The Feasibility and Acceptability of an intervention to improve career adaptability skills in Olympic and Paralympic athletes

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Declaration

I hereby certify that this material, which I now submit for assessment on the programme of study leading to the award of PhD is entirely my own work, and that I have exercised reasonable care to ensure that the work is original, and does not to the best of my knowledge breach any law of copyright, and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work.

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Abstract

The Olympic and Paralympic Games are a pinnacle experience for athletes, coaches, support staff and their families. Conceptualized as a series of meta-career transitions, each Games is unique in its own way and present intense, emotional, physical and psychological demands on competitors. Research has shown that individuals' ability to adapt to career transitions has implications for their well-being, mental health, motivation and productivity. Consequently, the aim of this research was to develop and test an athlete transition support programme that would enhance career adaptability skills in Irish Olympic and Paralympic athletes, coaches and athlete support providers. Best practice in intervention development is to approach the design systematically utilizing prior evidence and theory, and to subsequently pilot the intervention to assess key barriers and facilitators to successful implementation. Following this, exploratory trials should be conducted, which ultimately lead to the implementation of a definitive evaluation. Following the six steps of quality intervention development model, this research presents four studies which inform the development and testing of a psychoeducation intervention delivered to Olympic and Paralympic athletes, coaches and athlete support providers prior to their participation in the Rio 2016 Summer Games. There is a gap in the career transition in sport literature pertaining to preventive interventions which this thesis addresses. Additionally, career adaptability skills have yet to be explored in any elite sport context. This thesis also draws the field of implementation science into sport psychology. The first study is a systematic review of the characteristics of the implementation of well-being related interventions in Olympic and Paralympic athletes. The purpose of this study is to review literature which has attempted to enhance the well-being of Olympic and Paralympic athletes and extract data pertaining to the implementation characteristics of the intervention. The findings suggest that to date little consideration has been given to the

impact of implementation factors on intervention effectiveness. The second study is a qualitative exploration of the factors Irish Olympic and Paralympic athletes, coaches, and athlete support providers believe affect an athlete's engagement in a psychoeducation intervention. The key findings suggest for such an intervention to be feasible and acceptable, it should be delivered in group format, at the training location of the athletes, and be packaged as a workshop to assist athletes in adapting to all stages of the Games and should emphasize the benefits to performance. The third study explores the initial efficacy of video as a delivery method for career adaptability psychoeducation with this population. Participants included 168 athletes with a mean age of 26.46 years (N = 116). Additionally, 10 coaches with a mean age of 40.20 years and 47 athlete support providers with a mean age of 39.77 years participated. Informed by entertainment-education theory, a video 155 seconds in length was found to be effective for communicating up to three learning points immediately following viewing.

The fourth study explored the transfer of learning from a group-based psychoeducation intervention delivered over the course of a 90-minute workshop. 140 individuals comprised of Olympic and Paralympic athletes, coaches and sport science and medicine support personnel attended the workshop. Of the 140 attendees, ninety-eight attendees consented to participate in the research. Sports represented included Cerebral Palsy football, mixed Paralympic events, hockey, boxing, rugby 7's, athletics, rowing, triathlon, pentathlon, badminton. Overall participants rated the workshops as satisfactory, useful and relevant to their career. Recommendations for the refinement of the intervention and future research were made. A pre-post evaluation of participants' ability to accurately generalize the content of the intervention found significant improvement in thoughts and behaviours following the intervention, with small-large effect sizes calculated. Additionally, less than 20% of all participant's successfully transferred their learning to the real-world context at two time points following

intervention. Overall, participants rated their adaptation to the post-Games career meta-transition positively, and listed skills learned at the workshop as helpful during this adaptation. This thesis contributes to the literature on career adaptability, implementation science, and the practical delivery of career transitions interventions to Olympic and Paralympic populations. Strengths of this thesis lie in the systematic development and testing of a psychoeducation intervention, and in the practical application of career transition theory. Practical recommendations for the development of psychoeducation interventions including both digital video and group format delivery are made.

I. Chapter 1: Introduction

Problem Statement and Purpose

In sport, stage or linear models of career transition continue to be used to conceptualise and guide interventions despite the fact career development is no longer conceived as a linear process but instead viewed as unstable and transitional over the individual's life span (Phillips, 2015). Recent theory proposes that contemporary career pathways are nonlinear, requiring individuals to activate and use a range of resources to respond to new and frequent demands. Research has shown that individuals' ability to successfully negotiate transitions has implications for their well-being, mental health, motivation and productivity (Shin & Lee, 2016). This has increased pressure on organisational support systems to put in place infrastructures to empower individuals to manage their career paths and deal with multiple transitions. This is certainly the case in Irish elite sport where the need to maintain and promote Olympic and Paralympic athletes' well-being has been publicly highlighted by several high profile male Irish athletes (Finn, 2018). Career adaptability is a set of personal resources which reflects the individual's capability to manage successive transitions (Savickas & Porfeli, 2012). Given the constant flux of elite sport, exploring the concept of career-adaptability may provide the scientific basis for contemporary athlete transition programmes.

As no intervention to improve career adaptability skills of Olympic and Paralympic athletes has yet been reported in the literature, a new intervention had to be developed. Best practice in intervention development is to approach the design systematically utilising prior evidence and theory, and to subsequently pilot the intervention to assess its feasibility including key barriers and facilitators to successful delivery. Following this, exploratory trials should be conducted, which ultimately lead to the implementation of a definitive evaluation (Craig et al., 2008; Wight, Wimbush, Jepson, & Doi, 2016). This thesis reports the development of an intervention to improve

career adaptability skills of Olympic and Paralympic athletes and its subsequent feasibility testing.

