Committee limiting the number of events a cyclist can compete in (each nation is limited to one athlete per individual event: *The Guardian*, 2012), there could be fewer opportunities to develop athletes at the highest level as they simply cannot be selected based on availability of athletes per country, and sporting organisations cannot justify the investment.

Russell (1989) stated that the primary aim of talent identification is to recognize current athletes with the greatest potential to excel in a particular sport. Within talent transfer programmes, targeting ‘experienced’ athletes to concentrate their efforts in a new sport, within a limited time period (perhaps to target an impending ‘games’) means pursuing sports that are closed rather than open. As discussed above, the prediction of success is likely to be easier in more closed sports (rather than invasion games) because the movements are less affected by the environment and fewer components are likely to impact performance (Vaeyans et al., 2008). These constraints would likely explain why sporting organisations have invested more resources in talent identification models within sports such as cycling, rowing, canoeing, weightlifting and skeleton (Abbott et al., 2002).

Countries like the UK have expanded talent transfer initiatives into more open sports for the 2016 Olympic games in Rio, for example handball, boxing and volleyball. The criteria on assessing physiological requirements needed for open sports are more challenging. Collins et al. (2014, p.1627) expressed concern for the transition some athletes might have to make when joining a highly skilled sport, stating that *“the complexity faced by a player, a team games player, is so substantial that they need experience of the training in that sport”*. The full effect of these

newly targeted transfer programmes have yet to be established for open/team sports. If a framework was created based on the length of time needed to 'upskill' an athlete in the technical requirements, there may be more opportunities of successful transfers between sports.

For the internal high order theme, the following were considerations for the athletes before action: commitment required; how long do you give it; financial considerations; family and friend support; flexibility of work; and relocation. All athletes described what could be identified as 'commitment screening' for the internal considerations before taking action.

*"And then this is probably your first commitment point because everything before this is head stuff and then anything past this, is everything else that you have to take action on and commit to."* Athlete 1.

Comparably, all athletes stated that they would have conversations with family and friends to help their decision making and talking through all the challenges/commitments they would have to face if pursuing their continuation within sport.

*"Only other thing would be to mention is making sure that your family can support you throughout all of this. It's difficult when you have to sacrifice everything as an athlete, which can mean family get-togethers and evenings out and drinking because you have training the next day or competition. And you're reliance on them financially. No point shying away from that as you cannot do it without them. So I would also say family and friends being on the journey with you. You need to sit down with them at the start and talk through what's coming. It's going to be tough."* Athlete 5.

Athletes' parents and significant others were described by most athletes as supportive to their sport career (Durand-Bush & Salmela, 2002). Debois, Ledon and Wylleman's (2015) study on the 'Lifespan Perspective on the Dual Career of Elite Male Athletes' supports athlete 5's sentiments above. They found that the time spent for training and travel was perceived to be to the detriment of being available for and present with the family. Debois et al. (2015) also found that the family turned out to be a strong support to athletes during the periods of lack of athletic achievement. Athlete 8 agreed about family support.

*"My girlfriend was an absolute rock through it all...through my first season she was paying my rent, because by the end of the year I was so short of cash. My family as well were absolutely great. My parents have always supported me doing sport. So my immediate family and my girlfriend were very supportive. Even through the hard times when I didn't feel as though I was achieving anything. They were there all the way through."*

Therefore, just two of the raw data themes have been examined above, however there are a number of considerations that the athletes from this study suggested should be discussed (with family and friends) before applying to the programme and going for testing.

### 5.3.4 General Dimension 4: Testing/Selection

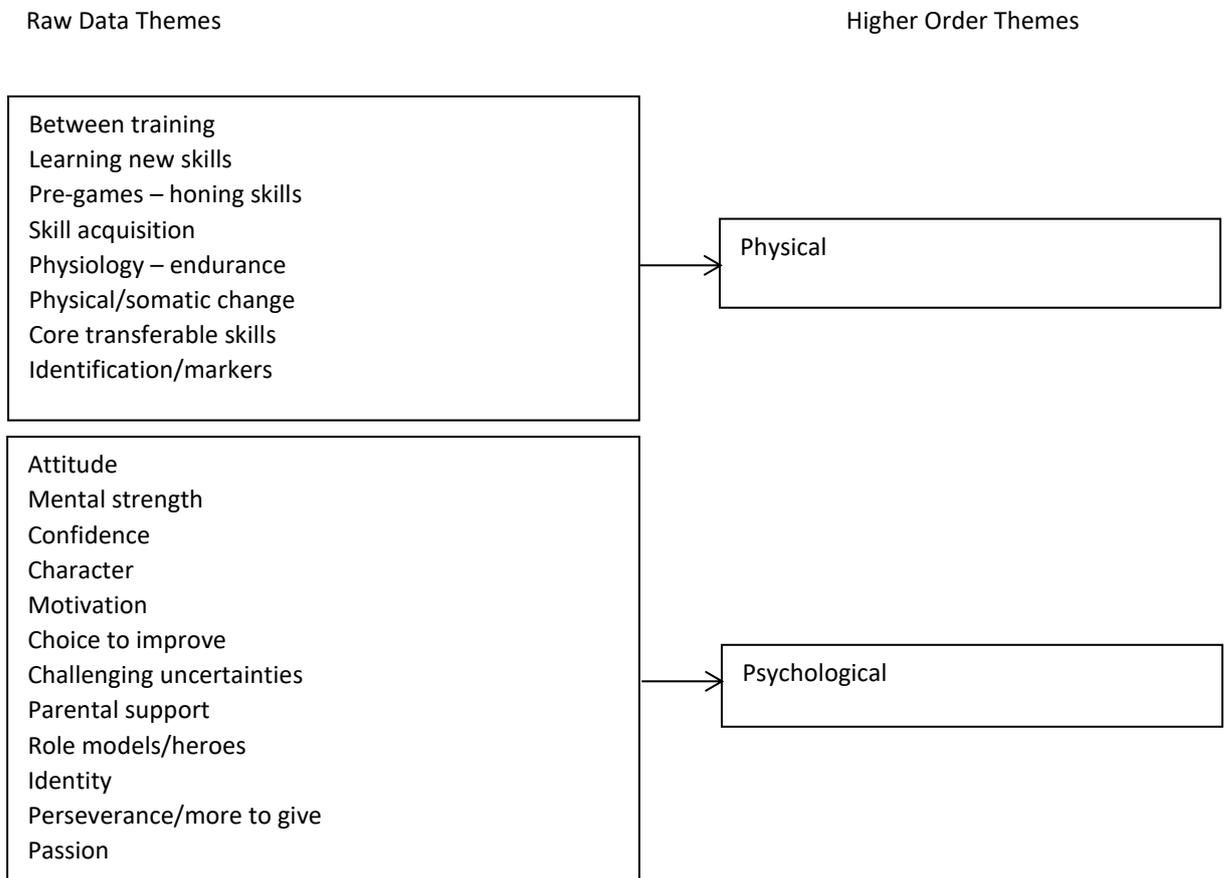


Figure 11: Testing/Selection Inductive Diagram

In the UK, there seems to be several sport science disciplines involved in talent transfer, with skill acquisition/motor control and physiology the most prevalent (UK Sport, 2013). Formal initiatives use the systematic selection of athletes based on defined protocols (MacNamara & Collins, 2015). Typically, talent transfer initiatives screen a large number of athletes based on performance (athletic background and sporting history) variables before inviting selected athletes to a testing day where they complete a number of physiological and performance tests. For example, UK Sport’s Power2Podium: Skeleton, was aimed at males and females aged 17-25 who were competing in any sport at a regional standard. Unlike UK Sport’s (2016a) Tall and Talented campaign which specifically asked for minimum height requirements, Power2Podium: Skeleton advertised questions such as ‘fast, powerful and strong?’ as well as ‘competitive and mentally

tough?’ to entice a large number of athletes to apply. Using this approach, physiological and psychological assessment methods may be utilised by sporting organisations to ‘sift through’ the scores of athletes applying. The specifics of how this is done is still unclear and does not follow consistent criteria (at least none that have been made publicly known).

*“We were never told what the other criteria was. Nobody sat us down and said that if you get this distance in this test then you would be on the programme. I am not exactly sure what the other criteria was now that you ask me. It’s a good question and that is unlike me not to have asked. That’s going to bug me now.” Athlete 1.*

Bullock et al.’s (2009) study examined 26 athletes that were recruited to a skeleton programme based on a variety of physical aptitude tests (30-m sprint), sport specific skill assessments (similar sled push and loading ability: the lower body power traits) and subjective evaluations (being a team player: how the athletes interacted with fellow competitors during the camp). During the 7-month selection process, the hopefuls were whittled down to 4 athletes to make the national team. The use of 30-m sprint time as a primary selection characteristic may have initially acted as a ‘filtering mechanism’ to select ‘already fast’ athletes, but other factors such as creative thinking, decision making, attention, self-confidence, motor skills and coach interaction (Williams & Reilly, 2000) were also considered for selection. This suggests that the selection of appropriate talent should involve a multi-dimensional approach involving more than just physical performance (Abbott & Collins, 2004; Nieuwenhuis et al., 2002; Reilly et al., 2000; Staerck, 2003). Athlete 2 had a similar experience of testing for cycling:

*“Basically we went from a big pool of athletes and it was narrowed down, each session there was maybe only a couple of weeks: four weeks between each meeting and each selection point. So if you hadn’t really learnt or picked up skills between them, in that time, then someone was going to get picked over you.”*

The challenge sporting organisations have across the globe is that they are unwilling to share the assessment methods/protocol used within talent identification initiatives in case it gives another country or federation an advantage. As a result, there is no agreed definition nor model that could help governing bodies follow a consistent framework. It is only through studies like Bullock et al. (2009) and Hoare and Warr (2000) that researchers are able to read and share information about the process.

Although, sports scientists will have an opinion on the fluctuating protocols that governing bodies decide to utilise for the testing phase(s) of a talent transfer (e.g. Collins et al., 2014). The

assessments can be critiqued because there is no universal agreement. MacNamara & Collins (2015) identified a number of limitations with the initial screening and selection process. They claimed that psychosocial variables (such as coachability, amongst others) that are more challenging to identify/assess, should be an integral part of the initial section process. Athlete 4 supports MacNamara and Collins (2015) in this assertion:

*“I would imagine if you’re looking at testing things, does somebody keep on going when they’re really struggling, because fundamentally when you get to international level sport, the physical requirements, the cardiovascular requirements, means you just have to be able to just keep on pushing when your head is telling you not to do it anymore and your body just doesn’t want to. I suppose there’s that resilience to training.”*

Van Yperen (2009) and Abbott and Collins (2004) both reasoned that talent transfer initiatives should consider whether potential transferees have the psycho-behavioural skills needed to successfully develop in the transfer environment. Abbot et al. (2005) argued that initial screening of athletes typically does not account for these (psychosocial) process markers. Nevertheless Morgan (1979) and Orlick and Partington (1988) suggest psychological variables are a significant predictor of success (among a range of other physical and technical variables) and therefore should be a mandatory requirement in talent identification. Additionally Vaeyans et al. (2008) contend that as talent transfer programmes target athletes increasing in age, the population of successful athletes becomes more homogenous with respect to their physical and physiological profiles. Perhaps this should/could also be the case for psychological profiles where sports scientists know which traits to assess when selecting athletes. For example, determination and commitment as described in Collins et al. (2014) study. British Shooting’s (2014) Target Tokyo (UK Sport, 2020) campaign, in collaboration with the English Institute of Sport, saw shooters assessed on factors including their performance, commitment, motivation, coachability, learnability, skill acquisition and concentration. Similarly, the New Zealand Institute of Sport (2013) solicited athletes who were intrinsically motivated, had a strong work ethic, were passionate about succeeding and enjoyed competition, as well as being coachable, that is, prepared to listen to advice and try new skills (amongst other physiological requirements). UK Sport and the New Zealand Institute of Sport (amongst others), may have identified a talent confirmation phase that incorporates these psychological factors from the outset, even if the assessment is just qualitative in nature. Athlete 7 summarised the traits that should be tested for within selection events as being: *“resilience, able to fail, able to learn, coachability, positive attitude, team player, confident and courageous.”* Julian Jones (Head of Strength & Conditioning for Performance Preparation at the Australian Institute of Sport, 2016) concurs:

*“Sometimes, physical abilities don’t even account for 50% of what’s needed for success. Coping with pressure, decision making abilities, learning from defeat, understanding the nuances of the sport, these are the elements that make a champion athlete.”*

Therefore the complexity of testing for these attributes with intelligent/innovative strategies and an open mind creates an interesting challenge.

MacNamara and Collins (2015) noted that another limitation with the process of screening and selection is the combination of factors that demonstrably underpin the successful transfer, with ‘success’ defined as competing at world/Olympic level within their first sport. Examples of gymnasts transferring to diving or even aerial skiing are obvious: Alisa Camplin and Lydia Lassila are two Australian gymnasts who successfully transferred to become Olympic aerial skiing gold medallists. However, as Rea and Lavalley (2015) identified, athletes do not always come from sports that are so clearly related; one of the athletes in their study was a club level rugby player who, within four years of transferring to canoeing, went to the London 2012 Olympics. From the athlete’s perspective, there was little (or no) obvious underlying rationale for a successful transfer in terms of physiological or anthropometrics, apart from height. The athlete was considered the ‘dregs’ of the ‘Tall and Talented: Rowing’ initiative and did not meet the criteria because at nearly 6’4” he was an inch too short of the 6’5” requirements (Rea & Lavalley, 2015). Instead, they (UK Sport) directed him to canoeing. Collins et al. (2014) also found that several successful transfer athletes lacked an obvious explanation from either a motor control or physiology perspective. Collins et al. (2014) suggested that they would not have been recruited/selected if the physiological standards currently in use had been applied to them. Rea and Lavalley (2015) identified that this athlete had other attributes that would have made him successful at rowing as much as canoeing, which raises the question regarding how many other athletes miss out on opportunities because of strict physical requirements?

Collins and MacNamara (2017) argued that a large number of potentially talented performers may have been excluded from talent identification and transfer programmes due to poor identification measures. For example, high profile athletes may not necessarily fail performance evaluation tests but there may have been (at the time) athletes who were marginally better but (they) could perhaps still achieve the criteria to secure selection for a talent transfer programme. Phillips et al. (2010) agreed that there are a large number of performers who are unsuccessful in transfer, or de-selected during identification, because of ‘snapshot’ approaches, on a small number of factors. MacNamara and Collins (2015) contend that identifying talent as a one-off anthropometric, physiological and performance snapshot (which most formal talent

transfer programmes assess) means that some athletes may be overlooked who, at the time of testing, may not meet the prescribed standards, or predetermined profiles, but who may have the potential to develop in the future.

Thus, MacNamara and Collins (2015) argue that an exploration of the range of factors athletes perceive to support talent transfer would seem a logical step in providing an evidence base for applied initiatives or even improving their design and efficiency. Abbott and Collins (2004) state that in order to predict future accomplishments successfully, it is necessary to identify which characteristics indicate that an individual has the potential to develop in sport and become a successful senior athlete, regardless of which sport this athlete originated from.

With the lack of a holistic perspective (incorporating physiological and psychological determinants) to identifying talent, Pinder et al. (2013) argue that caution should be taken in emphasising some sub-disciplines over others. Attempts to target isolated psychological characteristics in talent identification programmes have led to psychologists repeating the same errors as their physiology counterparts (e.g. Weissensteiner et al., 2012). This issue is only exacerbated by the adoption of mono-disciplinary approaches to sport science support work and strengthens the need for a multidisciplinary and holistic approach (Renshaw et al., 2004).

*“Never once did I have a mental or psychological test. Not once.” Athlete 9.*

### 5.3.5 General Dimension 5: New Sport/Training

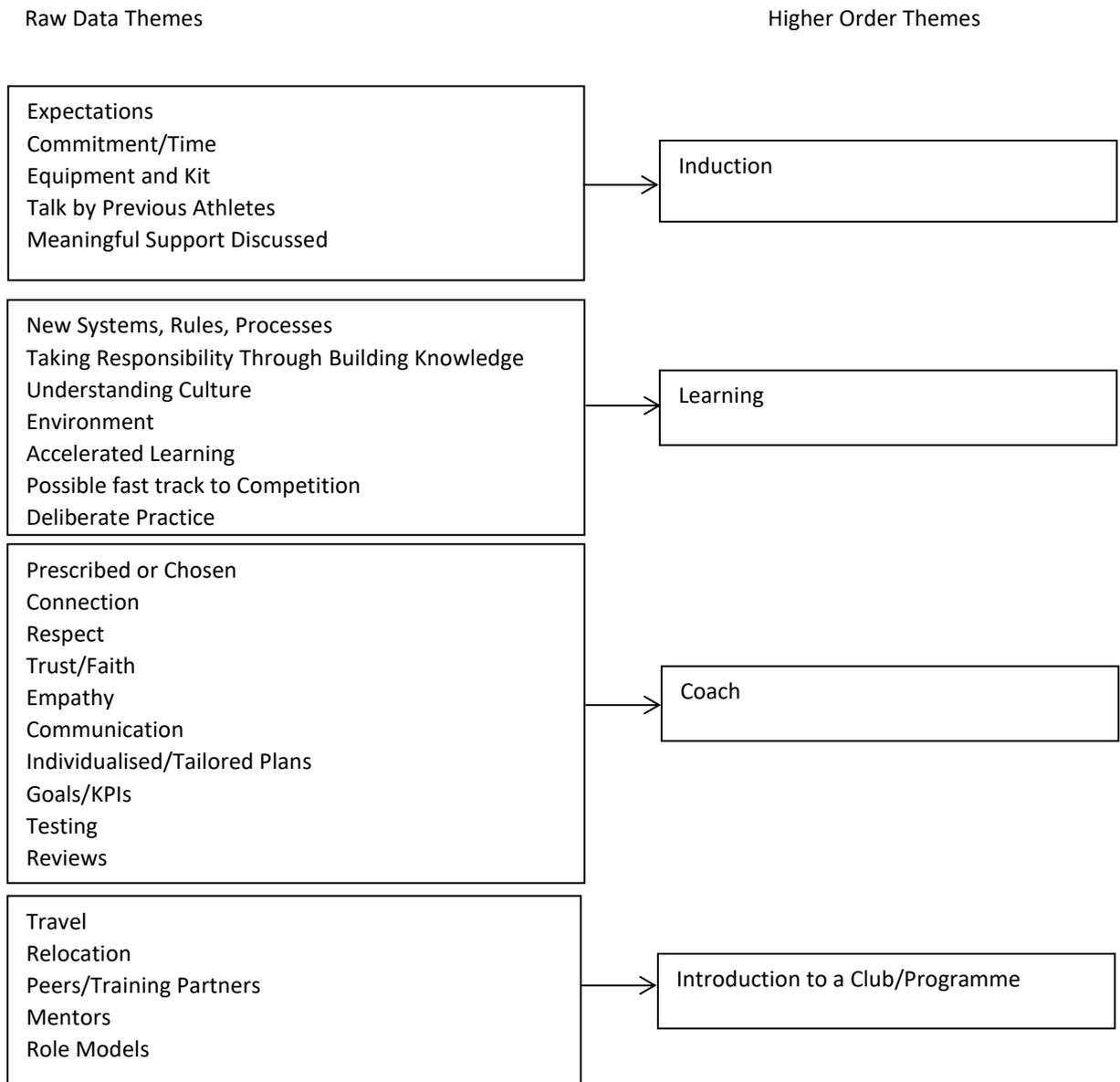


Figure 12: New Sport/Training Inductive Diagram

After the athletes had been selected for a place onto the programme, there were a number who said they received an induction from the NGB and more importantly, from the athletes who had similarly transferred from other sports over the past several years. Athlete 7 stated:

*“We had three athletes that had gone through the same process as us, come in and speak to us. We did a question and answer and they were really, really honest. They really did give us the reality check about what it was going to be like: warts and all. And we also had*

*a similar session with the coaches, so we knew what we were getting ourselves into. The governing body were very proactive in making sure that we had those sessions.”*

At the induction, the athletes described their experiences but also the expectations of the NGB and what they needed to take responsibility for. This was the time athletes needed to spend learning the new sport and mastering the technical side. Athlete 10 stated:

*“Physically I was quite good but technically I wasn’t as good and needed to spend more time on the track. So getting as much exposure to the push track to learn the technique was necessary, so I took it upon myself because no one else was going to do it for me.”*

Athletes were realistic in their ambitions to master their new sport and the frustrations with not being able to learn the technical aspects as quickly as they would like.

*“And I’d say about ongoing commitment to pursue your goal. That is going to be hard to stay focused to what you want to achieve, especially if you are not seeing the results but that you want.”* Athlete 3.

However athlete 4 shared some interesting insights about the challenges of grasping the technique within her new sport.

*“In some ways, talent transfer can be a negative thing because I was trying to take 15 years of habit, in terms of a skill set rather than a behaviour. But 15 years of skill set and change and under fatigue often you will revert back to type and we’d go back to how we used to be. And we found that in competition, often if you did video analysis, which start off as wrestlers and end up as judo players.”*

There is still significant deliberation as to the elements essential for developing expertise (e.g. Baker & Davids, 2006; Tucker & Collins, 2012). However, most agree that expert-level performance is not possible without a long-term commitment to training and practice (e.g. Baker & Young, 2014; Starkes, 2000). This suggests it would be impossible for an athlete with less accumulated practice in a particular sport to fast-track or to perform at, or above the level, of individuals who started sport-specific deliberate practice earlier and maintained maximal levels of deliberate practice. However this was not the case for athlete 8 who found himself competing in an international competition 3 weeks after joining the new sport and after only a few days training. However as new athletes joined the programme he reflected on the speed with which he was given the opportunity to compete.

*“Now that I’ve been involved in the sport, and seen wave after wave of new people come in, and I keep thinking in my head “Oh no, you’ve got to protect them. You’ve got to allow someone to practice on a push bar or on the back of a sled before they do it”. And I always forget my own story. It’s only when I get asked to recount it, I go “Oh yeah, I jumped in at the deep end. Like it couldn’t have been deeper for me”. Whereas I’m trying to protect other people and I keep thinking, “hang on. I shouldn’t be doing this because I turned out alright”. Of course, it has its greater risks and someone could be very much put off by the sport, if they fail so early. But if it’s an athlete transferring, which pretty much every Bobsleigh athlete is, there’s very few people in Britain that grow up dreaming of being a Bobsleigher. It’s not a national sport or anything, so most people are transferring from another sport. But as long as they’ve had the success or the discipline in their first sport, they shouldn’t necessarily be scared of failing. Or failing shouldn’t put people off because they’ve probably already gone through that scenario in their first chosen sport.” Athlete 8.*

The New Zealand National Athlete Transfer System (2013) specifically targets athletes with a proven track record of performance at the international level or at the highest standard nationally. The New Zealand Institute of Sport (2013) state there is now *“sufficient evidence showing that athletes can progress in a new sport in a significantly shorter timeframe. This is because athletes can transfer some of the skills (physical and mental), physiological attributes, and training ethic already required.”* Therefore, rather than undertaking a programme targeted to a specific sport (i.e. Sporting Giants, 2010, for volleyball and basketball in UK Sport), the New Zealand Institute of Sport *“recommend one or more sports that best suit an athlete’s potential and will support them to make an informed decision”* (High Performance Sport New Zealand, 2013).

Bullock et al. (2009) use the definition of deliberate programming (rather than deliberate practice as proposed by Ericsson et al., 1993) to encompass other planned factors in addition to practice such as high-quality strategic planning, access to quality coaching, equipment, the best possible (and many) competitions, and technical, financial and sport science and medicine support, to ensure athletes fulfil their potential. Using a deliberate programming model, their investigation explored the minimum exposure required for a novice selection athlete to reach an Olympic standard through intensified sport-specific training.

This supports the notion that training experiences accumulated in many sports (within skeleton it was an accumulation of at least 15 years sporting experience in an array of sports) and adaptability may be an alternative pathway to expertise (Baker, 2007; Coleman, 2007; Runco, 2007). The concept of talent transfer and the aim of achieving excellence through late

specialization and rapid development needs further exploration in relation to Bullock et al.'s (2009) definition of deliberate programming. In support of this concept is Canadian Clara Hughes, who won multiple medals in both speed skating and cycling, at the summer (1996, 2000, 2012) and winter (2002, 2006, 2010) Olympics. Evidently, the accumulation of hours training in both sports worked in Hughes' favour as she continued to train and compete in both sports over a number of years. Athlete 1 concurs and states:

*"Each sport will have certain things athletes can do that can accelerate the learning curve much quicker than other things but I am not aware of any research behind that. I only know of examples across two or three sports through my own personal experience but most of the sports don't talk to each other about the detail."*

An interesting and astute reflection by the athlete. There is limited research across sport that has analysed the time at which athletes on a talent transfer programme were given in mastering their new sport before being introduced to international competition. The assumption being that this would be a shortened time period based on the accumulated hours of practice that has built their overall athletic ability which is then transferred. Further research is needed to understand the impact of fast tracking the experience of athletes into their new competitive environment or whether this would need to be assessed on a purely individual basis.

Moreover, there is little research stating the specific detail of support services (i.e. physiotherapy, strength and conditioning, nutrition, psychology, performance lifestyle) given to the athletes to help them succeed with the transfer to another sport. These would include world class coaching and sports science and medicine support as part of a carefully planned training and competition programme, with the major goal of achieving selection and success for upcoming competitions. Rea and Lavalley (2015) identified that support services was one of three factors that athletes perceived as important for a successful transfer, including services such as (world class) coaching and sports medicine as well as informal support mechanisms such as family, friends and partners.

Collins et al. (2014) also suggested that educated coaches who have experience and understanding of the challenges faced by talent transfer athletes are an important element of the process. In the fourth chapter (study 2) of this thesis, of one athletes' subjective experiences of a talent transfer process, access to high quality coaching appeared to be an integral component in maximising athlete development as well as the right environment to train and compete in, to accelerate learning. Athlete 3 from this study agreed:

*“So definitely having the right coaching support. Without the right coach you will not going to be able to get to the level that is required.... I do think you need that support when you’re just starting out. But it’s not as though there are a number of coaches who have supported athletes through talent transfer programmes. So you are not going to have the luxury of picking and choosing coaches. Mainly because there are not enough in the first place and also because there is a coach that comes with the village velodrome you go to, so there is no choice there either. But the coach and the knowledge they have is going to be based on experience so it really is potluck at the end of the day.”*

Athletes who are part of a formal talent transfer programme maybe expected to relocate as part of the new sport’s expectations, therefore being able to access a coach to ensure maximum learning is achieved may have to be managed as part of the programme. In support of this, Bullock et al. (2009) acknowledged that a supportive and aggressive, but time-limited, learning environment was needed and that this would be led primarily by a world class coach with previous Olympic medal success who knew what it would take for a high performance programme to succeed. The athletes would also have access to a team of sport scientists and practitioners on a daily basis to ensure an optimal daily training environment. These two combined factors (environment and coach) were needed to minimise mistakes and condense the time associated with the talent transfer process (Bullock et al., 2009).

### 5.3.6 General Dimension 6: Competition

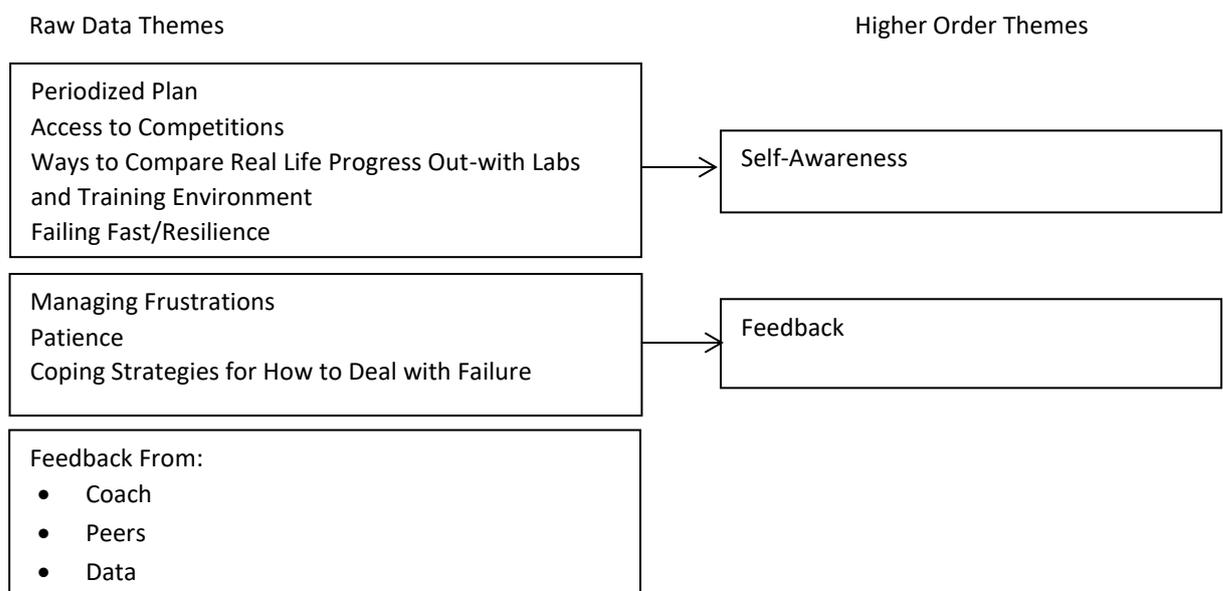


Figure 13: Competition Inductive Diagram

Competition as a theme was discussed in the previous general dimension (General Dimension 5: New Sport/Training) due to it being captured as a raw data theme under ‘possible

fast-track to competition'. Gulbin et al. (2013) recognized that successful late bloomers were characterised by their substantial competitive experience and success in other sports which enabled them to transfer to a new sport at an older age. This was not just a unique experience by athlete 8 within bobsleigh.

*"The biggest challenge is that you don't know anything about bobsleigh. My first ever time on ice was at a World Cup, so I had four training runs and one competition. So it really was like a very steep learning curve. So yeah basically you know nothing about it, not the rules or anything. To try and pick up other technical aspects or the sensation of it is quite difficult. That was probably the hardest part. So I competed there and then three weeks after that I competed in the World Championships with the team and came 19<sup>th</sup> so I was quite good but not great. And a year later I was picked for the Winter Olympics in both two-man and four-man. So I had improved quite a lot in that year."* Athlete 10.

Out of the 10 athletes interviewed for this study, 2 of the athletes share similar experiences of being fast-tracked. Bullock et al.'s (2009) study on skeleton also exposed athletes to competition within two weeks of starting the sport with 4 athletes competing against senior elite athletes (World Cup) within one sliding season. Bullock et al. (2009) emphasized competition as an essential element for athlete development to enhance the ability to perform at the highest level. Within two competitive seasons of deliberate practice, their athletes achieved top six rankings in World Cups and one individual competed at an Olympic Games, which suggests that fast-tracking and surpassing more experienced competitors is achievable with late specialization (Bullock et al., 2009).

It was acknowledged by athlete 10 that there was a significant amount of frustration as a result of 'failing' and managing frustrations/expectations around this (as captured within the raw data themes above).

*"...It was frustrating because no one would give me answers as to why I was failing. I knew I was thrown in at the deep end and I just had to take my time to adapt to that. I knew if I had a long time, like a season of winter training, training period away from competition, that I would be able to deal with these weaknesses. So I just kind of waited for that really and then once I attacked that training block, I came out the other end a much better bobsleigh."*

The NGB and coach supporting the programme need to be aware of the feelings experienced by athletes that are fast tracked and how this can be managed appropriately so they

do not exit from the sport too early. There may be a fine line between facing the challenge of international competition early on and succeeding mentally, then feeling as though this is too big a mountain to climb and/or win.

Others have similarly emphasized the importance of competition (e.g. Baker, Côté & Abernethy, 2003) in helping cement the learning from within a training environment. In particular Starkes (2007) noted that a component of expertise is the athlete's ability to reliably perform the skill in a competitive setting, rather than excelling as a 'practice player'.

*"You need to compete to gain experience. So the quicker you can start competing, the more experience you will get. So definitely something to talk about with your coach quite quickly and to make sure you are getting entry into the right competitions."* Athlete 2.

For the majority of athletes within this study, there was a longer period of time before they were given the opportunity to compete on the international stage. Raw data themes captured under self-awareness included: managing frustrations; patience; and coping strategies for how to deal with failure. Athlete 5 argued that harder competition experience earlier within the talent transfer process would have helped:

*"...But that is because of my lack of patience. So by doing more (competitions) I would have learned quicker and got more race experience. I probably did eight or nine competitions that summer. But you are limited as to what is available to enter unless you have proven rankings. But I still would have liked to have been given the opportunity of understanding where I would have been placed against the best, even if it had meant coming last. I think that would have been really good for me."*

A number of factors should be considered earlier when moving to another sport to manage expectations on access to competitions. Gulbin et al. (2013) found that most athletes had experienced a descending trajectory as they returned at least once to a lower level of competition before ascending once more. However it should be noted that a descent into 'lower' levels of senior competition may still provide sufficient and appropriate developmental challenge for the individual. For example, there is limited availability to winter push tracks for bobsleigh and skeleton within the UK therefore it would be necessary to access these facilities abroad to experience the pressure of a competitive environment and learn from it. Additionally, there is not the pipeline of talent within some winter sports in comparison to a sport like cycling where proven rankings would be an element of access to competition, as described by athlete 5 above. Arguably, some sports could offer developmental opportunities that would differ from those less popular

sports and that might suffer from lower numbers of participants, coaches and support (Gulbin et al., 2013). Therefore in conversation with the coach, a considered periodized plan needs to be agreed upon.

*“It helps because I sat down with my coach and went through a list of competitions I was going to target to give me the experience I needed to put me under pressure. This was about getting a competition experience really early on. Because you only learn by failing. And boy did I fail fast.”* Athlete 5.

Every athlete within this study talked about failing fast within the new sport and what this feels like and the expectations to be managed with new athletes coming into a talent transfer programme.

*“You have to fail and be really comfortable with failing. And that’s difficult if you have always been successful, which some of the other athletes had. They would end up getting really frustrated because they thought it would be easy to pick up. But it wasn’t. And I know that now because I spent two years in the sport. But at the time I didn’t.”* Athlete 7.

Athlete 9 supported this and took it one step further:

*“I don’t think that’s something you can just pick it up. It builds and builds and builds with more and more failures, which is the difficult part. People naturally try and avoid failure because they don’t like how it feels. You have got to go through those moments to understand yourself a little better each time. But it’s definitely something that you have to come to a sport with. The knowledge that it might not be the sport for you or with the knowledge that is going to be miserable in some places.”*

Therefore coping strategies for how to deal with failure was mentioned by a number of athletes, for example, patience and how to embrace this. Athlete 1 referenced the 10,000 hours theory and athletes forgetting how long it took them to master their first sport.

*“I think you’re constantly learning. There’s so much to learn and I think with being a crossover athlete as well, is frustrating because you expect to see results right away. And when you first start in the sport you should just expect that you’re going to do nothing and achieve nothing and then you won’t get frustrated with your lack of progress. Or at least within the time you think it is going to happen. Patience is definitely a virtue.”* Athlete 3.

For any NGB supporting athletes through a talent transfer process, the psychological skills to be developed in parallel with the physical skills in a shorter period of time, needs to be

supported. Not one athlete within this study said they were supported by a sport psychologist who helped them understand the new environment. Considerations for future research are the psychological skills that an athlete requires for this unique experience and how this can be 'fast-tracked' in the same way that physical skills are.

### 5.3.7 General Dimension 7: Degree of Success

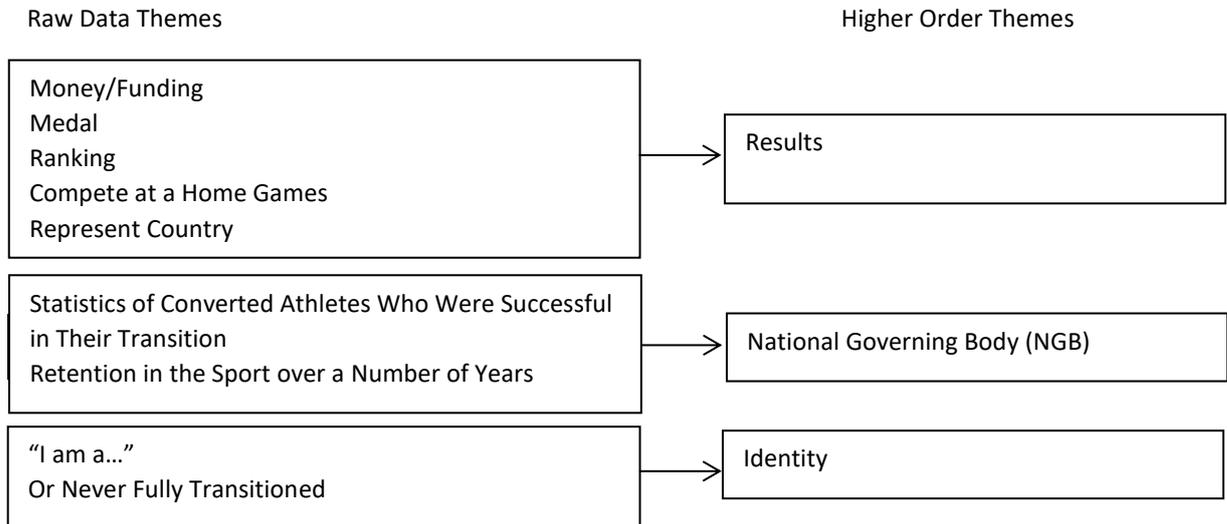


Figure 14: Degree of Success Inductive Diagram

There were three higher order themes captured under general dimension 7 of Degree of Success: 1) results; 2) identity; and 3) National Governing Body (NGB).