A further issue addressed in this thesis is the reluctance of athletes to engage in planning for life beyond the Games (Lavallee, 2019). There appears to be an unwillingness among younger athletes and those who perceive themselves to have a significant amount of time before they retire to develop concrete plans about their future career prior to their retirement (North & Lavallee, 2004). As stated previously "no-one wants to talk about what happens afterwards too much ahead of time" (Arnold & Sarkar, 2015, p. 10). Sport psychology practitioners have reflected that the reluctance to engage in career development might be because of a lack of understanding, and often discuss the need to provide information about the benefits of career transition planning for an athlete's current and future performance goals (Gilmore, 2008; Lavallee, 2019). Further to this, the most appropriate mode of delivery for information related to career transition planning has yet to be explored in elite sport.

The primary objectives of this thesis are:

1. Develop a conceptual model of transition in sport that captures complexity, change and unpredictability.
2. Systematically define the main components of an intervention to improve career adaptability.
3. Analyse the feasibility of digital narratives from former elite athletes as a means of disseminating information about athlete career transition to current competitors.
4. Test the feasibility of a group-format intervention for teaching career adaptability skills.

Chapter Outline

Within this thesis there will be a literature review and four studies, followed by an overall discussion, including limitations and strengths of the research and recommendations for research and professional practice. Chapter three describes the development of the intervention and discusses literature pertaining to intervention development, career development, the demands of Olympic and Paralympic sport and prior interventions delivered to improve career adaptability skills. Objective one "Develop a conceptual model of transition in sport that captures complexity, change and unpredictability" is addressed in this chapter. Chapter four contains three sections which address objectives two "Systematically define the main components of an intervention to improve career adaptability". Part one describes the literature pertaining to the logistical decisions such as the when, where, who and how of intervention delivery. Chapter four further describes a systematic review of the characteristics of implementation of interventions delivered to Olympic and Paralympic athletes, coaches and athlete support providers which aimed to improve well-being. Chapter four also describes a qualitative study of the barriers and facilitators athletes, coaches and athlete support providers believe would affect athlete engagement in a psychoeducation career intervention delivered during the pre-Games period. Chapter five discusses two feasibility studies pertaining to objectives three and "Analyse the feasibility of digital narratives from former elite athletes as a means of disseminating information about athlete career transition to current competitors." and four "test the feasibility of a group-format intervention for teaching career adaptability skills.". Chapter six discusses the outcomes of the thesis and frames the contribution of the information within the existing literature. Chapter six also discusses limitations of the thesis and provides concluding remarks and recommendations for practical use of the findings.

II. Chapter 2: Methodology

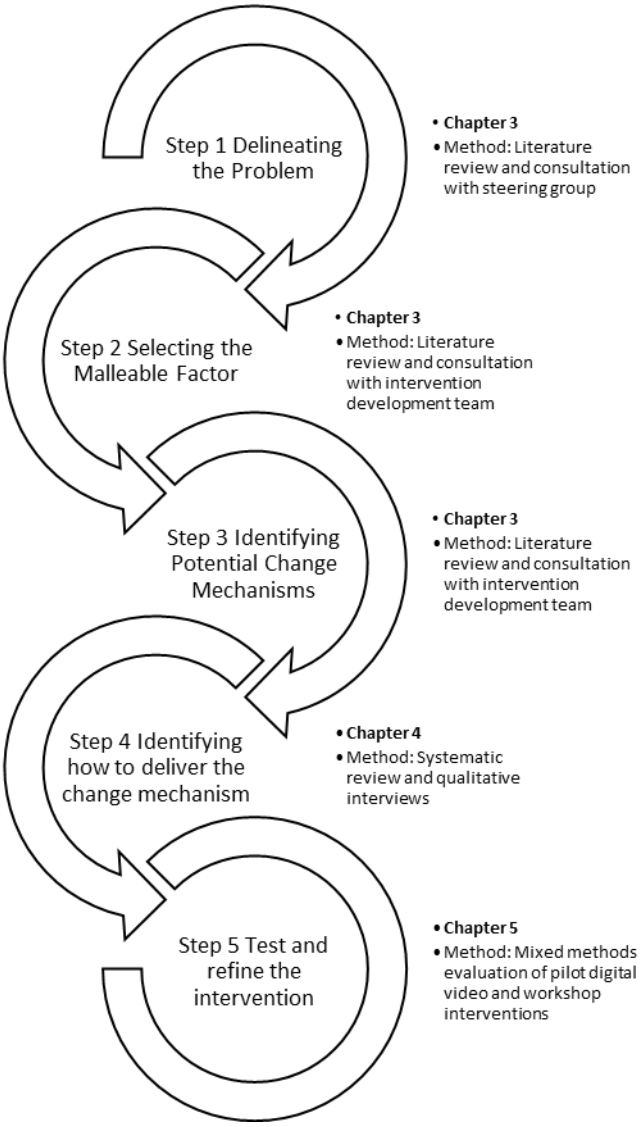
Central to any form of scientific enquiry are the questions what can we know and how can we know it? Within this thesis, the four main research questions are (1) how are Olympic/Paralympic career transitions conceptualised, (2) how can an intervention be designed to maximise engagement, (3) is digital video a feasible and acceptable method of delivering psychoeducation to this population, and (4) is a group format career intervention workshop a feasible method for teaching career adaptability skills? Methodologically, these questions are suited to examination from opposing methods, with the first being better suited to qualitative investigation, and the second better suited to quantitative investigation. Ontologically and epistemologically, these two methods are conflicting, however, sport psychology research is increasingly embracing a pragmatic paradigm (Giacobbi, Poczwardowski, & Hager, 2005). The pragmatic paradigm considers practical problems and the consequences of inquiry. Its epistemological view is that the best method is the one that solves the problem, and therefore encourages the use of mixed methods of enquiry. Given the intervention described in this thesis was attempting to solve a problem, the pragmatic paradigm was the most suitable to perspective to take.