If an athlete is lucky enough to achieve their goals within their first sport, then their narratives will be very different to athletes who may no longer feel as though they have anything 'more to give'. A number of athletes for this study had not finished within their second sport and therefore the contributions to this section are limited. They did, however, have suggestions on what would be important to a future self. For example, one athlete said representing their country would be a fantastic achievement, whereas another said they would want nothing less than a medal at a major games (i.e. Olympic or commonwealth). Athlete 7 stated:

*“The sport would not be able to justify the funding if they did not deliver some outcomes in terms of medals.”*

Athlete 7 was quite realistic in terms of the opportunity she had been given and the expectations placed on her (and others) being part of and succeeding within the programme.

Athlete 8 shared his thoughts on success and what that meant in terms of funding for future athletes,

*“My first full season, we ended up achieving the target race of the World Championships. We ended up achieving top 10, which got the sport recognised, so from that perspective it was monumentally successful. I wouldn’t have been able to carry on in the sport otherwise. I was heavily in debt, because it wasn’t funded and I had to pay for my own flights and so on. So I had invested quite a bit already in it. And then thankfully, after a few months we found out that we were going to receive funding, which completely changed the landscape for me. It kept me in the sport and attracted new athletes and the sport is as big as it is now, in Britain, as a result of our success at the World Championships.”*

Each athlete had personal thoughts on what the definition of success meant for them. The same can be said of identity and whether athletes felt their identity lay with their first or second sport, no matter how long the time frame.

*“So I really wasn’t a wrestler at all. I was a judo player wearing a singlet and hoping for the best on a wrestling mat. And I think there was certainly an element of whether I ever was technique wise. Whether I ever really became a wrestler? I’m not sure that transition ever really happened. I think I was probably always a judo player pretending to be a wrestler.....I think you probably need a good four years of being on a proper programme, with full-time coaching, to really be able to change. I think the physical attributes you can gain very quickly but to have the movement patterns and have the skill set, you’re probably looking at a good four years of really being comfortable and competent with that. Like I said, I’m not a hugely skilful person so maybe if you speak to someone who was very quick at picking up techniques in their original sport, maybe they’d be much quicker to transfer it. For me, I think that wasn’t a hugely easy thing which is why I think I felt I was somebody pretending to be a wrestler. Maybe the others feel differently. I think equally probably, the younger you get somebody, the easier it may be as well. I was switching over at the age of 25/26, which is quite old, I think, to be changing sport.” Athlete 4.*

Athletic identity represents an element of self-concept among sportspeople and refers to the degree to which individuals identify with their athletic role and includes perceived values and social networks (Brewer, Van Raalte & Petitpas, 1993). Longitudinal research with elite athletes suggests that athletic identity generally declines towards retirement and is lower among former athletes who experienced a positive adjustment to career termination (Martin, Fogarty & Albion, 2014). Where careers were terminated involuntary, those displaying high levels of athletic identity

were more likely to experience negative reactions including dissatisfaction, depression, and loneliness (Alfermann, Stambulova & Zemaityte, 2004; Lally, 2007). This could reflect athlete 4's experiences as she never truly felt synonymous with the sport of Wrestling, even though she attend a Commonwealth Games and represented her country, because she was plagued with injuries.

There were varying timelines for each athlete and when they felt their identity reflected their new sport.

*"This is the first season where I've sort of felt like a Skeleton athlete, if that makes sense. In the first few seasons, I felt like I was still a badminton player having a go at something else. Whereas slowly over the season my understanding of the sport and the differences in training has grown. And that is three seasons in."* Athlete 6.

Some athletes felt as though they would always have their identity stem from their first sport as it had played such a significant part of their childhood and their development.

*"It's hard to describe but I will always consider myself as someone from athletics so perhaps that's where it stemmed from. Feeling as though I was brought in for a reason rather than being really part of the team....I'd say that I was a sprinter, but I often caveat that with 'I was also selected for the Winter Olympics in Bobsleigh'. So my identity is still very much as a sprinter because people know about my sprinting and know my name. They don't really know about Bobsleigh. But in terms of what I miss the most, it's bobsleigh. Because I very much feel like athletics has run its course and it kind of spent more than 10 years doing it. I sort of became a bit jaded towards the end and wasn't really enjoying it. Whereas Bobsleigh was like a fresh challenge and I probably reached my limit within Athletics. Whereas I didn't reach my limit in Bobsleigh so the things I miss the most, what the professional sport I miss the most, is doing Bobsleigh because I feel like there's unfinished business there."* Athlete 10.

Some interesting reflections by athlete 10 and where he felt his identity lay after retiring from both sports. But also where he felt he had 'unfinished business' due to injury.

## **Chapter 6**

### **General Discussion, Theoretical Advancements, Implications, Limitations, Future Research Directions and Conclusion**

## 6.1 Introduction

This thesis focussed on examining the talent transfer experiences as lived by the athletes whom went through the transition. The purpose was to examine why athletes chose to continue in their pursuit of international competition by switching sports as well as understanding how they managed the process and their own unique experiences. This chapter includes a general discussion, theoretical advancements, implications, limitations, future research directions and a conclusion. However an overview to the three studies will be presented first.

### 6.1.1 Study One (Chapter 3)

The purpose of the first study was to examine the athletes' experiences through the talent transfer process. The description given at the start of the literature review in chapter 2 (ExpertAdvantage, 2011) defining talent transfer gives a reference point for the results gathered, although there is no agreed definition across the sport's literature. The results highlighted the athletes' responses regarding whether there are (physical or psychological) similarities between two sports they have transitioned between. ExpertAdvantage (2011) argue that similarity between sports is a key component of talent transfer as the focus is on capitalising previously learnt skills to fast track development in the new environment. As can be discerned from Table 1, the range of sporting experiences are as varied as rugby to canoeing as well as judo to cycling. However there are physical components that can be transferred between sports. For example:

*"(In ski-racing) I had this huge upper leg and then if you go on a bike, you have this long lever, it is already extremely strong....So for me, swapping over from ski racing to cycling is a perfect fit". Athlete 7.*

Further research could be conducted within this area to examine Ericsson et al.'s (1993) theory as to whether an athlete has to undertake 10 years of deliberate practice within the same sport to reach the mastery stage before they begin the talent transfer process, or whether they could accumulate their years/hours across sports and therefore fast track the process. The results from all three studies within this thesis show support for Vaeyens et al.'s (2009) argument that rapid expert development can take less than 5 years as 50% of the athletes interviewed (within Vaeyens et al.'s 2009 study) were competing at an international level within this time frame. In addition, research by Bullock et al. (2009) supports the results from this thesis that an athlete is already over the age of 18 when they commence a talent transfer process. 9 out of the 10 athletes interviewed in study one (chapter 3) were over the age of 18.

As per the results within the similarities section, the psychological aspect was also identified as important. There is significant literature highlighting the importance that psychological factors (e.g. confidence) play in elite performance (Durand-Bush & Salmela, 2002; Gould & Maynard, 2009), as well as similar characteristics in talent identification (Abbott, Collins, Sowerby & Martindale, 2007; MacNamara et al., 2010a, 2010b; Van Yperen, 2009). MacNamara et al. (2010b) stated that certain psychological characteristics of developing excellence are more appropriate/effective at different stages of the development pathway and/or in different performance domains or context. The results from study one correlated with MacNamara et al.'s (2010b) study and identified confidence, motivation and passion (to name but a few) as some of the psychological characteristics required to navigate the transition of talent transfer.

Additionally, all athletes from this study felt as though they had more to give and this was despite their age at the time of the talent transfer process. The results also highlighted that being an athlete was part of their identity and not something they were willing to give up in the near future. According to Wylleman and Lavallee (2004) athletes are in the perfection/mastery stage of their athletic development which could be argued as the most challenging and demanding in terms of their sport's career therefore being integral to their identity and the athlete's desire to continue within another sport.

The second section of the results identified whether the athletes have made their transfer through a formal support programme (i.e., with UK Sport/NGB or an Institute of Sport) or informally of their own accord. Within the literature review, ExpertAdvantage (2011) argued that talent transfer frequently occurs informally, whereby the athletes initiates and co-ordinates the switch between sports themselves. Out of the 10 interviewed, 7 athletes had undertaken an informal talent transfer process. In addition ExpertAdvantage (2011) argued that the switch is often prompted by an injury, a plateau in performance, a reduction in motivation or retirement. However the results from this study illustrate that the primary three reasons as to why an athlete chose to transition to another sport was because they were: a) not achieving good enough results to compete at an international level within their previous sport; b) had a career ending injury that forced them to reconsider their options; and/or c) that their sporting identity was a challenge to let go of and that for most athletes, they still had 'more to give' or 'aspired for something more'.

In contrast, talent transfer can also occur through formalised/supported talent identification and development programmes that are co-ordinated by sporting organisations. In these structured programmes, existing high performance athletes are targeted and their athletic ability is transferred to another sport. However, from the 3 athletes interviewed that were

selected for a supported programme, one was from a regional rugby background and the other two from a regional athletics background. None of the 3 athletes were existing 'high performance' athletes, depending on how high performance is defined. The definition provided by ExpertAdvantage (2011) to explain the talent transfer process may need to be revised if the results of future studies show similar trends in athletes' backgrounds and prior competitive achievements.

Finally, the degree of success (process) which the athlete felt they had achieved within their previous sport or what they feel they must achieve within their new sport to 'make it'. There is some overlap here with the similar psychological attributes between the sports and the process involved within the 'degree of success' section, as it emphasized the importance the athletes placed upon themselves, as well as their ability to overcome adversity in a variety of endeavours (not necessarily about winning). Athlete 8 identified having to "*fight against the more physically mature kids*" to achieve a degree of success but that this notion of "*not winning at an early age*" was something to aspire to and overcome and helped him with his long term goals.

Some athletes felt their degree of success (outcome) was hindered by a career ending injury that ensured they would never progress within their previous sport. As a result it was the catalyst for a number of athletes to consider the transition into another sport. For other athletes, the acknowledgement that they were not going to compete at the highest level because they were not good enough was evidently a hard lesson and one that was a result of either not being selected and/or not achieving times/scores etc.

The two athletes who were not selected from NGB testing had very unique experiences of a talent transfer programme and there were strong feelings associated with how they had been treated as well as the rationale/justification for their lack of selection. MacNamara and Collins (2011) argues that a large number of potentially talented performers may have been excluded from talent identification and transfer programmes due to performance evaluation tests with set criteria, even though they could perhaps still achieve a top ten placing on the World stage. From the athletes' reflections, if a NGB was to articulate the criteria as to what they may (or may not) be selected upon, then responses such as the following may be minimised: "*...all they did was send out an automatic email to say that we did not get on...did not give us reasons or anything*" (athlete 5: study one).

### 6.1.2 Study Two (Chapter 4)

The purpose of the second study (chapter 4) was to examine the subjective experiences and one athlete's meaning of the talent transfer process through a life history approach. The athlete chosen was interviewed within chapter 3 (study one) and therefore an insight into her experiences was already garnered. This chapter further explored the athlete's informal, non-normative talent transfer and her change-event experiences. The purpose of this life history was to address a gap in the literature regarding the subjective experiences of an athlete undertaking the talent transfer transition by following one female athlete whom competed internationally within judo and then cycling. Life histories are appropriate when the goal is to understand the internal experience of a particular phenomenon "*through the eyes of those who have direct, immediate experience with it*" (Hays & Wood, 2011, p.291). In this case, description of the athlete's lived experience might help invested coaches, NGBs and sporting organisations consider highly athletic (talented) individuals complexly rather than the atypical talent development models which are held within the sporting fraternity.

As our high performance sporting system evolves in the UK (through initiatives driven by UK Sport such as Target Tokyo), understanding the best service/support options to prepare athletes for the future is increasingly critical. Based on the interviews, it is apparent that this athlete made a number of adaptations to ensure that she had thought about, sought advice upon, and investigated sports in which to transfer to, therefore ensuring that she was on the 'correct' and 'quickest' path to success, given the limited time she had to specialise and compete within, to master the sport (cycling) and compete at a 'games' (which was her ambition). Even though the athlete experienced competing internationally in one sport, how she went about adapting to the challenges she faced was impressive and certainly worth sharing with athletes who are thinking about undertaking the talent transfer process themselves. The athlete shifted her behaviour and perspective to a mode that enabled her to continue to reach her sporting objectives but within a different sport. One might consider her a role model and her experience a worthwhile case study to share.

Access to high quality coaching is an important component in maximising athlete development through a talent transfer. Gulbin et al. (2010) argued that sports must be proactive in matching up quality talent with quality coaches. Given the likely success an athlete would have in working with the 'right coach', sporting organisations should plan in advance this contact time to ensure a more favourable outcome. Indeed, such an approach is the cornerstone of talent identification programmes, whereby quality athletes are inducted into a highly specialised talent

development programme under the auspices of an expert coach (Bullock et al., 2009; Vaeyans et al., 2009).

The environment was identified as another significant factor in supporting a successful talent transfer. As Anshel and Lidor (2012) argue, talent development programmes should focus less on current abilities but more on providing athletes with appropriate practice conditions to promote their future potential in a given sport. Bullock et al. (2009) take the examples one step further by arguing that high quality strategic planning, access to superior coaching, equipment, the best possible competitions, technical, financial and sport science and medicine support, are needed to ensure athletes fulfil their potential. The results from study two identified that the combination of the athlete, the coach and the environment were fundamental to the process of this athlete undertaking and succeeding within the talent transfer process.

And finally, the athlete and her past experience as well as her adaptive behaviours were integral to the successful transition. Collins et al. (2014) found similar results to this study where the experience and knowledge athletes obtained from being within the competitive world of elite sport positively influenced the transfer process.

### *6.1.3 Study Three (Chapter 5)*

The final study (chapter 5) enhances our understanding of the talent transfer process by interviewing a further 10 athletes that are either currently part of a formal programme, or have successfully competed and retired from their second sport. The difference between the first study was twofold: 1) the interviews for the third study were unstructured. This enabled the athletes the opportunity to stress points they believed were most important to their experience rather than rely on the author's notion of relevancy (Dexter, 1970) and invites rich story-telling; and 2) the athletes were all currently part of, or had left, a formal/supported talent transfer programme by a sporting organisation rather than approaching this transition informally. Additionally, the timeline between interviews from study one to this study was three years. More UK Sport initiatives have been launched during those three years (such as Tall and Talented, Target Tokyo, #DiscoverYourGold) and therefore the experiences of the athletes will have evolved during this time as well as the structure of the support programme provided by the NGB and thus the results would provide further insight on the athlete's unique transition.

The results further demonstrate an increased understanding of specific factors that the athletes experience. There were seven general dimensions captured across the 10 athletes:

1) Previous Sport includes 3 sub themes: a) their previous Degree of Success; b) the individual characteristics the athletes have acquired along their sporting history; and c) their physiological foundation on which they will transfer their skill set;

2) Catalyst for Change includes the internal catalyst (negative and positive) as to why the athlete may choose to target another sport, as well as the external catalyst as experienced by a number of the athletes;

3) Considerations before Action is a significant area which the athletes highlighted the questions that need to be asked regarding external support provided by the sporting organisation and how this would influence the decision as to whether to proceed for testing. Also the internal and personal expectations that the athletes would need to consider which may influence their ability to succeed on the programme. If these questions were not sufficiently addressed then the ability to make an informed decision would be restricted;

4) Testing and Selection was broken down into two parts: a) physical; and b) psychological. The athletes mainly shared the physical components that were assessed at their testing events. There was considerable emphasis given by the athletes as to the significance of the psychological element of testing, if it were to be assessed. The athletes were not sure as to whether they were tested as it was not communicated on the day. As there is no universal model on assessments at these events (across sports never mind countries) then suggestions of what the athletes would choose to assess was explored instead;

5) New Sport/Training included four sub themes: a) the athlete's induction; b) learning; c) the coach; and d) introduction to a club/programme. This general dimension would be the most complex for the athletes as entering the new sport and the significant learning they would experience would test their self-belief and their ability to succeed on the programme;

6) Competition may be fast tracked for some athletes dependent upon the sport. The access available to superior competitions and the qualitative assessment as to whether the athlete would cope in the new environment and under pressure should be reviewed for each athlete. The competition experience the athletes brought from their previous sport would give the groundwork to help them navigate and succeed through this ongoing assessment;

7) Degree of Success was captured within the three areas of – results, NGB and identity. Each athlete had a very personalised view of what their success criteria was and this ranged from attendance at a 'home games' through to medals. However the athlete being able to identify

themselves as an athlete within their new sport varied wildly and was distinct to their personal sporting journey.

Each dimension captured a number of raw data themes that revealed their collective experiences. The results of these three studies have implications for sporting organisations who wish to promote talent transfer as an alternative development pathway for athletes. The author hopes that these results are a starting point for other researchers to critique and build upon to support more athletes who feel as though they still have 'something to give'.

## 6.2 Theoretical Advancement: Talent Transfer Lifecycle Model

Petre and Rugg (2010) state that making a significant contribution means adding to knowledge or contributing to discourse. Consequently the author has established a definition of talent transfer based on the findings from this thesis. Talent transfer can be defined as when an experienced athlete is supported by a structured programme to transfer their physical and psychological skills into a new sporting environment. The athlete's accumulated learning, previous experience, and deliberate practice, is fast tracked by the expertise of a support structure (i.e. coach, NGB, IoS) with the intention of winning medals on the international stage.

Further contribution from this thesis to this research area includes the creation of the Talent Transfer Lifecycle model (TTLM: Figure 15). It charts the end to end lifecycle (through 6 stages) that an athlete could potentially experience whilst undertaking this transition. It is important to note that not all themes captured within the model are applicable to athletes who will go through this process. For example, some athletes may be fast tracked through stage 4 and into stage 5 within a matter of weeks (as per results from study 3) and others may follow a stringent programme by their NGB that supports their development. The TTLM is meant to present a holistic perspective and ensure that sporting organisations, coaches and athletes are aware of all considerations and therefore the timeline will be unique to the athlete experiencing it.

### 6.2.1 Stage One: Previous Sporting Experience

An athlete's previous sporting experience is captured as the first stage within the TTLM. Throughout the three studies of this thesis, the 'degree of success' that an athlete had experienced was important to note. This was not captured as achievement through medals or competitions attended but more important to the athletes was the experience they had gathered through quality of coaching they had received, the level of competition they had been exposed to and whether they had received Institute of Sport services, which was significant to the athletes from an holistic, as well as a monetary/funding perspective.

The second theme captured was the 'individual characteristics' that the author believed relevant to the athletes' narratives that were shared. Age at which an athlete was competing is a factor however there is not enough research within this area to draw any conclusions about the ideal age to target. As per figure 1 in chapter 1, UK Sport's current initiative (#DiscoverYourGold) identifies very specific age criteria for entry into the programmes, for example, short track Speed skating – 15 to 16 year olds and track cycling – 15 to 21. The athlete within the second study (chapter 4) of this thesis is an example of how a talented individual may not have been given the opportunity of a place within a programme due to her movement from judo to cycling at the age of 24. She would have been classed as 'too old' and therefore discounted from the selection criteria. It has been suggested that many of the qualities that distinguish top athletic performance in adults may not be apparent until late adolescence, confounding the early selection of performers (Abernethy & Russell, 1987; Bloom, 1985; French & McPherson, 1999; Simonton, 1999; Tenenbaum, Sar-El & Bar-Eli, 2000; Williams & Franks, 1998) therefore being a limitation of some of the programmes targeted by UK Sport and their criteria (i.e. speed skating). For example, if a 15 year old athlete applied for the sprint track cycling programme, their chronological age and biological maturity will be different to that at the top end of the age bracket at 21, as they rarely progress at the same rate (Katzmarzyk, Malina & Beunen, 1997). Concurrent with this argument and as highlighted in chapter 2, Collins and MacNamara (2012) argued that a large number of potentially talented performers may have been excluded from talent identification and transfer programmes due to poor and inconsistent identification measures put forward by some sporting organisations.

However Gulbin and Ackland (2009) and Halson et al. (2006) argue that such talent identification and development initiatives increase the probability of identifying athletes who can attain senior expertise by minimizing adolescent maturational issues, reducing talent development time frames and maximising return on the developmental investment already made in these older athletes. One would presume this would be dependent upon the age of the athletes targeted rather than specific age criteria as identified above.

# TALENT TRANSFER LIFECYCLE



SELF BELIEF



SELF BELIEF



SELF BELIEF



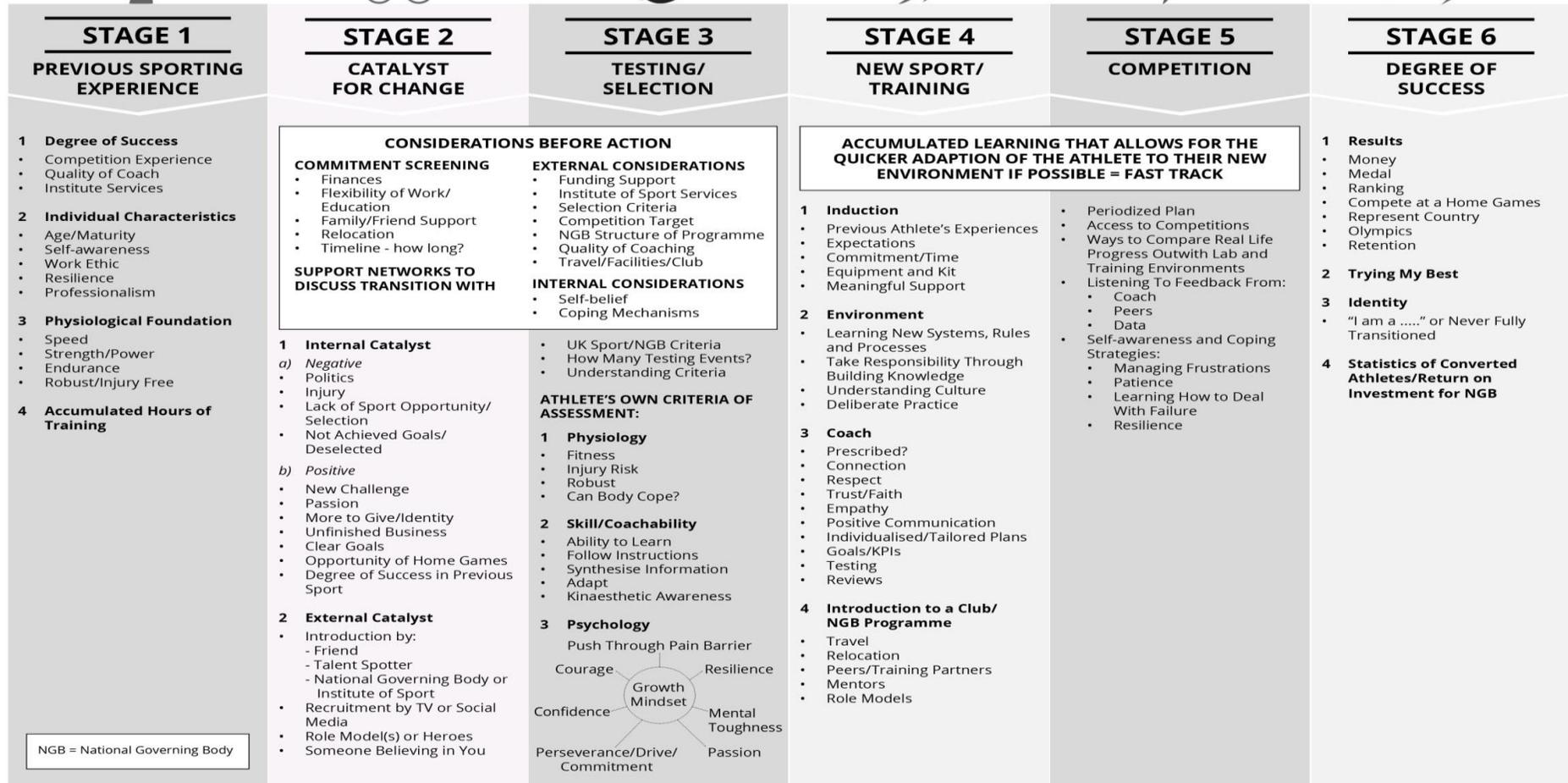
SELF BELIEF



SELF BELIEF



SELF BELIEF



NGB = National Governing Body

Figure 15: Talent Transfer Lifecycle Model (TTLM)

Accumulated hours is also identified as a theme with the acknowledgement from athletes across this thesis that they are not starting 'from scratch' in their athletic ability but have accumulated a number of hours to date that will help them 'fast-track' their ability. Ericsson et al. (1993) contended that the start of target-oriented, purposeful training at an early age led to a higher accumulated training volume and performance advantage at any stage of life, making it difficult for those who started specific training later to reach the same level of attainment. Although it can be questioned as to whether an athlete has to undertake 10 years of deliberate practice within the same sport to reach the mastery stage before they begin the talent transfer process, or whether they could accumulate their years/hours across sports and therefore fast track the process. Oldenziel et al. (2004) supported this accelerated talent transfer approach, in their retrospective analysis of Australian senior national athletes which revealed that 28% reached their elite status within 4 years of starting the sport for the very first time. Thus, it would suggest that Ericsson et al.'s (1993) much re-iterated theory that 10 years or 10,000 hours of deliberate practise is essential for someone to reach high levels of expertise is critically flawed. For example, the 18-month pathway from novice to world podium reported by Bullock, et al. (2009) in their study of Australian skeleton athletes reported as little as 3 years of training. This supports the notion that training experiences accumulated in many sports and adaptability may be an alternative pathway to expertise (Baker, 2007; Coleman, 2007; Runco, 2007). These examples support the concept of talent transfer and the aim of achieving excellence through late specialization and rapid development. Nevertheless Vaeyans et al. (2009) concede that there is no empirical evidence to suggest that an athlete's success can be attributed to the skills they acquired in their previous sport.

### *6.2.2 Stage Two: Catalyst for Change*

This stage contains the internal (negative & positive) and external catalyst for making the change. Appreciating that there are a considerable amount of reasons why an athlete would think about changing sports, there will inevitably be a personal reason, as explained by the athletes interviewed within this thesis. One athlete may hear about a programme advertised on the TV (as per athlete 6 in chapter 5: external catalyst) or see an athlete winning a medal and make a decision in the moment. Hardy, Barlow, Evans, Rees, Woodman & Warr (2017) similarly found that observing another athlete winning a medal on TV was a positive and significant career turning point for a super-elite athlete (within their study) and as a result, there was an overall increase in focus, motivation and determination to attain sporting success. Whereas another athlete may struggle to let go of their previous sport, even though they were encouraged to enter the new

sport 16 months previously (athlete 8, chapter 5) and was not achieving the criteria to compete internationally (internal negative catalyst).

Injury is also a negative internal catalyst for the athletes across this thesis (amongst others) and these non-normative transitions could be a significant influence to investigate another sport. Samuel and Tenenbaum (2011b) identified 32.2% of athletes within their study of change events, experienced the threat of discontinuation as a result of severe injury. Potentially recycling athletes (Vaeyans et al., 2009) and signposting them to another sport, rather than discontinuation, might be a targeted approach by sporting organisations to encourage more athletes to apply for a talent initiative like UK Sport's: #DiscoverYourGold rather than through self-discovery.

There is an additional element here which has been captured in the section 'considerations before action' that starts in the second stage and bridges across stage 3. It will be a reflective opportunity as an athlete makes their way through the two stages and the information they gather may inform their decision at any point across that specific timeline. A commitment screening is essential for an athlete to fully understand the implications of making a decision to undertake a transfer between sports. Some athletes will know the general themes of what this might entail but may not necessarily know the details until they go forward for the testing events and/or are selected onto the programme, where they find out the specifics. Athlete 7 (chapter 5) supported this by stating:

*"You do not realise how much of a sacrifice this is until you are actually in the programme and what you have had to give up as a result...No one can really prepare you for what it really means to be part of a full time programme."*

Samuel & Tenenbaum (2011b) reported a high tendency of making a strategic decision to consult with others in response to a change-event. When athletes perceived a new situation as significant and felt they have had available resources of professional support, they were more likely to consult with others than to ignore the situation or cope with it independently (Samuel & Tenenbaum, 2013), which corresponds with the results of this thesis and having a support network to discuss the potential transition with.

External considerations identified a range of topics that the athletes should explore with the NGB so they can make an informed decision about whether to proceed. Funding, coaching and Institute of Sport services were to name a few but if the athlete does not ask the questions to manage expectations then they may not be receiving every opportunity to help them succeed and gain the relevant insight.

Conversely, internal considerations of the athletes' coping mechanisms whilst going through this transition needs to be fully explored as every athlete from this thesis believed that this self-awareness was a key factor in helping them succeed. Gould et al. (2002) found that Olympic athletes had effective coping mechanisms (i.e. self-belief) which reflects the results of this thesis and captured in stage 5 under competition. Athletes need to appreciate the coping mechanisms that will be required through this process and ensure that these are developed and robust as no doubt they will be tested.

### *6.2.3 Stage Three: Testing/Selection*

As stated above, 'Considerations before Actions' transcends stages 2 and 3 as it is a reflective process that can surpass the second stage. The testing and selection stage has been combined into one because of the ongoing assessment used at the various events by the sporting organisations. As outlined in chapter 1, there is normally a phased selection process used by UK Sport (and adapted to the unique demands of the sport) which gives a brief outline as to what is assessed. The details of each phase have not been identified within the TTLM as it is not consistent across each sport. However understanding an overview as to the criteria used through each phase would be advantageous for the athlete and coach, especially if they wished to do some preparation for the event.

Thus, this stage has been broken down into 3 assessment areas, as shared by the athletes of what they would assess if they were in charge of a programme: 1) physiology; 2) skill/coachability; and 3) psychology. It is still unclear exactly what factors, or combination of factors (Dickens & Flynn, 2001; Simonton, 2001), are causative of successful talent transfer. It is perhaps easier to assess for the physiological requirements needed to move between sports however psychology in particular is more challenging. As outlined in chapter 2, MacNamara and Collins (2015) claimed that psychosocial variables (such as coachability, amongst others) that are more challenging to identify/assess, should be an integral part of the initial selection process. Van Yperen (2009) and Abbott and Collins (2004) both reasoned that talent transfer initiatives should consider whether potential transferees have the psycho-behavioural skills needed to successfully develop in the transfer environment. Gould et al. (2002) established that sport psychological evaluations found Olympic athletes to be especially confident, mentally tough and resilient, sport intelligent, optimistic, competitive, hardworking and coachable (amongst others) which supports corresponding findings of this thesis. If the aim is to have these athletes fast tracked and medal on the international stage, it would naturally follow to assess athletes on the characteristics they are aspiring for themselves or may already possess. Therefore the selection of appropriate talent

should involve a multi-dimensional approach involving more than just physical performance (Abbot & Collins, 2004; Nieuwenhuis et al., 2002; Reilly et al., 2000; Staerck, 2003).

An additional element to be considered here is for the athlete to understand the selection criteria that will be used by the NGB for major competitions (i.e. an Olympics). As an example, if 8 athletes are selected onto a talent identification programme but there are only 2 places available at an Olympic games for that country, there is no guarantee that having achieved all the competition criteria, that the athlete will be selected over their peers. Hardy et al. (2017) similarly found that one of the non-super elite athletes was not picked for the Olympics even though he had achieved the qualification requirements in two separate disciplines.

#### *6.2.4 Stage Four: New Sport/Training*

When an athlete has been selected onto a formal talent programme, there are four aspects that they should consider from the outset: 1) their induction; 2) their environment; 3) the coach; and 4) whether this is supported through a club or a specialized NGB programme.

Multiple empirical studies in sport psychology have supported the link between the coach-athlete relationship and subsequent athletic performance (Durand-Bush & Salmela, 2002; Gould et al., 2002; Greenleaf et al., 2001; Hays et al., 2007). Principally the coach, and the relationship the athlete has with this individual, is significant to the unique experience. The athletes should ask the relevant questions to manage expectations and to understand the coach's philosophy and approach in helping the athlete succeed through the talent transfer process. Questions should also be asked as to whether the coach(es) have supported athletes through a talent transfer before and thus understand the unique challenges the athlete could face, or whether they have only supported athletes through the typical pathway development model. Greenleaf et al. (2001) found that the relationship that the athlete had with his or her coach greatly influenced successful performance on an international stage. Furthermore, Gould et al. (2002) found that the ability of a coach to understand his or her athlete provided the athlete with a level of trust and self-confidence that guided the athlete to excellence in the Olympic games. As the age of the athlete is pertinent within this relationship (a potential adult who has medalled internationally within their previous sport) the coach should aim to deliver structure within a democratic relationship, based on the demonstration of holistic care and concern for the athlete as an individual. The athlete may have more self-awareness than that ascending the typical identification pathway and therefore the coach may need to be more mindful of the experience and meaningful conversation that the athlete can bring to the relationship.

Environment was also identified as a theme under stage 4. The athletes from this thesis have had experience of a high performance training environment within their previous sport therefore having an expectation and something to reference mentally on what this could look and feel like within the new sport may accelerate their learning. Araujo & Davids (2011) argue that talented performance derives from an increasingly functional fit of an individual and a performance environment. Therefore how well an individual can adapt to their new sport by learning the new rules, systems and procedures is integral to their success and their time on the developmental pathway. In the confirmation phase of UK Sport's (2018) talent identification initiative, it states that: *"Selected athletes will embark on a 6-12 month confirmation phase during which they are immersed in the sport's training environment. Athletes are exposed to a carefully constructed developmental experience and their rates of progression are tracked to further assess their suitability for the sport"*. Successful talent development results in emergence of adaptive behaviours can be used in a range of performance contexts. But a major challenge is to understand how each athlete uniquely adapts their behaviours in complex environments to consistently achieve specific task outcomes (Phillips et al., 2010).

There are a number of considerations captured under these four themes but this stage may end up being considerable in terms of timeline and therefore potentially more opportunity for an athlete to struggle with completing the transition. The timeline from training to competition maybe fixed by the NGB within a structured programme of support, but the potential flexibility that fast tracking an athlete may bring (exposure to international competition and therefore earlier potential for return on investment) needs further consideration.

#### *6.2.5 Stage Five: Competition*

As described in the introduction, UK Sport's talent recruitment and confirmation programmes are multi-phased. Within the confirmation phase, selected athletes will embark on a 6–12 month programme and immerse themselves in the sport's training environment. Athletes are exposed to a carefully constructed developmental experience and their rates of progression are tracked to further assess their suitability for the sport (UK Sport, 2018) which may be the case for a number of athletes across a range of sports. However it is important to note the box that straddles stages 4 and 5 which states: *"accumulated learning that allows for the quicker adaptation of the athlete to their new environment if possible = fast track."* Two athletes (chapter 5) shared their experiences of being fast-tracked into an international competition within weeks of moving to their new sport. It was a collaborative decision on both occasions between the athletes and the NGB. This supports Bullock et al.'s (2009) study on skeleton which exposed

athletes to competition within two weeks of starting the sport. Competition is an essential element for athlete development to enhance the ability to perform at the highest level. As such, the ability to cope with defeat and setbacks is an inevitable characteristic of successful athletes (MacNamara & Collins, 2015). Atkinson (1957) defined fear of failure as the motive to avoid failure associated with anticipatory shame in evaluative situations. Talent transfer athletes are perhaps unique because they will have already experienced these evaluative situations (competitions) within their previous sport. It could be presumed that if these athletes did not have the coping strategies to deal with failure and self-awareness on how they would respond to it, then they would not choose to continue their sporting pathway for longer and enter into another sport with the intention of competing at the highest level, especially if they are fast tracked (as described above) into international competition. Pummel et al. (2008) found that despite the challenging environment of a higher level of competition, successful athletes reported their transition to this more competitive stage as exciting and thrilling.

The timeline will be unique to each athlete however consideration should be given to the mindset of the athlete and their expectations of achievement. In conjunction with stage 3 (testing/selection), growth mindset was identified as a theme across the athletes interviewed. Synonymous with fear of failure, Dweck's (2006) research demonstrated the impact an individual's mindset has on their reaction to challenge and how beliefs about ability have significant influence on their motivation, learning and achievement. Thus, a growth mindset seems to epitomise why an athlete may choose to continue their sporting endeavours: the passion for stretching oneself and staying the course, even during the most challenging times.