Fundamental to the pragmatic paradigm is the ecological validity of scientific enquiry, that is, the actual change to an individual's life caused by the enquiry. This thesis therefore combines both quantitative and qualitative methods to inform intervention development and evaluation. The intervention development team included a clinical psychologist, a sport psychologist and two researchers. Intervention development was guided by the six steps to quality intervention development (6SQuID) framework (Wight et al., 2016). The framework provides a pragmatic, evidence-based path to ensure an intervention is suitably designed to prevent or reduce a particular health problem (or related factors) in a specific population (Wight et al., 2016). Developed for the field of public health, it is suited to application across disciplines

(Hartley, McAteer, Doi, & Jepson, 2018). The framework supports better use of scarce public resources by ensuring that adequate attention is given to methodical intervention development, appropriate implementation, and thorough evaluation (Wight et al., 2016).

The framework suggests that once a problem has been identified as requiring intervention, the development process can be segmented into six steps. These steps included (1) defining and understanding the problem and its causes, (2) identifying the causal pathway and selecting malleable factors, (3) identifying the mechanisms of change, (4) developing an implementation plan, (5) piloting and refining the intervention, and (6) collecting evidence of effectiveness sufficient to warrant rigorous evaluation (Wight et al., 2016). This thesis is organised to reflect these steps and **Error! Reference source not found.** presents each step of the 6SQuID model, the c orresponding methods used and the thesis chapter in which they are discussed. Following the framework of the 6SQuID model ensures an intervention logic model is developed and a guiding psychological theory is employed to elucidate the factors which can be altered to enhance athlete career adaptability skills.

Figure 1 Pragmatic approach to intervention development



Following the development of the intervention logic model, the implementation plan is addressed. This entails making decisions about the what, when, who and where of intervention delivery. At this step, the 6SQuID framework encourages the user to elucidate context-specific factors which are likely to affect the desired outcomes of intervention prior to delivery, thus giving the intervention the greatest chances of success. The framework suggests that key stakeholders and potential end-users are involved in this process to ensure the intervention achieves maximum acceptability. Acceptability is considered to be the degree of satisfaction a participant holds in relation to intervention (Bowen et al., 2009). Acceptability can be an important predictor of

engagement with a psychoeducation resource and should be considered at the intervention development stage (Wight et al., 2016). To this end, a project steering group was assembled to give feedback on the intervention development process. The steering group consisted of three full-time athletes, three coaches, five athlete support providers (two of whom had also previously competed at the Games), two members of management and one communications expert. While following the steps outlined in the framework, numerous other models and theoretical framework were used to guide specific aspects of intervention development. For example, models of human adaptation are used to understand the causes of compromise to well-being during career transitions, and a model of the determinants of successful implementation is used to explore the factors which have typically affected the success of interventions with Olympic and Paralympic athletes. Descriptions of these guiding models and theoretical frameworks are provided in studies one through four. In sum, a pragmatic epistemological approach is taken to intervention development and evaluation, and mixed methods are used to achieve the stated objectives. Guiding models and theoretical framework affecting each of the studies are described within, and chapter six provides a reflection on the suitability of this approach.

Given the potential benefits to an athlete of improving their career adaptability resources an intervention ahead of the Rio 2016 Games was identified as a priority need by the Sport Ireland Institute, the organization responsible for the preparation of Irish athletes for the Games. Within Irish Olympic, and Paralympic sport, an offer of psychological support of this magnitude in advance of the Games has not previously been made. In 2005, (Lavallee, Jennings, Anderson, & Martin, 2005), and again in 2015, (Woods, Meade, Mahoney, & Breslin, 2015) research articles were published which reported that Irish athletes held receptive attitudes towards sport psychology, but 48% of those surveyed considered there to be little access to providers of the service

(Woods et al., 2015). Further to this, recent research with Irish Olympic athletes has suggested that even when the service is readily available, fear of stigmatization, low expectations of the value of participation and a centralized location of delivery can act as barriers to participation (McArdle et al., 2014). As discussed above, implementation science suggests that the involvement of all key stakeholders in the planning and delivery of psychoeducation reduces barriers to engagement, therefore all those involved in the preparation of athletes for the Games were invited to participate in the research. Overall, 39 individuals were involved in the development of the intervention and 187 athletes, coaches and athlete support providers attended the interventions described herein, evaluating the intervention. Methodology and methods specific to the individual studies are described in chapters four and five.

III. Chapter 3: The development of a psychoeducation intervention to improve career adaptability

Introduction

This chapter outlines the development of an intervention to enhance career adaptability and psychological well-being in Olympic and Paralympic athletes. Intervention development is a complex process which requires a considered approach for the product to be feasible, acceptable and effective (Craig et al., 2008). This chapter describes the measures taken to follow steps one to three of the six steps of quality intervention development (6SQuID) model in sequence. Steps one to three of the process inform the theoretical grounding for the intervention. Literature review was used to address these steps and included an examination of over one hundred books, journal articles, and dissertations spanning several topic areas related to careers from an individual and organizational perspective from databases including PsycInfo, EBSCO, SPORTDiscus, Google Scholar, Medline, and PubMed. The literature search focused on the past 40 years, as well as on seminal works and theories.

Step 1: Delineating the Problem

The first step of the 6SQuID model is to understand the problem and its causes. Thus, the first step of addressing the aim of this thesis was to identify the immediate and underlying influences that give rise to compromised well-being during the period of time following participation in the Olympic or Paralympic Games (the Games). Literature review was the main method used to understand the problem and develop a conceptual model of how it could be addressed, but the project steering group was also consulted. Literature included in this section focuses on compromised well-being as an outcome of ineffective adaptation to a career transition, well-being in the sport career, and the demands of competing at an Olympic and Paralympic standard and how that can impact well-being.