As a result, having an acute awareness of themselves as athletes and their own personalised coping strategies to deal with the challenges of international competition, are significant and is highlighted as a theme within stage 5: competition. Sub-themes included: managing frustrations; patience; learning how to deal with failure; and resilience. Athletes may be used to competing at the highest level and think they can emulate that within the new sport and therefore having coping strategies on how to deal with these frustrations is pertinent to the process.

### 6.2.6 Stage Six: Degree of Success

The final stage identified the degree of success experienced by the athlete through four themes: 1) results; 2) trying my best; 3) identity; and 4) statistics of converted athletes/return on investment for the NGB. If the athlete has been supported through a formal support programme (for example, UK Sport #DiscoverYourGold) then there will be an expectation on what the athlete's return on investment has and can be and thus, theme 1 and 4 is considered.

However the degree of success may vary for the athlete within their second sport and the theme that developed across the thesis was that of identity. As far as this author is aware, there is no literature in the public domain which examines the change in identity when transitioning between different sports and also an athlete's retirement from a second sport. Is the athlete's identity still synonymous with their first sport? Research at this time can only be drawn from the extensive area of identity and its decline after retirement (Lally, 2007; Lavalley, Gordon & Grove, 1997).

As identified by Brewer, Van Raalte and Linder (1993), athletic identity is the degree to which an individual thinks and feels like an athlete. In the area of elite athlete career decision making, Albion and Fogarty (2005) found that high levels of athletic identity were associated with indecisiveness, lack of knowledge about occupations and internal conflicts about career choices. Appreciating that this will be the second time an athlete has chosen to 'retire' from a sport, could this potentially suggest that they are more prepared for what lies ahead and the coping strategies needed to ensure a smooth transition into whatever field they choose to pursue for their life after sport? Houle, Brewer and Kluck (2010) investigated the development of athletic identity over three age groups (10 years, 15 years and adulthood) and found that it increased until the age of 15 and then stayed at that level into young adulthood. Age would be the significant element here and how 'young adulthood' is defined in terms of years, again using the example of the case study from chapter 4. Lally (2007) found that for some athletes within her study, they began to negotiate their new sense of self long before they actually retired. The athletes from this thesis have a very specific target in mind (atypically a 'games'). Knowing there is a finality to their time within the second sport, this may help the athlete(s) plan ahead for their retirement. Consequently, a voluntary decision to retire is beneficial for the transition out of elite sports, as athletes feel more in control of their adaptation process (Alfermann, 2000; Cecić Erpić, Wylleman & Zupančič, 2004; Taylor & Ogilvie, 1994).

Each athlete's experience varied significantly throughout the talent transfer process with some feeling as though they could identify themselves as part of the new sporting fraternity after

12 to 18 months. Others (chapter 4: case study) still felt that after 4 years and winning medals internationally within their new sport, that their identity was still synonymous with their original sport. In one of the few studies in this area, Shachar, Brewer, Cornelius, Petitpas (2004) looked at the differences in athletic identity, transitional adjustment difficulties and life satisfaction of former athletes who chose to be coaches, and those who chose a career unrelated to sport following their retirement. Using retrospective recall data, it was found that the two groups did not differ in athletic identity at the time of retirement. There were no differences in transitional adjustment or life satisfaction, indicating that changes in athletic identity do not necessarily influence these factors.

The fourth theme within stage 6 identifies the statistics of converted athletes and the return on investment for the NGB. Formal talent transfer initiatives are still in their infancy and therefore more analysis would need to be completed to understand the return on investment through medals won. Collins et al.'s (2014) is one of the few studies that analysis the percentage of athletes across four countries (UK, USA, Canada and Australia) comparing summer (2012) and winter Olympics (2010). Collins et al. (2014) identified that 8.4% of athletes were selected onto the GB squad for the 2012 London Olympics from talent transfer programmes and 23.1% of athletes selected for the 2010 Vancouver Olympics, which could indicate that the talent transfer programmes run for winter sports are more effective. MacNamara and Collins (2011) argue that it may well be the case that the UK was able to transfer athletes to 'softer sports' where the talent pool is less competitive. Therefore UK Sport would no doubt target the sports where they would have more likelihood of medalling at an Olympic games and/or where they have already proven their return on investment by medals won (i.e. skeleton/Lizzy Yarnold).

### 6.3 Practical Implications

As stated above, the TTLM captures the end to end lifecycle (6 stages) through a holistic perspective that an athlete could potentially experience whilst undertaking this transition. It is apparent that this research advances understanding by providing an appreciation of the experience of athletes in particular. As they navigate the transition, the TTLM produced through this thesis answers the call for more specificity in the research understanding of the talent transfer process. It is the developmental process which athletes will navigate in making this particular transition that sporting organisations like UK Sport will need to examine from a holistic perspective, if they wish to utilise this area of talent identification further. Wylleman and Lavallee (2004) also captured a holistic approach to athlete development which focuses beyond the athletic areas, situating the athlete at each point in their career in the context of their concurrent

athletic or non-athletic developmental tasks (Wylleman et al., 2000). Wylleman and Lavallee (2004) argue that an individual's athletic development will be influenced by, and have an influence on, psychological, psychosocial and academic/vocational development and this is highlighted in their developmental model of transitions. Therefore forward planning from a holistic perspective for a significant transition like talent transfer between sports, is imperative if sporting organisations are to help the athlete/person succeed. Alfermann, Stambulova & Zemaityte (2004) argue that planning for retirement has been seen to provide athletes with a degree of readiness for and a perception of ownership and control over the anticipated change. Unsurprisingly, the purpose of creating the TTLM is echoed here, with readiness for transition being of major importance to the athlete's ability to cope with the demands of moving between sports. The narratives of the athletes throughout this thesis illustrate just how difficult and complex a talent transfer process can be and therefore the role of the sporting organisation in helping them succeed from a holistic perspective is required.

The results from this thesis emphasise that optimal preparation for the talent transfer process begins early and involves the interplay of a number of different considerations. The athlete must be aware of all factors across the 6 stages before choosing to commit and take action. One of the key resources of readiness is knowledge of the demands of the transition. Without this knowledge, athletes cannot begin to adapt themselves physically and psychologically in preparation for their new sport. Crucial to this process are role models who not only act as key sources of informational support but have 'shone a light' on how they have mastered their own unique experience between sports. As sporting organisations choose to utilise more talent initiatives like talent transfer for athlete development, there should be more role models for athletes to identify with and benchmark against and thus aiding an athlete's progression through the transition. Every opportunity to avoid potential drop-out from a programme (which could be offered to another athlete) should be taken as there could be as few as 12 places per year with a talent identification programme such as UK Sport's #DiscoverYourGold. Finally, a TTLM which encourages athletes to consider all of the facets involved before they undertake the process means they can make an informed decision as to whether they are ready to commit to all the factors that could potentially be required of them (i.e. relocation) and they have the right support mechanisms around them to succeed.

#### 6.4 Limitations and Future Research Directions

Talent transfer is a relatively new concept in the world of high performance sport and it is essential to build on our knowledge of what a successful talent transfer process looks like and how

it can be supported more frequently if we are to realise the benefits of what it can potentially bring: winning more medals on the world stage. Now more than ever, sport needs those who are committed to identifying and then assisting athletes who have the requisite aptitudes for high level accomplishment but not the coaching resources and environmental framework needed to develop them.

Alfermann and Stambulova (2007) stressed a need in sport psychology for more applied research related to career transitions, as well as research on specific aspects of transitions in different types of sport settings. Given athletes who move between sports as a result of talent transfer are an under-researched group and purposeful in nature, this thesis allowed for the collection of detailed and personalised narratives to be gathered to provide important understanding of their lived experiences. As Patton (2002) highlighted, purposeful sampling does not necessarily aim to be representative but to establish participant groups who can provide in-depth response for the research questions.

A limitation of this thesis was interviewing athletes who had not retired from their second sport. The athletes interviewed across the three studies were all at different stages of the talent transfer process. This prevents the author determining how successful they may become and making full comparisons between their sports. For example, is a sport like skeleton reaping more results/success than cycling, from their analysis of athletes who have completed the process and gained medals? It would be difficult to clearly identify why some talent transfer athletes succeed where others do not without more analysis of other examples that demonstrates trends, i.e. between particular/targeted sports.

It could also be argued that the athletes who had retired from their second sport experienced recall bias in comparison with athletes who were still going through the process. However these athletes were more than capable of sharing the experiences of their unique talent transfer process and gave detailed insight through their reflections. The author minimised this limitation by encouraging the athletes to reflect and expand upon their experiences to reduce ambiguity in meaning and to establish a greater level of respondent validity (Van Manen, 1997). Nevertheless, future qualitative studies of talent transfer by athletes should adopt a longitudinal interview schedule that will make it less likely for recall bias to occur and eliminate the limitations faced by retrospective interviewing as well as providing a deeper understanding of the change-event process as it unfolds, over time. It might be helpful to incorporate a sport psychology consultation as an integral aspect of the athletic experience, so when athletes do encounter change-events that require professional support, this will be easily available.

In addition, as there is no (confirmed or agreed) definition or theoretical framework of talent transfer, it is difficult to establish a baseline to evaluate against and build on our knowledge of what a successful process might look like, therefore informing and educating sporting organisations to be able to support the athlete and not lose 'talent' from sport. Until such a framework is constructed, research from independent findings can only be concluded. However there are examples of lifecycle models in the sport literature that consider career transitions, including Wylleman and Lavallee's (2004) Developmental model and Wylleman et al.'s (2013) Holistic Athletic Career (HAC) model. Using these two models as a theoretical framework, research questions were developed for this thesis with an overarching aim of developing a lifecycle model that captures the non-normative transition of talent transfer within the athletic level. The similarities of the models are that they both are linear and chronological in nature, which reflects the transition being a process rather than an event. The Developmental model and the HAC model identify levels (athletic, psychological, psychosocial, academic/vocational and financial) experienced by an athlete across a lifespan. The lifecycle model created from this thesis could be situated within the athletic level of Wylleman et al.'s (2013) HAC model and anywhere from the 'development stage' onwards. The Talent Transfer Lifecycle model shows many similarities to the Developmental model and the HAC model in that it is one specific transition (talent transfer) within the athletic stage but may still run parallel to the other transitions an athlete could potentially experience across their lifespan. For example, the academic (university) and vocational (finding a job) level that the athlete would continue to navigate alongside the transition to another sport. As Wylleman and Lavallee (2004) acknowledge, the focus cannot simply be on the athletic level and needs a life-span perspective to put a 'spot-light' on the role and influence of 'non-athletic' transitions at the other levels.

Furthermore, Wylleman and Lavallee (2004) acknowledged that existing transitional models remain too general. It becomes therefore important to acknowledge the diversity which may exist in view of specific sport characteristics, like the transition of talent transfer. For example, if an athlete was transitioning from gymnastics to diving, the age at which this transition occurs may be very sport specific, in comparison to an athlete moving from athletics to bobsleigh (as per chapter 5: study three).

And lastly, a significant progression on Wylleman and Lavallee's (2004) Developmental model and Wylleman et al.'s (2013) Holistic Athletic Career (HAC) model is that the TTLM has useful considerations and actions for the athlete to undertake before and during the transition. It remains a must for researchers to provide ways in which practitioners can apply research findings in their applied work with athletes. While the existing transition models provide support staff and

organisations with a theoretical framework to situate the developmental, interactive and interdependent nature of transitions and stages athletes face, it remains important that the demands of particular stages and transitions are linked to the resources available to athletes and their surroundings to make each transition successfully. Therefore the TTLM provides professionals (working with athletes) a framework to assist them in structuring an optimal transition by having all the information up front and in one place so they can navigate a talent transfer successfully.

Consequently, the accumulating evidence from this thesis may help inform national level policy and intervention strategies aimed at identifying and supporting future athletes who choose to continue their international aspirations. Given that research on this subject is currently limited and the literature base on talent transfer continues to develop, future research should expand upon the findings outlined and conduct longitudinal research over a significant number of the athletes to capture their end to end experiences. This would allow for better insight and practitioners would be able to craft evidence based interventions, providing a benchmark to inform wider policy and commissioning of support services for athletes undertaking a talent transfer process.

A fascinating future research opportunity that has a concurrent theme to this thesis would be to interview international athletes in different sporting organisations and across comparable sports to analyse whether there are any cultural and environmental differences (Si & Lee, 2007) in the talent transfer transition. As a consequence of the scarcity of literature on talent transfer, this presents endless research opportunities available for investigation. Another limitation of this study was that none of the 10 athletes interviewed were from a team sport. The themes captured within this study would need to be evolved/adapted to reflect the distinctive nature of entering into team sport. This could also be an additional recommendation for future research that would build our knowledge of talent transfer further.

With talent often lost throughout the development pathway, the knowledge arising from the current thesis should, not only help to fill a void by providing a comprehensive guide to the experiences of athletes thinking about a transfer, but also offer sporting organisations and athletes a practical approach to mitigating the impact and the potential for premature loss of talent. With such an objective in mind, this research endeavour culminated in the design of a Talent Transfer Lifecycle model, created to prepare aspirant athletes for the transition and what they could potentially experience. To the author's knowledge, this constitutes a first attempt at such model in the sporting literature.

## 6.5 Conclusions

The purpose of this thesis was to examine the transition of talent transfer experiences of athletes through their own narratives. Literature addressing talent transfer is now reflecting a growing recognition of the opportunity to identify talent through alternative methods rather than the atypical developmental pathway. Between the three studies and the lifecycle model created, the results further contribute to the scant research of talent transfer by producing rich storytelling experiences through qualitative methodologies (interviews).

This thesis has contributed to building talent transfer literature in three important ways: 1) it offers a number of athletes' unique experiences on the talent transfer process; 2) it constructs a Talent Transfer Lifecycle model which can present a holistic/end-to-end process of what an athlete might potentially experience through the transition; and 3) it provides some important possibilities for future research.

Drawing this thesis to a close, this chapter provides an overall discussion of findings, highlighting the advancements and contributions made, as well as limitations, future research implications and conclusions drawn.

## References

- Abbott, A., Button, C., Pepping, G. J. & Collins, D. (2005). Unnatural selection: Talent identification and development in sport. *Nonlinear Dynamics, Psychology and Life Sciences*, 9(1), 61-88.
- Abbott, A. & Collins, D. (2004). Eliminating the dichotomy between theory and practice in talent identification and development: Considering the role of psychology. *Journal of Sports Sciences*, 22(5), 395-408.
- Abbots, A., Collins, D. & Martindale, R. (2002). *Talent identification and development: An academic review*. A report for **sportscotland** by the University of Edinburgh. Cited in A. MacNamara & D. Collins (2011): Comments on "Talent identification and promotion programmes of Olympic athletes." *Journal of Sport Sciences*, 29(12), 1353-1356. DOI: <https://doi.org/10.1080/02640414.2011.568510>
- Abbott, A., Collins, D., Sowerby, K. & Martindale, R. (2007). Developing the potential of young people in sport: A report for **sportscotland** by University of Edinburgh. Cited in A. MacNamara & D. Collins (2011): Comments on "Talent identification and promotion programmes of Olympic athletes." *Journal of Sport Sciences*, 29(12), 1353-1356. DOI: <https://doi.org/10.1080/02640414.2011.568510>
- Abernethy, B. & Russel, D. G. (1987). Expert-novice differences in an applied selective attention task. *Journal of Sport Psychology*, 9(4), 326-345. DOI: <https://doi.org/10.1123/jsp.9.4.326>
- Agnew, D., Marks, A., Henderson, P. & Woods, C. (2018). De-selection from elite Australian football as a catalyst for a return to sub-elite competitions: when elite players feel there is 'still more to give'. *Qualitative Research in Sport, Exercise and Health*, 10(1), 117-136. DOI: <https://doi.org/10.1080/2159676X.2017.1380074>

- Albion, M. J. & Fogarty, G. J. (2005). Career decision making for young elite athletes: Are we ahead on Points? *Australian Journal of Career Development*, 14(1), 51-63. DOI: <https://doi.org/10.1177/103841620501400108>
- Alfermann, D. (1995). Career transitions in elite athletes: Drop-out and retirement. In D. Lavallee & P. Wylleman (Eds.). *Career transitions in sport: International perspective*. Morgantown, WV: Fitness Information Technology.
- Alfermann, D. (2000). Causes and consequences of sport career termination. In D. Lavallee & P. Wylleman (Eds.). *Career transitions in sport: International perspective*. Morgantown, WV: Fitness Information Technology.
- Alfermann, D. & Stambulova, N. (2007). Career transitions and career termination. In G. Tenenbaum, & R. C. Eklund (Eds.). *Handbook of Sport Psychology* (3<sup>rd</sup> Ed.). New York: Wiley.
- Alfermann, D., Stambulova, N. & Zemaityte, A. (2004). Reactions to sport career termination: A cross-national comparison of German, Lithuanian and Russian athletes. *Psychology of Sport and Exercise*, 5(1), 61-75. DOI: [https://doi.org/10.1016/S1469-0292\(02\)00050-X](https://doi.org/10.1016/S1469-0292(02)00050-X)
- Allen-Collinson, J. (2013). Auto-ethnography as the engagement of self/other, self/culture, self/politics, selves/futures. In: S. Holman Jones, T. E. Adams, & C. Ellis, (Eds.) *Handbook of autoethnography*. Walnut Creek, CA: Left Coast Press, 281-299.
- Anshel, M. & Lidor, R. (2012). Talent detection in sport: The questionable use of psychological testing. *Journal of Sport Behaviour*, 3, 239-266.
- Araujo, D. & Davids, K. (2011). Talent development: From possessing gifts to functional environmental interactions. *Talent Development and Excellence*, 3(1), 23-25.

- Athleteassessments.com (2015). The X Factor in Sport: 5 Minutes with Bo Hanson. Available at <https://athleteassessments.com/recruiting-x-factor-athletes/> (Accessed: 18<sup>th</sup> August, 2016).
- Atkinson, J. W. (1957). Motivational determinants of risk-taking behavior. *Psychology Review*, 64, 359-372.
- Atkinson, P. (1990). *The Ethnographic Imagination: Textual construction of reality*. London, Routledge.
- Atkinson, R. (1998). *The Life Story Interview*. London: Routledge.
- Australian Sports Commission (2010). Talent Transfer. Available at [http://www.ausport.gov.au/sportscoachmag/development\\_and\\_maturation2/talent\\_transfer](http://www.ausport.gov.au/sportscoachmag/development_and_maturation2/talent_transfer) (Accessed: 1st October 2013).
- Australian Sports Commission (2012). News. Available at: [http://www.ausport.gov.au/sportscoachmag/development\\_and\\_maturation2/talent\\_transfer](http://www.ausport.gov.au/sportscoachmag/development_and_maturation2/talent_transfer) (Accessed: January 6, 2016).
- Baker, J. (2003). Early specialization in youth sport: A requirement for adult expertise? *High Ability Studies*, 14, 85-94.
- Baker, J. (2007). Nature and nurture interact to create expert performers. *High Ability Studies*, 18, 57-58.
- Baker, J., Cobley, S., Schorer, J. & Wattie, N. (2017). *Routledge Handbook of Talent Identification and Development in Sport*. Routledge, UK.
- Baker, J., Côté, J. & Abernethy, B. (2003). Learning from the experts: Practice activities of expert decision-makers in sport. *Research Quarterly for Exercise and Sport*, 74, 342-347.

Baker, J. S. & Davids, B. (2006). Variation in resistive force selection during brief high intensity cycle ergometry: implications for power assessment and production in elite karate practitioners. *Journal of Sports Science and Medicine CSSI*, 42-46. Cited in J. Baker & B. Young (2014). 20 years later: deliberate practice and the development of expertise in sport. *International Review of Sport and Exercise Psychology*, 7(1) 135-157. DOI: <https://doi.org/10.1080/1750984X.2014.896024>

Baker, J. & Horton, S. (2004). A review of the primary and secondary influences on sport expertise. *High Ability Studies*, 15, 211-228.

Baker, J. & Young, B. (2014). 20 years later: Deliberate practice and the development of expertise in sport. *International Review of Sport and Exercise Psychology*, 7(1), 135-157.

Balish, S. M., Eys, M. A. & Schulte-Hostedde, A. I. (2013). Evolutionary sport and exercise psychology: Integrating proximate and ultimate explanations. *Psychology of Sport and Exercise*, 14, 413-422.

Baltes, P. (1987). Theoretical propositions of life span developmental psychology: On the dynamics between growth and decline. *Developmental Psychology*, 23, 611-626.

Barker-Ruchti, N. & Schubring, A. (2016). Moving into and out of high performance sport: The cultural learning of an artistic gymnast. *Physical Education and Sport Pedagogy*, 21(10) 69-80. DOI: <https://doi.org/10.1080/17408989.2014.990371>

BBC Sport (2009). Ennis relieved after painful year. Available at <https://news.bbc.co.uk/sport1/hi/athletics/8204914.stm> (Accessed: 11<sup>th</sup> June, 2018).

Benner, P. (1994). The tradition and skill of interpretive phenomenology in studying health, illness and caring practices. In P. Brenner (Ed.), *Interpretive phenomenology: Embodiment, caring and ethics in health and illness* (pp. 99-127). Thousand Oaks, CA: Sage.

- Black (2013). The Science of Sport: What is talent? Available at [http://sportsscientists.com/2013/11/what-is-talent-your-definitions-and-thoughts-from-david-epstein/?doing\\_wp\\_cron=1546166897.1104779243469238281250](http://sportsscientists.com/2013/11/what-is-talent-your-definitions-and-thoughts-from-david-epstein/?doing_wp_cron=1546166897.1104779243469238281250) (Accessed: 30<sup>th</sup> December, 2018).
- Blaikie, N. (2010). *Designing Social Research*. Polity Press.
- Bloom, B. S. (1985). *Developing talent in young people*. New York: Balletine.
- Bold, C. (2012). *Using narrative research*. London: Sage. DOI: <https://doi.org/10.4135/9781446288160>
- Bompa, T. O. & Haff, G. G. (2009). *Periodization, Theory and Methodology of Training*. Human Kinetics. DOI: [https://rua.ua.es/dspace/bitstream/10045/29733/1/jhse\\_Vol\\_8\\_N\\_II\\_350-366.pdf](https://rua.ua.es/dspace/bitstream/10045/29733/1/jhse_Vol_8_N_II_350-366.pdf)
- Brewer, B. W., Van Raalte, J. L. & Linder, D. E. (1993). Athletic identity: Hercules' muscles or Achilles heel? *International Journal of Sport Psychology*, 24(2), 237-254.
- Brewer, B. W., Van Raalte, J. L. & Petitpas, A. J. (1993). Self-identity issues in sport career transitions. In D. Lavallee & P. Wylleman (Eds.), *Career transitions in sport: International perspective* (pp. 29-43). Morgantown, WV: Fitness Information Technology.
- British Shooting (2014). Targeted talent. Available at <http://britishshooting.org.uk/news/d=985> (Accessed: January 6, 2016).
- Bruner, M. W., Munroe-Chandler, K. J. & Spink, K. S. (2008). Entry into elite sport: a preliminary investigation into the transition experiences of rookie athletes. *Journal of Applied Sport Psychology*, 20, 236-252.
- Bryman, A. (2001). *Social research methods*. Oxford: Oxford University Press.
- Bryman, A. (2012). *Social Research Methods*. 4<sup>th</sup> edition. Oxford University Press.

- Bullock, N., Gulbin, J. P., Martin, D. T., Ross, A., Holland, T. & Marino, F. (2009). Talent identification and deliberate programming in skeleton: Ice novice to winter Olympian in 14 months. *Journal of Sport Sciences*, 27(40), 397-404.
- Burgess, D. J. & Naughton, G. A. (2010). Talent development in adolescent team sports: A review. *International Journal of Sports Physiology and Performance*, 5, 103-116.
- Burton, L. J., VanHeest, J. L., Rallis, S. F. & Reis, S. M. (2008). Going for Gold: Understanding talent development through the lived experiences of US female Olympians. *Journal of Adult Development*, 13, 124-136.
- Butt, J. & Molnar, G. (2009). Involuntary career termination in sport: a case study of the process of structurally induced failure. *Sport in Society*, 12(2), 240-257. DOI: <https://doi.org/10.1080.17430430802591027>
- Campbell, M. (1997). Institutional ethnography and experience as data. *Qualitative Sociology*, 21, 55-74.
- Cannell, C. F., Fisher, G. & Marquis, K. H. (1986). The influence of interviewer and respondent psychological and behavioural variables on the reporting in household interviews. Cited in A. S. Paterson (1997). A humanistic framework for interviewer skills. *Paper presented at the British Educational Research Association Annual Conference*: University of York. <https://www.leeds.ac.uk/educol/documents/000000325.htm>
- Carless, D. & Douglas, K. (2013a). Living, resisting and playing the part of athlete: Narrative tensions in elite sport. *Psychology of Sport and Exercise*, 14, 701-708. DOI: <http://dx.doi.org/10.180/14623943.2010.657793>.
- Carlson, J. A. (2010). Avoiding traps in member checking. *The Qualitative Report*, 15(5), 1102-1113.

- Cecić Erpić, S., Wylleman, P. & Zupančič, M. (2004). The effect of athletic and non-athletic factors on the sports career termination process. *Psychology of Sport and Exercise*, 5(1), 45-49.  
DOI: [http://dx.doi.org/10.1016/S1469-0292\(02\)00046-8](http://dx.doi.org/10.1016/S1469-0292(02)00046-8)
- Cicourel, A. U. (1964). Method and Measurement in Sociology. Cited in R. Y. S. Berry (1999).  
Collecting data by in-depth interviewing. Paper presented at the British Educational  
Research Association Annual Conference, University of Sussex at Brighton, September 2 -  
5 1999. DOI: <http://www.leeds.ac.uk/educol/documents/000001172.htm>
- Coleman, L. J. (2007). Parts do not make a whole: Lumping expertise into one whole. *High Ability  
Studies*, 18, 63-64.
- Collins, D., & MacNamara, A. (2012). The rocky road to the top: Why talent needs trauma. *Sports  
Medicine*, 4 (11), 1-8.
- Collins, D. & MacNamara, A. (2017). *Talent development: A practitioner guide*. Routledge: UK.
- Collins, R., Collins, D., MacNamara, A. & Jones, M. I. (2014). Change of plans: an evaluation of the  
effectiveness and underlying mechanisms of successful talent transfer. *Journal of Sports  
Sciences*, 32(17), 1621-1630. DOI: <http://doi.org/10.1080/02640414.2014.908324>
- Connelly, L. & Peltzer, J. (2016). Underdeveloped themes in qualitative research: relationship  
with interviews and analysis. *Clinical nurse specialist*, 30(1), 52-57. In F. Cavallerio, R,  
Wadey & C. R. D. Wagstaff (2017). Adjusting to retirement from sport: narratives of  
former competitive rhythmic gymnasts. *Qualitative Research in Sport, Exercise and  
Health*, 9(5), 533-545. DOI: <https://doi.org/10.1080/2159676X.2017.1335651>
- Côté, J. (1999). The influence of the family in the developmental of talent in sport. *The Sport  
Psychologist*, 13, 395-417.

- Côté, J., Baker, J. & Abernethy, B. (2007). Practice and play in the development of sport expertise. In R. Eklund & G. Tenenbaum (Eds.). *Handbook of Sport Psychology*. Hoboken, NJ: Wiley.
- Côté, J., Salmela, J. H., Trudel, P., Baria, A. & Russell, S. J. (1995). The coaching model: A grounded assessment of expertise gymnastic coaches' knowledge. *Journal of Sport and Exercise Psychology*, 17, 1-17.
- Creswell, J.W. (1998). *Qualitative inquiry and research design: Choosing among five approaches*. Thousand Oaks, CA: Sage.
- Creswell, J. W., Hanson, W. E., Clark Plano, V. L. & Morales, A. (2007). Qualitative research designs: Selection and implementation. *The Counselling Psychologist*, 35(2), 236-264.
- Dale, G. A. (1996). Existential Phenomenology: Emphasizing the experience of the athlete in sport psychology research. *The Sport Psychologist*, 10(4), 307-321.
- Davids, K. Araujo, D., Vilar, L., Renshaw, I. & Pinder, R. A. (2013). An ecological dynamics approach to skill acquisition: Implications for development of talent in sport. *Talent Development & Excellence*, 5, 21-34.
- Debois, N., Ledon, A. & Wylleman, P. (2015). A lifespan perspective on the dual career of elite male athletes. *Psychology of Sport and Exercise*, 21, 15-26.
- Dexter, L. A. (1970). *Elite and specialized interviewing*. Evanston, IL: Northwestern University Press.
- Dickens, W. T. & Flynn, J. R. (2001). Heritability estimates versus large environmental effects: The IQ Paradox Resolved. *Psychological Review*, 108(2), 346-369.

- Douglas, K. & Carless, D. (2006). Performance, discovery and relational narratives among women professional tournament golfers. *Women in Sport and Physical Activity Journal*, 15, 14-27.
- Durand-Bush, N. & Salmela, J. H. (2002). The Development and Maintenance of Expert Athletic Performance: Perceptions of World and Olympic Champions. *Journal of Applied Sport Psychology*, 14, 154-171. DOI: <https://doi.org/10.1080/10413200290103473>
- Dweck, C. S. (2006). *Mindset: the new psychology of success*. New York, Random House.
- Eklund, R. C. & Cresswell, S. L. (2007). Athlete burnout. In G. Tenenbaum & R. C. Eklund (Eds.). *Handbook of Sport Psychology* (3<sup>rd</sup> Ed.). New York: Wiley.
- Ellis, L. (2015). Clarke Carlisle has spelt it out: retiring from sport can be a traumatic loss. The Guardian (online). Available at: <https://www.theguardian.com/commentisfree/2015/feb/05/clarke-carlisle-retiring-sport-professional-athletes-depression> (Accessed: March 12, 2018).
- Ericsson, K. A., Krampe, R. T. & Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review*, 100, 363-406.
- ExpertAdvantage.com (2011). Pathways to Podium Research Project. Available at <http://expertadvantage.wordpress.com/2011/10/10/talent-transfer/> (Accessed: 12th August, 2013).
- Farrow, D., Baker, J. & MacMahon, C. (2013). *Developing sport expertise: Researchers and coaches put theory into practice*. Routledge: New York.
- Feldman, D. H. (1986). *Nature's gambit: Child prodigies and the development of human potential*. 2<sup>nd</sup> ed. New York: basic Books.

- Field Manual (1990). Army Leadership. Cited in J. L. Wyszynski (2005). Adaptability: Components of the Adaptive Competency for U.S. Army Direct and Organizational Level Leaders. School of Advanced Military Studies. United States Army Command and General Staff College: Fort Leavenworth, Kansas.
- Finn, J. & McKenna, J. (2010). Coping with academy to first team transitions in elite English male team sports: the coaches' perspective. *International Journal of Sports Science and Coaching*, 5, 257-279.
- French, K. E. & McPherson, S. L. (1999). Adaptations in response selection processes used during sport competition with increasing age and expertise. *International Journal of Sport Psychology*, 30, 173-193.
- Gagné, F. (1999). Nature or nurture? A re-examination of Sloboda and Howe's (1991) interview study on talent development in music. *Psychology of Music*, 27, 38–51.
- Gilbert, W., Cote, J., & Mallett, C. (2006). Developmental paths and activities of successful sports coaches. *International Journal of Sports Science and Coaching*, 1, 69-76.
- Giorgi, A. (1997). The theory, practice and evaluation of phenomenological method as a qualitative research practice procedure. *Journal of Phenomenological Psychology*, 28(2), 235-260. DOI: <http://search.proquest.com/docview/211498419?accountid=12860>
- Glauss, B. G. & Strauss, A. L. (1967). The discovery of grounded theory: Strategies for qualitative research. In N. Denzin & Y. Lincoln, (1994a). *Handbook of Qualitative Research*. London: Sage.
- Gould, D., Dieffenbach, K. & Moffett, A. (2002). Psychological characteristics and their development in Olympic champions. *Journal of Applied Sport Psychology*, 14, 17-2204.
- Gould, D. & Maynard, I. (2009). *Psychological preparation for the Olympic Games*. *Journal of Sports Science*, 27(13), 1393-1408. DOI: <https://doi.org/10.1080/02640410903081845>

- Greenleaf, C., Gould, D. & Dieffenbach, K. (2001). Factors influencing Olympic performance: Interviews with Atlanta and Nagano US Olympians. *Journal of Applied Sport Psychology*, 13, 154-184.
- Guba, E. G. & Lincoln, Y. S. (1994). Competing paradigms in qualitative research: In N. K. Denzin & Y. S. Lincoln (Eds.). *Handbook of qualitative research* (pp. 105-107). Thousand Oaks, CA: Sage.
- Gubrium, J. F. & Holstein, J. A. (2002). *Handbook of interview research: Context and method*. Thousand oaks, CA: Sage Publications.
- Gulbin, J. P. & Ackland, T. (2009). Talent identification and profiling. In T. R. Ackland, B. C. Elliott, & J. Bloomfield (Eds.). *Applied Anatomy and Biomechanics in Sport*. (pp. 11-26). Champaign, IL: Human Kinetics.
- Gulbin, J. P., Croser, M. J., Morley, E. J. & Weissensteiner, J. R. (2013). An integrated framework for the optimisation of sport and athlete development: A practitioner approach. *Journal of Sport Sciences*, 31(12), 1319-1331. DOI: <https://doi.org/10.1080/02640414.2013.781661>
- Gulbin, J. P., Oldenzel, K. E., Weissensteiner, J. R. & Gagne, F. (2010). A look through the rear-view mirror: developmental experiences and insights into high performance athletes. *Talent Development and Excellence*, 2(2), 149-164.
- Güllich, A. (2011). Training quality in high performance youth sport. Invited keynote at the Science for Success Conference, October, 11-12. Finland: Research Institute for Olympic Sports (KIHU). In A. Pankhurst & D, Collins (2013). Talent identification and development: The need for coherence between research, system and process. *Quest*, 65(10), 83-97. DOI: <https://doi.org/10/1080/00336297.2012.727374>
- Hahn, A. (1990). Identification and selection of talent in Australian rowing. *Excel*, 6, 5-11. Cited in Bullock, N., Gulbin, J. P., Martin, D. T., Ross, A., Holland, T. & Marino, F. (2009). Talent

- identification and deliberate programming in skeleton: Ice novice to Winter Olympian in 14 months. *Journal of Sports Sciences*, 27, 397-404.
- Halson, S. L., Martin, D. T., Gardner, A. S., Fallon, K. & Gulbin, J. (2006). Persistent fatigue in a female sprint cyclist after a talent-transfer initiative. *International Journal of Sport Physiology and Performance*, 1, 65-69.
- Hammersley, M., & Atkinson, P. (1983). *Ethnography: principles in practice*. London: Tavistock. In P. Atkinson (2005). Qualitative research – unity and diversity. *Qualitative Social Research*, 6(3). Available at: [www.qualitative-research.net/index.php/fqs/article/view/4/9/](http://www.qualitative-research.net/index.php/fqs/article/view/4/9/) (Accessed: May 5<sup>th</sup>, 2015).
- Hanton, S., Fletcher, D. & Coughlan, G. (2005). Stress in elite sport performers: a comparative study of competitive and organisational stressors. *Journal of Sports Sciences*, 23, 1129-1141.
- Hardy, L., Barlow, M., Evans, L., Rees, T., Woodman, T. & Warr, C. (2017). Great British medallists: Psychosocial biographies of Super-Elite and Elite athletes from Olympic sports. *Progress in Brain Research*, 232, 1-119. DOI: <https://doi.org.10.1016/bs.pbr.2017.03.004>
- Harper, M. & Cole, P. (2012). Member checking: can benefits be gained similar to group therapy? *The Qualitative Report*, 17(2), 510-517.
- Harriss, G & Atkinson, D. J. (2013). Ethical standards in sport and exercise science research: 2014 update. *International Journal of Sports Medicine*, 34, 1025-1028. DOI: <http://dx.doi.org/10.1055/s-0033-1358756>
- Hatamleh, M. R. (2013). The Life Transitions of High Performance Athletes Retirement from Sport. *European Scientific Journal*, 9(11), 336-353.