Compromised well-being is associated with mental ill-health and is significantly important in relation to sport, with data indicating high rates of psychological distress

and disturbance among athletes (Markser, 2011). Literature has noted that athletes experience mental health risk factors similar to non-athletes, in addition to risks associated with their participation in sport such as concussion (Guskiewicz et al., 2007), overtraining syndrome (Peluso & deAndrade, 2005), and crisis-career transition (Stambulova, Alfermann, Statler, & Côté, 2009). Thus, the focus of this section is to understand what factors give rise to compromised well-being during a career transition and what factors may maintain and promote global well-being.

2.1.1 What is well-being in Olympic and Paralympic sport?

Olympic and Paralympic athletes face several risk factors to their mental health including; a single-minded athletic identity, high levels of psychosocial stress and competitive anxiety, overtraining and burnout, negative emotional adjustments to sports injuries, and crisis-transitions (Lundqvist, 2011; Schinke, Stambulova, Si, & Moore, 2018). Researchers have described elite athletes as rigidly controlled, overprotected, depersonalized, and exploited (Pearson & Petitpas, 1990). Given these influences, it is not surprising that many athletes struggle to adapt to changes within the career (Pearson & Petitpas, 1990).

In this thesis elite sport is defined as competing at an Olympic or Paralympic standard. In the career of an Olympic or Paralympic athlete the continual strive for success in a highly competitive environment demands they be adaptable to change. However, this continual pressure to adapt has negative consequences for their well-being and mental health (Lundqvist, 2011). The high dedication to the sport that is required for success works to limit athletes' opportunity to pursue alternative interests or social contacts outside sports during their active careers, thus inhibiting the development of important life skills and experiences that are imperative to successful navigation of a career characterised by change (Pearson & Petitpas, 1990).

Given the necessity for Olympic and Paralympic standard athletes to focus on their career to the exclusion of other experiences, it is unsurprising that athletes make judgments of their well-being that are often exclusively grounded in their sport experiences.

Well-being is conceptualised within the elite sport literature as comprising two types; hedonic, and eudemonic (which further comprises psychological well-being and social well-being). The hedonic tradition considers an individual's long-term cognitive evaluation of satisfaction in diverse domains of the person's life (measured as life satisfaction) and their perceived happiness as the main indicators of subjective well-being. Many definitions of psychological well-being exist, however within this research it is considered from the perspective of effective psychological functioning (Lundqvist, 2011). The eudaimonia tradition considers six main dimensions as a measure of psychological well-being, namely; self-acceptance, positive relations to others, autonomy, environmental mastery, purpose in life, and personal growth. Additionally, social well-being comprises five dimensions namely, a person's perception of social acceptance, social actualization, social contribution, social coherence, and social integration (Lundqvist, 2011; Lundqvist & Sandin, 2014).

Studies have noted that elite athletes who achieved long successful careers are rated higher on attributes related to well-being such as a hopeful and positive view of the future, high perceived ability, high self-esteem, adequate life balance, well developed skills to cope change, and high levels of mental and emotional health (Durand-Bush & Salmela, 2002; Gould, Dieffenbach, & Moffett, 2002; Macdougall, Halloran, Shields, & Sherry, 2015).

2.1.2 What demands associated with the Games might affect well-being?

The context of the Olympic and Paralympic Games (the Games) in relation to well-being is multifaceted. Competing at the Games is considered a pinnacle experience in an athlete's life and career (Blumenstein & Lidor, 2008; Schinke, Stambulova, Trepanier, & Oghene, 2015). However, due to the infrequent nature of this competition in an athlete's life, and the importance it bears, it is easy to discern that participation in the Olympics or Paralympics can impart higher levels of stress on an athlete (Samuel & Tenenbaum, 2011; Schinke, Stambulova, Trepanier, & Oghene, 2015; Wylleman, Reints, & Van Aken, 2012).

First, the preparation phase is four years, and involves the management of a complex system of training and recovery to qualify to compete at the Games (Blumenstein & Lidor, 2008). Qualification pathways differ per sport, giving some athletes a relatively longer preparation phase than others. However, qualification is not a guarantee that the athlete will have the chance to compete. Selection processes are individual to each sport and may not be completed until the months or weeks before the Games (Gould, Greenleaf, Guinan, Dieffenbach, & McCann, 2001). This creates a long period of uncertainty and heightens the pressure on an athlete to maintain performance over an extended time (Stambulova, Stambulov, & Johnson, 2012).

Second, the competition venue is different from other types of elite sport due to its multi-sport, multi-cultural nature and the challenges associated with thousands of people living together in a purpose-built village (Elsborg, Diment, & Elbe, 2015; Gould et al., 2001; Haberl & Peterson, 2010). Athletes typically arrive to the Games ahead of the competition to acclimatize and take advantage of the opportunity to see their competitors' practice. Access to the Olympic village is limited and athletes are often separated from their family and friends during their stay (Stambulova et al., 2012). Additionally, space allocation for athlete support providers is limited (Haberl &

Peterson, 2010) which means athletes may not have access to their typical social support network. Space constraints also mean accommodation is shared and athletes may be assigned roommates they are not familiar with. Additionally, each nation operates as one unit which means athletes share one another's' successes and failures (Stambulova et al., 2012).