- Hays, K., Maynard, I., Thomas, O. & Bawden, M. (2007). Sources and types of confidence identified by World-class sports performers. *Journal of Applied Sport Psychology, 19*, 434-456.
- Hays, D. G. & Wood, C. (2011). Infusing qualitative traditions in counselling research designs. *Journal of Counselling & Development, 89*, 288-295.
- Helsen, W. F., Hodges, N. J., van Winckel, J. & Starkes, J. L. (2000). The roles of talent, physical precocity and practice in the development of soccer expertise. *Journal of Sports Science, 18*(9), 727-736.
- High Performance Sport New Zealand (2013). Talent Transfer. Available at: <http://hpsnz.org.nz/athletetransfer> (Accessed: January 6, 2016).
- Hindley, C. B. (1979). Problems of interviewing in obtaining retrospective information. In L. Moss & H. Goldstein (Eds.). *The Recall Method in Social Surveys*. London: University of London Institute of Education.
- Hoare, D. (2000). Predicting success in junior elite basketball players – the contribution of anthropometric and physiological attributes. *Journal of Science and Medicine in Sport, 3*(4), 391-405.
- Hoare, D. G. & Warr, C. R. (2000). Talent identification and women's soccer: An Australian experience. *Journal of Sports Sciences, 18*, 751-758.
- Hogan, K., & Norton, K. (2000). The price of Olympic gold. *Journal of Science and Medicine in Sport, 2*, 203-218.
- Hollings, S. (2002). Talent identification is easy but talent management is much more difficult. *New Studies in Athletics, 17*(3/4), 7-10.
- Holloway, I. & Wheeler, S. (1996). *Qualitative research for nurses*. Oxford: Blackwell Science.

- Holt, N. L. & Dunn, J. G. H. (2004). Toward a grounded theory of psychosocial competencies and environmental conditions associated with soccer success. *Journal of Applied Sport Psychology*, 16, 199-219.
- Houle, J. L., Brewer, B. W. & Kluck, A. S. (2010). Developmental trends in athletic identity: A two-part retrospective study. *Journal of Sport Behavior*, 33(2), 146-159.
- Howe, M. J. A., Davidson, J. W. & Sloboda, J. A. (1998). Innate talents: Reality or myth? *Behavioural and Brain Sciences*, 21, 399-442. Cited in Baker, J., Bagats, S., Busch, D., Strauss, B. & Schorer, J. (2012). Training differences and selection in a talent identification system. *Talent Development and Excellence*, 4(1), 23-32.
- Hugg, P. J. (1994). The selection of Australian youth soccer players based on physical and physiological characteristics. Unpublished master's thesis, University of Canberra. Cited in D. G. Hoare & C. R. Warr (2000). Talent identification and women's soccer: An Australian experience. *Journal of Sports Sciences*, 18, 751-758.
- Lavallee, D., & Wylleman, P. (2000). *Career transitions in sport: International perspectives*. Morgantown WV: Fitness Information Technology.
- Katzmarzyk, P. T., Malina, R. M. & Beunen, G. P. (1997). The contribution of biological maturation to the strength and motor fitness of children. Cited in R. Vaeyans, M. Lenoir, A. M. Williams, & R. M. Phillippaerts (2008). Talent identification and development programmes in sport: Current models and future predictions. *Sports Medicine*, 38(9), 703-714. DOI: <https://doi.org/10.2165/00007256-200838090-00001>
- Keane, R. M. (2008). Available at: [http://en.wikipedia.org/wiki/Roy\\_Keane](http://en.wikipedia.org/wiki/Roy_Keane). Cited in R. D. Samuel & G. Tenenbaum (2011). How do athletes perceive and respond to change-events: An exploratory measurement tool. *Psychology of Sport and Exercise Science*, 12, 392-406.

- Kerr, G., Berman, E. & De Souza, M. J. (2006). Disordered eating in women's gymnastics. *Journal of Applied Sport Psychology*, 12(2), 115-133. In F. Cavallerio, R. Wadey & C. R. D. Wagstaff (2017). Adjusting to retirement from sport: narratives of former competitive rhythmic gymnasts. *Qualitative Research in Sport, Exercise and Health*, 9(5), 533-545.  
<https://doi.org/10.1080/2159676X.2017.1335651>
- Kerr, J. H & Mackenzie, S. H. (2012). Multiple motives for participating in adventure sports. University of British Columbia. Available at  
[http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1031&context=rpta\\_fac](http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1031&context=rpta_fac)  
 (Accessed: 5<sup>th</sup> January, 2015).
- Klug, J. J. (2006). Effects of an Imagery Training Programme on Free Throw Self-Efficacy and Performance of High School Basketball Players. Masters Dissertation: Miami University. Available at [https://etd.ohiolink.edu/rws\\_etd/document/get/miami1156375861/inline](https://etd.ohiolink.edu/rws_etd/document/get/miami1156375861/inline)  
 (Accessed: 12<sup>th</sup> October, 2012).
- Knowles, A. & Lorimer, R. (2014). A case study of an athlete's experience of multiple change-events moving between team and individual sports. *Journal of Applied Sport Psychology*, 26, 197-210.
- Kobe-Shaq Feud, (2010). Available at: [http://en.wikipedia.org/wiki/Kobe%E2%80%93Shaq\\_feud](http://en.wikipedia.org/wiki/Kobe%E2%80%93Shaq_feud)  
 Cited in R. D. Samuel & G. Tenenbaum (2011). The role of change in athletes' careers: A scheme of change for sport psychology practice. *The Sport Psychologist*, 25, 233-252.
- Kuettel, A., Boyle, E. & Schmid, J. (2017). Factors contributing to the quality of the transition out of elite sports in Swiss, Danish and Polish athletes. *Psychology of Sport and Exercise*, 29, 27-39
- Kvale, S. (1983). The qualitative research interview: A phenomenological and a hermeneutical mode of understanding. *Journal of Phenomenological Psychology*, 14, 171-196.

- Kvale, S. (1996). *Interviews: An introduction to qualitative research interviewing*. Thousand Oaks, CA: Sage Publications.
- Jones, J. (2016). Trapped in the wrong body: recycling talent in elite sport. Available at: <http://www.conqagroup.com/blog/recycling-talent-ais-skeleton-olympics> (Accessed: March, 12<sup>th</sup>, 2018).
- Lally, P. (2007). Identity and athletic retirement: A prospective study. *Psychology of Sport and Exercise*, 8(1), 85-99. <https://doi.org/10.1016/j.psychsport.2006.03.003>
- Lavallee, D. & Andersen, M. B. (2000). Leaving sport: Easing career transitions. In M. B. Andersen. *Doing sport psychology*. Leeds: Human Kinetics.
- Lavallee, D., Gordon, S. & Grove, J.R. (1997). Retirement from sport and the loss of athletic identity. *Journal of Personal and Interpersonal Loss*, 2, 129-147.
- Lavallee, D., & Wylleman, P. (2000). *Career transitions in sport: International perspectives*. Morgantown WV: Fitness Information Technology.
- Lavallee, D., Wylleman, P. & Sinclair, D. A. (2000). An annotated bibliography on career transitions in sport: II. Empirical references. *Australian Journal of Career Development*, 7 (3) Spring.
- Lincoln, Y. S. & Guba, E. G. (1985). *Naturalistic inquiry*. London: Sage.
- Lonsdale, C., Hodge, K. & Raedeke, T. D. (2007). Athlete engagement: 1. A qualitative investigation of relevance and dimensions. *International Journal of Sport Psychology*, 38, 451-470.
- MacNamara, A., Button, A. & Collins, D. (2010a). The role of psychological characteristics in facilitating the pathway to elite performance. Part 1: Identifying mental skills and behaviours. *The Sport Psychologist*, 24(1), 52-73.

- MacNamara, A., Button, A. & Collins, D. (2010b). The role of psychological characteristics in facilitating the pathway to elite performance. Part 2: Examining environmental and stage related differences in skills and behaviours. *The Sport Psychologist*, 24(1), 74-96.
- MacNamara, A. & Collins, D. (2011). Comment on “Talent identification and promotion programmes of Olympic athletes”. *Journal of Sports Sciences*, 29 (12), 1353-1356.
- MacNamara, A., & Collins, D. (2015): Second Chances: Investigating Athletes’ Experiences of Talent Transfer. *PLoS ONE* 10 (11): e0143592. DOI: <https://doi.org/10.1371/journal.pone.0143592>
- Martin, L. A., Fogarty, G. J. & Albion, M. J. (2014). Changes in Athletic Identity and Life Satisfaction of Elite Athletes as a Function Retirement Status. *Journal of Applied Sport Psychology*, 26(1), 96-110. <http://doi.org/10.1080/10413200.2013.798371>
- Martingough22.wordpress.com (2011). What now for Rebecca Romero? Available at <https://martingough22.wordpress.com/2011/10/12/what-now-for-rebecca-romero/> (Accessed: 12<sup>th</sup> August, 2013).
- McAdams, D. P. (2008). The Life Story Interviews, Foley Center for the Study of Lives. Available from: <https://www.sesp.northwestern.edu/foley/instruments/interview> Accessed: 8<sup>th</sup> March, 2018.
- McMorris, T., & Beazeley, A. (1997). Performance of experienced and inexperienced soccer players on soccer specific tests of recall, visual search and decision making. *Journal of Human Movement Studies*, 33, 1-13.
- Messner, M. A. (1992). Power at play: Sports and the problem of masculinity. Boston, MA: Beacon Press. In N. J. Ronkainen & T. V. Ryba (2017). Rethinking age in athletic retirement: An existential-narrative perspective. *International Journal of Sport and*

Exercise Psychology, 15(2), 146-159. DOI:

<https://doi.org/10.1080/1612197X.2015.1079920>

Miles, M. & Huberman, A. (1994). *Qualitative data analysis*. Beverly Hills, CA: Sage Publications.

Moesch, K, Elbe, A. M., Hauge, M. L. & Wikman, J. M. (2011). Late specialization: the key to success in centimeters, grams or seconds (cgs) sports. *Scandinavian Journal of Medicine and Sport Sciences*, 21(6), 282-290. DOI: <https://doi.org/10.1111/j.1600-0838.2010.001280>

Mohamed, H., Vaeyens, R., Matthys, S., Multael, M., Lefevre, J., Lenoir, M., & Philippaerts, R. (2009). Anthropometric and performance measures for the development of a talent detection and identification model in youth handball. *Journal of Sports Sciences*, 27(3), 257–266.

Morgan, W. P. (1979). Prediction of performance in athletics. In P. Klavara and J. V. Daniel (Eds.). *Coach, athletes and the sport psychologist* (pp. 173-186). Toronto: University of Toronto Press.

Morrison, M. (2018). Nine Box Grids for Talent Management. Available at <https://rapidbi.com/nine-box-grids-for-talent-management/> (Accessed: January 2<sup>nd</sup>, 2019).

Moss, L. (1979). Problems of interviewing in obtaining retrospective information. In L. Moss & H. Goldstein (Eds.). *The Recall Method in Social Surveys* (pp. 100-108). London: University of London Institute of Education.

Musch, J. & Grondin, S. (2001). Unequal competition as an impediment to personal development: A review of the relative age effect in sport. *Developmental Review*, 21, 147-167.

Nesti, M. (2004). *Existential psychology and sport: implications for research and practice*.

London: Routledge

New Zealand Institute of Sport (2013). About Us. Available at <https://nzis.co.nz/about-ua/overview/> (Accessed: January 12, 2018).

New Zealand National Athlete Transfer System (2013). Available at <https://hpsnz.org.nz/athletetransfer> (Accessed: January 12, 2018).

Nieuwenhuis, C. F., Spamer, E. J. & Van Rossum, J. H. A. (2002). Prediction function for identifying talent in 14-15 year old female field hockey players. *High Ability Studies*, 13(1), 21-33.

Oldenzel, K., Gagné, F. & Gulbin, J. P. (2004). Factors affecting the rate of athlete development from novice to senior elite: how applicable is the 10-yr rule? In J. Gulbin, J, Weissensteiner, K. Oldenzel & F. Gagne. Patterns of performance development in elite athletes. *European Journal of Sport Science*. January, 2013. DOI: <https://doi.org/10.1080/17461391.2012.756542>

Orlick, T. & Partington, J. (1988). Mental links to excellence. *The Sport Psychologist*, 2, 105-130.

Orum, A. M., Feagin, J. R. & Sjoberg, G. (1991). Introduction: The Nature of the Case Study. In M. Sokolovsky (1996). Case Study as a Research Method to Study Life Histories of Elderly People: Some ideas and a case study of a case study. *Journal of Aging Studies*, 10(4), 281-294.

Park, S., Lavalley, D. & Tod, D. (2013). Athletes' career transitions out of sport: a systematic review. *International Review of Sport and Exercise Psychology*, 6(1), 22-53.

Paterson, A. S. (1997). A humanistic framework for interviewer skills. Paper presented at the British Educational Research Association Annual Conference, University of York. In

<http://www.leeds.ac.uk/educol/documents/000000325.htm> Accessed on 12<sup>th</sup> January, 2015.

Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2<sup>nd</sup> ed.). Newbury Park, CA: Sage.

Patton, M. Q. (2002). *Qualitative evaluation and research methods* (3<sup>rd</sup> ed.). Thousand Oaks, CA: Sage Publications.

Patton, M. Q. (2002). Two decades of developments in qualitative inquiry. *Qualitative Social Work* 1(3), 261-283.

Pearson, R. E. & Petitpas, A. J. (1990). Transitions of athletes – Developmental and preventative Perspectives. *Journal of Counselling and Development*, 69 (1), 7-10.

Petitpas, A. (2009). Sport career transition. In: B. Brewer (Ed.) *Handbook of sports medicine and science: sport psychology*. West Sussex, UK: Wiley-Blackwell Publishing, 113-120. DOI: <https://doi.org/10.1002/9781444303650.ch11>

Petitpas, A., Champagne, D., Chartrand, J., Danish, S. & Murphy, S. (1997). *Athlete's Guide to Career Planning: Key to success from the playing field to professional life*. Leeds: Human Kinetics.

Petre, M. & Rugg, G. (2010). *The Unwritten Rules of PhD Research Open Up Study Skills*. Berkshire: Open University Press, 2010). Available at: <http://writepass.com/journal/2013/05/how-to-demonstrate-significant-contribution-original-study-in-your-phd-thesis/> (Accessed: 23rd April, 2018).

Phillips, E., Davids, K., Renshaw, I. & Portus, M. (2010). Expert performance in sport and the dynamics of talent development. *Sports Medicine*, 40(4), 271-283.

Phoenix, C., Faulkner, G. & Sparks, A. C. (2005). Athletic identity and self-aging: the dilemma of exclusivity. *Psychology of Sport and Exercise*, 6(3), 335-348.

- Phoenix, C. & Sparkes, A. (2006b). Young athletic bodies and narrative maps of aging. *Journal of Aging Studies*, 20, 107-121. <https://doi.org/10.1016/j.jaging.2005.06.002>
- Pidgeon, N. & Henwood, K. (1997). Using grounded theory in psychological research. In N. Hayes (Ed.), *Doing qualitative analysis in psychology*. Hove: Psychology Press.
- Phillips, E., Davids, K., Renshaw, I. & Portus, M.R. (2010). Expert performance in sport and the dynamics of talent development. *Sports Medicine*, 40(4), 271-283.
- Pinder, R. A., Renshaw, I. & Davids, K. (2013). The role of representative design in talent development: a comment on "Talent identification and promotion programmes of Olympics athletes". *Journal of Sports Sciences*, 31(8), 803-806.
- Plucker, J. A. & Barab, S. A. (2005). The importance of contexts in theories of giftedness: Learning to embrace the messy joys of subjectivity. In A. Ziegler, E. L. Grigorenko & B. Harder (2014). *The significance of learning contexts in talent development. High Ability Studies*, 25(1), 1-3.
- Poczwadowski, A, Barott, J. E. & Henschen, K. P. (2002). The athlete and the coach: their relationship and its meaning. Results of an interpretive study. *International Journal of Sport Psychology*, 33, 116-140.
- Poczwadowski, A., Diehl, B., O'Neill, A., Cote, T. & Haberl, P. (2013). Successful Transitions to the Olympic Training Center, Colorado Springs: A Mixed Method Exploration with Six Resident-Athletes. *Journal of Applied Sport Psychology*, 26, 33-51.
- Polkinghorne, D. E. (1989). Phenomenological Research Methods. In R.S. Valle & S. Halling (Eds.), *Existential-Phenomenological Perspectives in Psychology: Exploring the breadth of human experience*. (pp. 41-60). New York, NY, US: Plenum Press.
- Potter, J. & Hepburn, A. (2005). Qualitative interviews in psychology: problems and possibilities. *Qualitative research in psychology*, 2(4), 281-307.

- Pummell, B., Harwood, C. & Lavalley, D. (2008). Jumping to the next level: Examining the within-career transition of the adolescent event riders. *Psychology of Sport and Exercise, 9*(4), 427-447.
- Rea, T. & Lavalley, D. (2015). An examination of athletes' experiences of the talent transfer process. *Talent Development and Excellence, 7*(1), 41-67.
- Reilly, T., Williams, A. M., Nevill, A. & Franks, A. (2000). A multidisciplinary approach to talent identification in soccer. *Journal of Sport Science, 18*(9), 695-702.
- Renshaw, I., Oldham, T., Glazier, P., & Davids, K. (2004). Around the world: Why applied sports scientists need a theoretical model of the performer. *The Sport and Exercise Scientist, 1*, 24.
- Riessman, C. K. (2008). *Narrative methods for the human sciences*. Thousand Oaks: Sage.
- Renshaw, I., Oldham, T., Glazier, P. & Davids, K. (2004). Around the world: Why applied sports scientists need a theoretical model of the performer. *The Sport and Exercise Scientist, 1*, 24.
- Rubin, H. & Rubin, I. (1995). *Qualitative interviewing. The art of hearing data*. Thousand Oaks, CA: Sage. DOI: <http://dx.doi.org/10.4135/9781452226651>
- Runco, M. (2007). Achievement sometimes requires creativity. *High Ability Studies, 18*, 75-77.
- Russell, K. (1989). Athletic talent: From detection to perfection. *Scientific Periodical on Research and Technology in Sport, 9*(1), 1-6.
- Samuel, R. D. & Tenenbaum, G. (2011a). The role of change in athletes' careers: a scheme of change for sport psychology practice. *The Sport Psychologist, 25*, 233-25.

- Samuel, R. D. & Tenenbaum, G. (2011b). How do athletes perceive and respond to change events: An exploratory measurement tool. *Psychology of Sport and Exercise, 12*, 392-406.
- Samuel, R. D. & Tenenbaum, G. (2013). Athlete's decision making in career change events. *The Sport Psychologist, 27*, 78-82.
- Sandelowski, M. (1994). Focus on qualitative methods. The use of quotes in qualitative research. *Research in Nursing and Health, 17*(6), 479-482.  
<https://doi.org/10.1002/nur.4770170611>
- Savage, J. (2006). Ethnographic evidence: The value of applied ethnography in healthcare. *Journal of Research in Nursing, 11*(5), 383-393.
- Scanlan, T. K., Ravizza, K. & Stein, G. L. (1989). An in-depth study of former elite figure skaters: II. Sources of Enjoyment. *Journal of Sport and Exercise Psychology, 11*, 65-83.
- Scanlan, T. K., Russell, D. G., Wilson, N. C. & Scanlan, L. A. (2003). Project on elite athlete commitment (PEAK): 1. Introduction and methodology, *Journal of Sport and Exercise Psychology, 25*, 360-376.
- Scanlan, T. K., Stein, G. L., & Ravizza, K. (1991). An in-depth study of former elite figure skaters: III. Sources of Stress. *Journal of Sport and Exercise Psychology, 13*, 103-120.
- Schlossberg, N. K. (1981). A model for analyzing human adaptation to transition. *The Counselling Psychologist, 9*, 2-18.
- Schlossberg, N.K. (1984). *Counselling adults in transition: Linking Practice with Theory*. New York, New York: Springer Publishing Company, Inc.