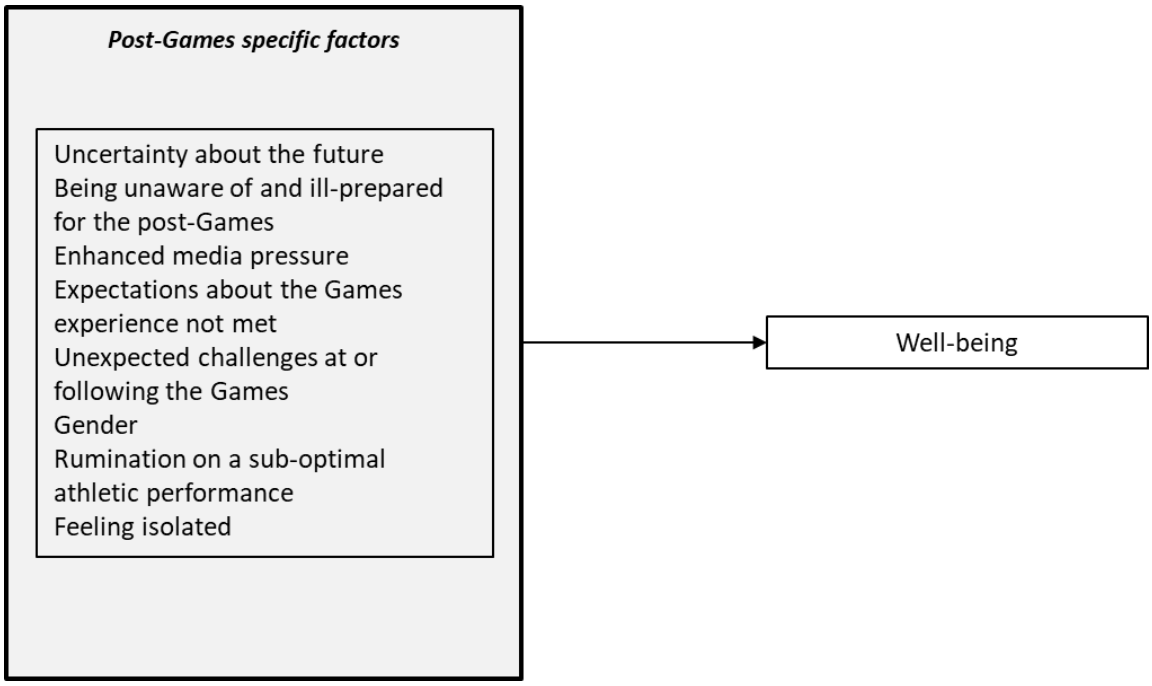
Third, the media spectacle of the Games has been shown to be a source of stress for Olympic athletes (Kristiansen, Hanstad, & Roberts, 2011). Millions of people watch the Games, in person, on TV, and online, and reports suggest there can be more journalists than athletes at the Games (Haberl & Peterson, 2010). The media is thought to have an impact on the scheduling of the competition (Stambulova et al., 2012), and the internal structure of the venues (Kristiansen et al., 2011). Following competition athletes are often encouraged to engage with media reporters by exiting the venue through a mixed-media zone, thus adding further stress to an athlete who may feel they underperformed (Kristiansen et al., 2011). Additionally, fans are known to make over enthusiastic declarations predicting the athlete's success, inadvertently putting pressure on the athlete to meet their expectations (Stambulova et al., 2012)

Fourth, the literature on the period of time following participation in the Games suggests that it is particularly emotionally difficult for athletes with reports of athletes experiencing a loss of motivation, perceived heightened demands from others, difficulty deciding on a career pathway, feelings of isolation, and psychological distress (Henriksen, 2014; Howells & Lucassen, 2018; Jackson, Mayocchi, & Dover, 1998; McArdle, Moore, & Lyons, 2014; Schinke et al., 2015). Researchers have listed the demands of this period of time to include reflecting on their athletic performance and deciding on a future career path (Schinke et al., 2015; Stambulova et al., 2012). In a study of British female athletes' experience of the post-Games blues, researchers described how and an athletes' experiences both prior to and during the Olympic Games

impacted their cognitive, affective, and behavioural responses when they returned home, and consequently, how well (or otherwise) they managed the post-Olympic period. Athletes reported low mood and feelings of best lost, which were unexpected despite being warned ahead of the Games that it might happen (Howells & Lucassen, 2018).

Based on literature review and discussion with the project steering group, the experiences of compromised well-being during the post-Games period were chosen as the target of the intervention. Within the literature a number of factors which affected well-being during the post-Games were identified including; (1) being unaware of and ill-prepared for the post-Games, and (2) uncertainty about the future (McArdle et al., 2014), (3) a sense of isolation during the post-Games (Howells & Lucassen, 2018), and (4) enhanced media pressure (Haberl & Peterson, 2010). In discussion with the project steering group a number of other factors were considered including; (1) expectations about the Games experience not met, (2) unexpected challenges at or following the Games, and (3) reflecting on a sub-optimal athletic performance.

Figure 2 Potential factors affecting well-being in the post-Games period



Step 2: Selecting the Malleable Factor

The second step of the 6SQuID model is to identify a malleable factor which can affect the target problem, which in this case was compromised well-being in the post-Games period. Selecting the malleable factor involved the identification of the causal pathways of the problem at hand. Literature discussing compromised well-being during the post-Games period has conceptualised the issue as an ineffective adaptation to a career transition (Howells & Lucassen, 2018; McArdle et al., 2014; Schinke et al., 2015). Therefore, to identify a causal pathway of compromised well-being, an iterative process of literature review and discussion between the intervention development team members on the topics of career transition and well-being was undertaken. The review aimed to identify a personal resource which could be affected to maintain and promote well-being. To do so, literature pertaining to career counselling was explored. Career counselling has been defined as "the giving of information, experience, and advice in regard to choosing an occupation, preparing for it, entering upon it, and progressing in it" (Allen, 1923, p. 26). Several paradigms exist within the career counselling literature, however this thesis operates from the career development paradigm as it is best suited for the uncertain nature of career in the 21st century (Savickas, 2015).

2.1.3 Career Development

Development is viewed as a process of adaptation taking place within multiple contexts that vary for individuals thus leading to different lifepaths (Ryba, Ronkainen, & Selänne, 2015; Savickas, 2005, 2012). The career development paradigm originated from a change in the way society viewed career. Following the second World War, organizations became hierarchal in nature, and job roles became more specialised, thus providing individuals with opportunity for progression within an organization (Anderson, Goodman, & Schlossberg, 2012). Resulting from this change, those who provided career counselling adopted a humanistic perspective and began to

conceptualise employees as subjects with agency. This alteration in perspective caused a shift from career counsellors evaluating a client's (seemingly) stable personality traits and matching them with a job for life, to considering career as a life-long process encompassing development, growth and change. Thus, the career development paradigm considers the employee's agency in the quality and direction of their life. Importantly, the alteration in perspective re-conceptualized occupational choice as a manifestation of selfhood, and career development as a continuing process of improving the match between the self and situation. Following on from this change in perspective, new types of intervention were adopted to help individuals improve their satisfaction with the match between self and situation in the world of work. The typical process of such interventions is (1) assess the client's degree of readiness to engage in a developmental task, (2) orient to challenges and identify needed resources, and (3) develop the needed resources (Anderson et al., 2012).

Schlossberg's (1981) model for analysing human adaptation to a career transition sits within this paradigm and provides a framework to understand what factors affect the readiness of an individual to adapt to a career transition. Defined as an event or non-event that affects ones' assumptions about oneself and the world and demands a change in behaviour and relationships, a career transition can provide an opportunity for personal growth, or personal crisis (Schlossberg, 1981). Similar to the process described above, the Schlossberg (1981) model and Stambulova's (2003) athletic career transition (ACT) model describe adaptation to a career transition as a phase beginning with an initial cognitive appraisal of a change within the career, which involves assessing the significance of the change and any potential negative impact to well-being. The next part of the phase is to decide what personal or social resources are required to address the change, and what the outcome is likely to be. Then, following the application of their coping resources the individual must reappraise the situation and

assess if the resources were enough for successful adaptation. An adaptation is considered successful when the individual is no longer preoccupied with the change and it has been integrated into what they consider normal (Schlossberg, 1981). At this point, the ACT model describes a failure of the coping resources to adequately address the demands of the career transition as a crisis-transition. A crisis transition requires the career counsellor to intervene to prevent further negative outcomes such as drug and alcohol abuse and depression (Taylor & Ogilvie, 1994).

The initial cognitive appraisal considers numerous factors related to the situation and self. Characteristics of the situation such as the trigger, timing, control, role change, duration, prior experience of similar transition, and concurrent stress are taken into consideration in the initial appraisal. Related to the situation, the trigger of a career transition can be an event, such as the move from junior to senior competition, or a non-event, such as a failed attempt to qualify for the Games (Alfermann & Stambulova, 2007). The predictability of an event or non-event can also affect the individual's appraisal of the transition (Stambulova et al., 2009). Normative transitions are ones which are expected, such as the move from junior to senior athlete, and non-normative transitions are ones which are unexpected; such as injury or deselection from a team. Non-normative transitions are thought to be more difficult to cope with due to their unpredictable, unanticipated and involuntary nature, whether in the sport context or other aspects of the individual's life (Schlossberg, 1981; Stambulova et al., 2009). Sport transitions can also be characterized as 'quasi-predictable' in that the transition is only expected to occur in the careers of some athletes. An example of one such quasi-predictable transition is competing at the Olympic or Paralympic Games (the Games) (Samuel, Tenenbaum, & Gil Bar-Mecher, 2016; Schinke et al., 2015). Timing refers to whether a career transition is perceived as on or off-time. For example, an athlete may be focusing on qualification for the next Games cycle, but through a personal best

performance, secure the qualification standard a cycle earlier. Another key aspect of the situation variable is the concept of control. Career counsellors should investigate whether the transition was because of a deliberate choice, or the decision was forced such as de-selection from a team (Anderson et al., 2012). The effect of a transition on an individual's role may not occur in all transitions, but it is important to consider whether the individual perceives a change as a gain or loss. Additionally, the duration of the transition can impact an individual's assessment (Schlossberg, 1981). Returning to the example of an injury, uncertainty about the longevity of the role change from participant to non-participant can be challenging. Other aspects of the situation variable involve previous experience with a similar transition, and concurrent stress. Prior experience with a similar transition can be leveraged to highlight the strengths an individual has for adapting to the transition. On the contrary, concurrent stress might decrease their ability to adapt. Each of these areas influences the appraisal of a career transition.

Related to the self, factors such as socioeconomic status, gender/sexual orientation, age and stage of life, state of health, ethnicity/culture, mental health, ego development, optimism and self-efficacy, commitment and values and spirituality affect the appraisal of career transitions (Goodman & Anderson, 2012). The relationship between these aspects of self can be complex and are for the most part outside the remit of this thesis. However, gender was identified by the research steering group as a factor of interest. Career counselling research has suggested that men appraise career transitions more favourably because they have been socialized to hide emotion and deny problems. Gender may also relate to the strategies that individual's use to adapt to a career transition. For example, some research has suggested that men like to problem solve and women like to discuss and develop ideas (Tannen, 1990, in Anderson et al., 2012).

An additional factor to consider in the initial appraisal is the amount of support an individual has. Support can come from a range of relationships including people, institutions, things and faith or spirituality. Career counsellors can assist clients by encouraging them to consider their pre and post transition supports. Specifically, it is important to identify what supports they currently rely on which may not be available during or after the transition, and what new supports the can take advantage of. For example, athletes with a strong relationship with their coach should be made aware of the likelihood of their unavailability during the post-Games period. An additional consideration in the context of elite sport is the attitudes individuals hold toward asking for, and receiving, help from others. Researchers have suggested the broader the athlete's disinterest in accepting help not related to performance, the more likely the individual is to refuse to ask for or accept help in coping with sport- and non-sport related transitions (Petitpas & Champagne, 2000).