- Shachar, B, Brewer, B. W., Cornelius, A. E. & Petitpas, B. J. (2004). Career decision making, athletic identity and adjustment difficulties among retired athletes: a comparison between coaches and non-coaches. *Scientific Journal on Sport*, 10(1), 71-85.
- Sharf, R. S. (1997). Applying career development theory to counselling. Pacific Grove, CA: Brooks.
- In P. Wylleman & D. Lavalley (Eds.). *A developmental perspective transitions faced by athletes*. Morgantown, WV: Fitness Information Technology.
- Shulman, S. & Ben-Artzi, E. (2003). Age-related differences in the transition from adolescence to adulthood and links with family relationships. *Journal of Adult Development*, 10 (4), 217-266.
- Si, G. & Lee, H C. (2007). Cross-cultural issues in sport psychology research. In *Social Psychology in Sport*. Edited by S. Jowett & D. Lavalley, 279-334. Champaign, IL: Human Kinetics. DOI: <https://doi.org/10.1080/1612197X.2009.9671916>
- Simonton, D. K. (1999). Talent and its development: An emergenic and epigenetic model. *Psychological Review*, 106(3), 435-457.
- Simonton, D. K. (2001). Talent development as a multidimensional, multiplicative, and dynamic process. *Current Directions in Psychological Science*, 10, 39-43.
- Sinclair, D. A. & Orlick, T. (1993). The effects of transition on high performance sport. In D. Hackfort (Ed.). *Psycho-social issues and interventions in elite sports* (pp. 29-55). Frankfurt: Lang.
- Smeeton, N. J., Ward, P. & Williams, M. (2004). Do pattern recognition skills transfer across sports? A preliminary analysis. *Journal of Sports Sciences*, 22, 205-213.
- Smith, B. & Sparks, A. (2012). *Routledge handbook of qualitative research in sport and exercise*. New York: Routledge.

- Sokolovsky, M. (1996). Case Study as a Research Method to Study Life Histories of Elderly People: Some ideas and a case study of a case study. *Journal of Aging Studies*, 10(4), 281-294.
- Sparkes A. (1995). Writing People: the dual crises of representation and legitimation in qualitative inquiry. *Quest*, 47, 158-195.
- Sparkes, A. C. (1998). Validity in qualitative inquiry and the problem of criteria: implications for sport psychology. *The Sport Psychologist*, 12, 363-386.
- Sparkes, A. C. & Smith, B. (2014). *Qualitative research methods in sport, exercise and health: From process to product*. London: Routledge.
- Spiegelberg, H. (1975). *Doing phenomenology: Essays on and in phenomenology*. The Hague, Netherlands: Martinus Hijhoff.
- Sporting Giants (2010). Sporting giant's initiative. Available at:  
<http://www.uk sport.gov.uk/pages/sportinggiants> (Accessed: January 6, 2016).
- sportscotland Institute of Sport (2014). Gold4Glasgow. Available at:  
<https://www.teamscotland.scot/2011/gold4glasgow-powerlifting/> (Accessed: March 22, 2014).
- Staerck, A. (2003). The anthropometric and physical requirements of women's hammer throwing: The implications for talent identification. *Journal of Sports Science*, 21(4), 305-306.
- Stambulova, N. B. (1994). Developmental sports career investigations in Russia: A post-perestroika analysis. *The Sport Psychologist*, 8, 221-237.
- Stambulova, N. B. (2000). Athlete's crisis: A developmental perspective. *International Journal of Sport Psychology*, 31, 584-601.

- Starkes, J. L. (2000). The road to expertise: Is practice the only determinant? *International Journal of Sport Psychology*, 31, 431–451.
- Starkes, J. L. (2007). Plus ça change, plus c'est la même chose. *International Journal of Sports Psychology*, 38, 89-95.
- Stephan, Y. & Brewer, B.W. (2007). Perceived determinants of identification with the athlete role among elite competitors. *Journal of Applied Sport Psychology*, 19, 67-79.
- Strauss, A. & Corbin, J. (1990). Basics of qualitative research: Grounded theory procedures and techniques. Newbury Park, CA: Sage Publications, Inc.
- Stroobants, V. (2005). Stories about learning in narrative biographical research. *International Journal of Qualitative Studies in Education*, 18(1), 47-61.  
<https://doi.org/10.1080/09518390412331318441>
- Taekwondocoach.com (2012). Talent transfer – A new Era for Taekwondo? Pt 1. Available at:  
[www.taekwondocoach.com/taekwondo-competition-talent-transfer-a-new-era-for-taekwondo-pt1/](http://www.taekwondocoach.com/taekwondo-competition-talent-transfer-a-new-era-for-taekwondo-pt1/) (Accessed: June 3, 2018).
- Taylor, J. & Ogilvie, B. C. (2001). Career termination among athletes. In P. Wylleman & D. Lavallee (Eds.) *A developmental perspective transitions faced by athlete*. Fitness Information Technology: Morgantown, WV.
- Tenenbaum, G., Sar-El, T. & Bar-Eli, M. (2000). Anticipation of ball location in low and high skill performers: A developmental perspective. *Psychology of Sport and Exercise*, 1(2), 117-128. DOI: [http://doi.org/10.1016/S1469-0292\(00\)00008-X](http://doi.org/10.1016/S1469-0292(00)00008-X)
- Tesch, R. (1990). *Qualitative Research: Analysis, types and software tools*. Basingstoke: Falmer.

The Guardian (2012). London 2012 rule changes likely to restrict GB cyclists' medal haul.

Available at: <http://www.theguardian.com/sport/blog/2012/feb/14/london-2012-rule-changes-cyclists> (Accessed: January 6, 2016).

The Independent (2016). How many millions each Olympic medal has really cost Britain.

Available at <http://www.theindependent.co.uk/sport/olympics/rio-2016-great-britain-secures-second-olympic-medal-table-sporting-superpower-tokyo-2020-a7202761.html>  
(Accessed: March 10, 2018).

Theregister.co.uk (2012). How talent-spotting boffins help Team GB bag Olympic Gold. Available

at: [http://www.theregister.co.uk/2012/08/09/building\\_an\\_olympian/](http://www.theregister.co.uk/2012/08/09/building_an_olympian/) (Accessed at: June 3, 2018).

Thomas, D. R. (2006). A general inductive approach for analysing qualitative evaluation data. *The American Journal of Evaluation*, 27, 237-246.

Truesdell, B. (1999). Oral history techniques: how to organize and conduct oral history interviews. Bloomington, IN: Indiana University, Center for the Study of History and Memory. Available at: [http://www.indiana.edu/~cshm/oral\\_history\\_techniques.pdf](http://www.indiana.edu/~cshm/oral_history_techniques.pdf)  
(Accessed: August 2nd, 2015).

Tucker, R. & Collins, M. (2012). What makes champions? A review of the relative contribution of genes and training to sporting success. *British Journal of Sports Medicine*, 46, 555–561.

Cited in J. Baker & B. Young (2014). 20 years later: deliberate practice and the development of expertise in sport. *International Review of Sport and Exercise Psychology*, 7(1) 135-157. DOI: <https://doi.org/10.1080/1750984X.2014.896024>

Tulle, E. (2008). The ageing body and the ontology of ageing: Athletic competence in later life.

*Body and Society*, 14(3), 1-19. DOI: 10.1177/1357034X08093570

UK Sport (2008). London 2012 – it could be you. Talent identification and confirmation – The hunt for London 2012 talent. Available at:

[http://www.eis2win.co.uk/pages/talent\\_identification.aspx](http://www.eis2win.co.uk/pages/talent_identification.aspx) (Accessed: 12th August, 2013).

UK Sport (2010). Pitch to Podium. Available at: <https://www.lfe.org.uk/news/pitch2podium> (Accessed: 12<sup>th</sup> August, 2013).

UK Sport (2012). World-Class performance programme. Available at:

<http://www.uk sport.gov.uk/pages/wc-performance-programme/> (Accessed: 12th August, 2013).

UK Sport (2012). Tall and Talented. Available at:

<http://uksport.gov.uk/pages/talent-2016-tall-and-talented> (Accessed: January 6, 2016).

UK Sport Talent Team (2013). Frontline solutions. Available at:

<http://www.uk sport.gov.uk/pages/frontline-solutions> (Accessed: January 6, 2016).

UK Sport (2014). Target Tokyo. Available at:

<http://www.uk sport.gov.uk/news/2014/07/17/british-shooting-targeting-tokyo-with-new-talent-id-campaign> (Accessed: January 6, 2016).

UK Sport (2016a). Previous campaigns: Tall and Talented. Available at:

<http://www.uk sport.gov.uk/our-work/talent-id/previous-campaigns> (Accessed: January 6, 2016).

UK Sport (2016b). Have you got what it takes to be a Champion? Find out with

#DiscoverYourGold. Available at <http://www.uk sport.gov.uk/news/2016/07/12/have-you-got-what-it-takes-to-be-a-champion> (Accessed: March 2, 2018).

UK Sport (2018). #DiscoverYourGold. Available at: <http://www.uk sport.gov.uk/our-work/talent-id> (Accessed: March 2, 2018).

UK Sport (2020). Target Tokyo. Available at:

<http://www.uk sport.gov.uk/news/2014/07/17/british-shooting-targeting-tokyo-with-new-talent-id-campaign> (Accessed: January 6, 2016).

Vaeyans, R., Güllich, A., Warr, C. & Phillippaerts, R. (2009). Talent identification and promotion programmes of Olympic athletes. *Journal of Sports Sciences*, 27(13), 1367-1380.

Vaeyans, R., Lenoir, M., Williams, A. M. & Phillippaerts, R. M. (2008). Talent identification and development programmes in sport: Current models and future predictions. *Sports Medicine*, 38(9), 703-714.

Van Manen, M. (1990). *Researching lived experience: Human science for an action sensitive pedagogy*. New York: State University of New York Press.

Van Manen, M. (1997). Researching lived experience: Human science for an action sensitive pedagogy. Cited in M. D. Vagle (2009). Validity as intended: 'bursting forth toward' bridling in phenomenological research. *International Journal of Qualitative Studies in Education*, 22(5), 585-605. DOI: <https://doi.org/10.1080/0951839003048784>

Van Yperen, N. W. (2009). Why some make it and others do not: Identifying psychological factors that predict career successes in professional adult soccer. *The Sport Psychologist*, 23, 317-329.

Wapner, S. & Craig-Bay, L. (1992). Person-in-environment transitions: Theoretical and methodological approaches. *Environment and Behaviour*, 24, 161-188.

Weinberg, R. S., Butt, J. & Knight, B. (2001). High school coaches' perceptions of the process of goal setting. *The Sport Psychologist*, 15, 20-47.

Weissensteiner, J., Abernethy, B., Farrow, D. & Gross, R. (2012). Distinguishing psychological characteristics of expert cricket batsmen. *Journal of Science and Medicine in Sport*, 15(1), 74-79.

- Williams, A. M. & Davids, K. (1998). Visual search strategy, selective attention, and expertise in soccer. *Research Quarterly for Exercise and Sport*, 69, 111-128.
- Williams, A.M. & Franks, A. (1998). Talent identification in soccer. *Sports, Exercise and Injury*, 4, 159-165.
- Williams, A. M. & Reilly, T. (2000). Talent identification and development in soccer. *Journal of Sports Sciences*, 18, 657-667.
- Wray, N., Markovic, M. & Manderson, L. (2007). Researcher saturation: the impact of data triangulation and intensive-research practices on the researcher and qualitative research process. *Qualitative health research*, 17(10), 1392-1402.  
<https://doi.org/10.1177/1049732307308308>
- Wylleman, P., De Knop, P., Ewing, M. & Cummings, S. P. (2000). Transitions in youth sport: A developmental perspective on parental involvement. In D. Lavalley & P. Wylleman (Eds.), *Career transitions in sport: International perspectives* (pp 143-160). Morgantown, WV: Fitness Information Technology.
- Wylleman, P. & Lavalley, D. (2004). A developmental perspective of transitions faced by athletes. In M. Weiss (Ed.). *Developmental sport and exercise psychology: A lifespan perspective*. Fitness Information Technology: Morgantown, WV.
- Wylleman, P., Reints, A. & De Knop, P. (2013). A developmental and holistic perspective on the athletic career. In L. Wei (ed.). *Abstracts of the ISSP 13<sup>th</sup> World Congress of Sport Psychology*. (p. 2). Beijing: ISSP – Beijing Sport University.
- Wyszynski, J. L. (2005). *Adaptability: Components of the Adaptive Competency for U.S. Army Direct and Organizational Level Leaders*. School of Advanced Military Studies. United States Army Command and General Staff College: Fort Leavenworth, Kansas.



## Informed Consent Form

*Name:* \_\_\_\_\_

*Name of Study:* 'The Subjective Experience of a Talent Transfer Athlete.'

*Researcher:* Tracy Rea

The researcher has explained the nature and purpose of the research and I understand fully what is proposed and have had opportunity to discuss the details with the researcher and ask any questions.

I have agreed to take part in this study as it has been outlined to me, but I understand that I am completely free to withdraw from the study or any aspect of the study at any time I wish.

I understand that this study is investigating the area of talent transfer. This study is being conducted under the supervision of Professor David Lavallee, and may be of no benefit to me personally.

I have been ensured that my confidentiality and anonymity will be protected and that all information collected during the research will be kept in a secure place.

.....

I hereby fully and freely consent to participate in the study which has been fully explained to me.

**Signature** \_\_\_\_\_

**Date** \_\_\_\_\_

I confirm that I have explained to the participant (named above) the nature and purpose of the study.

*Signature of researcher* \_\_\_\_\_

*Date* \_\_\_\_\_

## Appendix B: Interview Guide for First Study

### Sporting History and Background

1. Please share with me your introduction to sport?
2. How did your involvement progress?
3. During your early years, what was the reason why you continued/progressed in sport?

### Transition Experiences/Main Questions

*These questions were adapted dependent on whether the athletes went through a formal/supported talent transfer or whether they did it informally (of their own accord).*

1. Can you remember the first time you thought about changing sport?
2. What was the reason you decided to leave your previous sport?
3. How old were you when you first thought about changing and then made the transition?
4. How did you feel knowing that you were going to leave your original sport?
5. Was there a particular person or action that introduced you to the new sport?
6. Why choose the sport that you did?
7. Were there any particular physical or psychological characteristics that you knew would help you with the new sport?
8. How did you go about investigating the sport?
9. Was there a particular individual/team that supported you through the process?
10. Can you share with me your experiences about the testing event?
11. What was the selection criterion that was used?
12. What were the goals for you? Were you aiming for anything in particular?
13. What was your criteria of success?
14. Were there any role models that you were aware of that had 'switched' sport?
15. Did your identity change in the new sport? How long after you started the new sport could you identify yourself with it?
16. What would you advise any other athletes that were thinking of going through talent transfer transition?

### Probe questions

- Can you tell me a little more about...?
- Can you give me an example of...?
- What else?
- Go on...

### Follow Up Questions

- Is there anything else that you would like to share that I have not asked and you consider important?
- Is there anything you would like to ask me? Or wanting clarity on anything next steps?

## Appendix C: Interview Guide for Second Study

### 1<sup>st</sup> Interview – The humble beginning/Introduction

- Tell me about you the person in the here and now? What are you like?
- How would you describe yourself?
- What life experiences have shaped the person that you are?
- How would your friends describe you?
- How would your peers describe you?
- How would your sporting peers describe you?
- What drives you in life? What is important to you?
- What significant others supports you in life?
- How did you get introduced to sport in general?
- What significant memories do you have re sport from when you were younger?
  - What else?
- What do you think were the benefits of being introduced?
- How important was sport within your family/as an identity?
- Looking back, what do you think were the key components that enabled you to be physically literate? Physically robust?
- How did you develop positive psychological characteristics as a child?
- Is there anything else that I have missed that you feel is important for me to know about Jenny?

### 2<sup>nd</sup> Interview – Pre Talent Transfer

- How old were you when you started judo?
- How were you introduced to the sport?
- Who were the key figures involved that progressed you within the sport?
- And what age did you have to decide to choose between sports?
- What made you choose judo?
- If you could look back in hindsight, which sport would you choose to be have competed in?
- Is there anything you feel as though you wanted to achieve but didn't within judo?
- How did you feel when you decided that you would not continue within judo?
- Was there ever a time when you feel as though you had "made it" within judo?
- How do you look back at the sport of judo? And your time within it?

### 3<sup>rd</sup> Interview – During Talent Transfer

- There was a period of time where you were not involved in anything competitively. How was that time for you?
- What else was going on at that time for you? Uni? Family? Significant others?
- You were still training "ticking over" in the gym whilst not competing in judo. Why was this important to you? What made you commit to continuing with training?
- The catalyst previously was an S&C coach stating that you were wasting your talent. Tell me a bit more about that?

- What attributes did that S&C coach see you in that he might not have seen in another athlete?
- So how might you define what your S&C coach saw in you for other coaches/Institute serviced providers to identify in other athletes?

#### 4<sup>th</sup> Interview – Post Talent Transfer

- What made the choose cycling as the sport to transfer to?
- How long have you been a cyclist (identity) in comparison to how long you have been training?
- How do you feel about cycling now?
- How do you feel when people call you a cyclist? In particular your identity being referenced to a cyclist?
- What are your aspirations in cycling?

Before the next interview will you please do a timeline of your life so far in sporting and life contexts that I can use as a clear indication of significant moments in your life?

#### 5<sup>th</sup> Interview – Summary and Recommendations

- What will you do after the CWG?
- What would you look back with fondness about?
- What would you do differently if you were given the chance?
- If you were coaching an athlete during the transition of transferring to another sport, what advice would you give from your experiences?
- How would you describe your identity now?
- What would you argue were the more challenging parts of making the transition?
- What else would you like to tell me that I have not asked?
- What is important for me to know about you and your life history?