Finally, the athlete's psychosocial competence and coping strategies can assist their adaptation process. In the ACT model, strategies for adapting are described as a necessity at two points: following initial appraisal and following re-appraisal if the original resources applied were ineffective (crisis-transition). According to the Schlossberg (1981) model, there are three types of strategies individuals implement to adapt to a career transition. These include strategies to change the situation, strategies to change the meaning of the situation, and strategies to manage the stress of the transition. Whether individuals want to change their situation or reduce their stress, they can choose from among four coping strategies: information seeking, direct action, inhibition of action, and adjusting their mindset to allow themselves the carry on (Anderson et al., 2012).

Schlossberg's (1981) model of human adaptation to transition has been applied to numerous athletic populations, including high-school, college and elite athletes and is

the basis of many of the features of the ACT model. Extrapolating from Schlossberg's (1981) model, it has been predicted that the transition process would be most difficult for athletes who have (a) a strong athletic identity (b) a large gap between athletic ability and aspiration; (c) little or no prior transition experience; (d) limited personal adaptability resources (both cognitive and behavioural); (e) low social support and (f) limited organizational support (Pearson & Petitpas, 1990). Research with a variety of competitive level of athletes has demonstrated that those with higher levels of general adaptability are more able to adjust to life after sport (Pearson & Petitpas, 1990). However, practitioners have suggested that the nature of an athletic career may overindulge or protect athletes, and a small percentage of these individuals develop a sense of entitlement. This sense of entitlement can act as a barrier to the development of psychosocial competencies and coping resources for adaptation because they assume they will always have support. Because they don't acknowledge that the support will end, they are less likely to work to develop life and career alternatives outside their sport. They may also fail to develop life skills needed to function in alternate roles (Petitpas & Champagne, 2000).

For the purposes of intervention development, the key takeaways from this literature are; (1) career transitions are a process of adaptation and crisis-transitions can be prevented by applying effective adaptation resources to the initial demands of the transitions, (2) relative success or failure of the adaptation process is influenced by the individual's balance (perceived or actual) of resources to demands, and (3) elite athletes may be reluctant to develop such personal resources.

2.1.3.1 Relating the career development literature to the meta-transitions associated with Olympic or Paralympic careers

The career transition in sport literature is based in the perspectives discussed above. Research indicates that different types of career transitions can present differential challenges to the athlete (Stambulova et al., 2009). As mentioned above models of career transition in sport propose career pathways are frequented by career transitions (McArdle et al., 2014; Schinke et al., 2015; Wylleman, Alfermann, & Lavallee, 2004; Wylleman et al., 1999; Wylleman & Lavallee, 2004). The ability to cope with transitions both within and outside of sport allows greater opportunity for an athlete to live a long and successful life in sport as well as being able to adjust effectively to the post-career (Stambulova, Alfermann, Statler, & Côté, 2009; Wylleman et al., 1999). Alternatively, an ineffective adaptation to a career transition results in a crisis-transition which is often followed by negative consequences to an athlete's well-being. Therefore, helping athletes develop their ability to adapt to career transitions should be of primary concern for coaches, managers, athletes' parents, and sport psychology consultants (Stambulova et al., 2009).

The career transitions associated with participation in the Games have been examined in the literature as a series of six quasi-predictable meta-transitions including; (1) entering the program, (2) entering major international tournaments, (3) Games qualification, (4) focused preparation for the Olympic Games, (5) participation in the Games, (6) transition to the post-Games (Schinke et al., 2015). To date, research has mainly focused on the first five meta-transitions (i.e., preparing for and participating in the Games (Collins & Cruickshank, 2014; Poczwardowski, Diehl, O'Neil, Cote, & Haberl, 2014; Wylleman et al., 2012). However, the demands of the post-Games meta-transition have been identified as particularly unique and emotionally challenging (Howells & Lucassen, 2018; McArdle et al., 2014; McCann, 2000; Schinke et al., 2015).

From the perspective of the ACT model (Alfermann & Stambulova, 2007; Stambulova, 2003), the post-Games is a quasi-normative meta-transition. As mentioned previously, the demands of this meta-transition are reported to include analysing the Games experience and planning the career path (Schinke et al., 2015). Athletes have discussed how they felt underprepared to adapt to this meta-transition and have reported experiencing a period lasting between two weeks and several months when negative emotions such as anxiety and irritability were present, as well as a general loss of interest in life (Arnold & Sarkar, 2015; Howells & Lucassen, 2018). This is unsurprising given athletes also report a perception of a loss of support from the general public and their friends and family during this meta-transition (Howells & Lucassen, 2018). The unusual combination of the demands of the post-Games meta-transition such as the comedown from celebrity status, rumination on performance, and the consideration of future career goals appears to outweigh the resources athletes have for adapting to this meta-transition, resulting in crisis-transition (Howells & Lucassen, 2018; McArdle, Moore, & Lyons, 2014). The ACT model suggests specific psychological intervention is required at this point to prevent worsening of depressive symptoms which can impact an athlete's performance and career (McCann, 2008; Schinke et al., 2015; Taylor & Ogilvie, 1994; Wylleman et al., 1999). The ACT model describes three types of intervention to assist athletes with career transitions. These are crisis-prevention, crisis-coping and negative consequences coping. To date, researchers have described interventions and models for intervention to address crisis-coping (see McArdle et al., 2014a; Stambulova, 2011). However, the aim of this this thesis was to develop a preventive intervention. That is, we aimed to develop athlete's ability to adapt to a career transition in advance of the transition.

2.1.3.2 Career Construction Theory

Within the Olympic career transition literature, suggestions have been made that the unique demands of the Games meta-transitions warrant special investigation through the lens of career construction theory (Poczwardowski et al., 2014). Career construction theory is a developmental perspective of how individuals construct their lives through the stories they tell (Johnston, 2018). Similar to the model described by Schlossberg (1981), career construction theory suggests adaptation consists of a mini-cycle of adaptation. These stages comprise growth, exploration, establishment, management and disengagement. Adaptation is therefore conceptualised as a repeating process of increasing awareness of potential options, followed by information-seeking, problem solving and informed decision making, which leads to trialling of behaviours and eventually a stable commitment to new behaviours which better match the new situation. Finally, the individual engages in active role management before the cycle begins again. For example, an athlete transitioning to the post-Games may think about their future career options and decide to pursue coaching as a career. They would thus explore opportunities to enhance their job opportunities through education or engage in work experience, choose which option best suits them, and continue on that path until it is no longer effective, thus triggering the beginning of a new transition. The specific attitudes, beliefs, and competencies which shape the information seeking, problem solving, informed decision making and behaviours that individuals use to adapt to a career transition are known as career adaptability skills.

2.1.3.2.1 Career adaptability skills

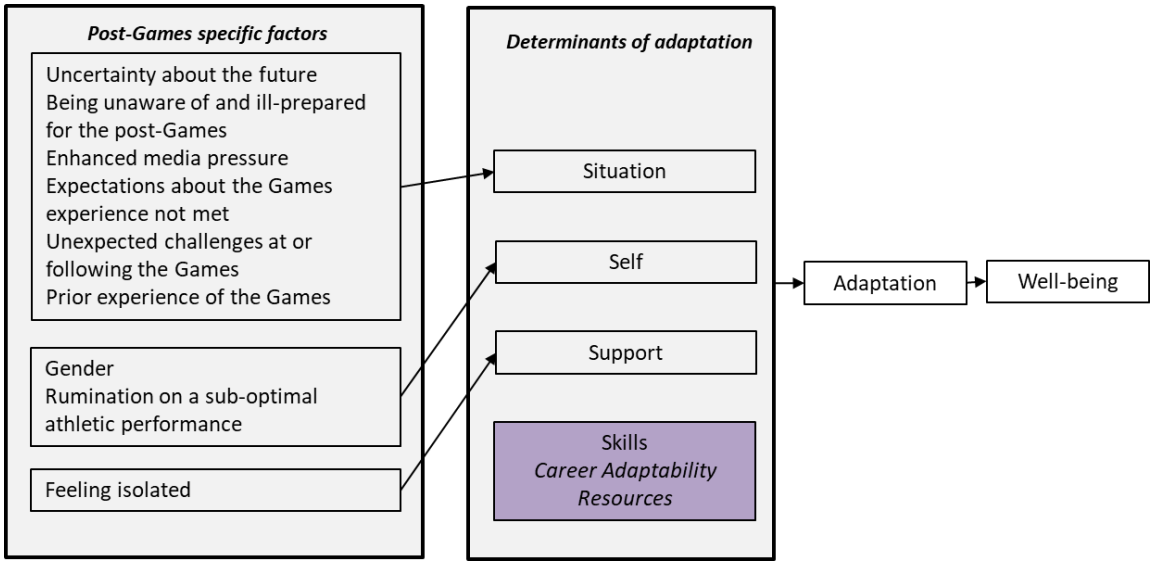
In both the general and sport literature, models explaining career transitions purport that difficulty in adapting to a career transition is predicted by a number of factors including a deficit in the athlete's personal resources (Pearson & Petitpas, 1990; Savickas, 1997; Schlossberg, 1981; Stambulova, 2003; Taylor & Ogilvie, 1994;

Wylleman et al., 1999). Career Construction Theory (CCT) has been demonstrated as an effective model for intervention development which informs a measure of career adaptability that has been validated cross-culturally (Johnston, 2018). Savickas' (2005, p. 51) definition of career adaptability was ''a psychosocial construct that denotes an individual's readiness and resources for coping with current and imminent vocational development tasks, occupational transitions, and personal traumas''.

Research has shown that career adaptability is malleable and highly correlated with psychological well-being (Maggiori, Johnston, Krings, Massoudi, & Rossier, 2013). Career adaptability is comprised of four global dimensions called, concern, control, curiosity and confidence (Savickas & Porfeli, 2012). An individual with high career adaptability is characterised by (a) concern about their vocational future (b) exerting personal control over their vocational future, (c) being curious and imagining their future self and exploring future scenarios, and (d) firming their confidence to pursue their future self.

Research has shown that individuals who successfully develop career concern, control, curiosity and confidence are more likely to respond to environmental changes and transitions and adapt in a timely manner (Koen, Klehe, & Van Vianen, 2012; Maggiori et al., 2013; Savickas & Porfeli, 2012) and also experience greater rates of subjective and work related well-being (Creed, Muller, & Patton, 2003; Paul J. Hartung & Taber, 2008; Hirschi, 2010; Koen et al., 2012). We therefore propose that by improving an athlete's career adaptability skills in advance of the post-Games meta-transition, their risk of experiencing compromised well-being will be minimized, and their chances of a positive transition experience will improve. Developing on Figure 2, the review of literature to identify a malleable factor is presented below in Figure 3 to provide a conceptual model of how well-being during the post-Games period can be affected.

Figure 3 Conceptual model of compromised well-being during the post-Games period



Step 3: Identifying Potential Change Mechanisms

Having identified career adaptability skills as the malleable factor step three of the 6SQuID model aims to decide how to achieve the change. Career interventions are considered to be any effort made to improve an individual's career development or their ability to make career-related choices, however, there is a vast range of career interventions described in the literature (Whiston & Rose, 2015). All interventions have a logic model for affecting change whether it is implicit or explicit and a key component of this logic model is the 'change mechanism' (Wight et al., 2016). Mechanisms of change are the 'active ingredients' or trigger that causes change for individuals, groups or communities. Following review of interventions to improve career adaptability skills, the decision regarding change mechanisms should be based on the client's needs, culture, learning style, the characteristics of the problem, as well as the facilitator's own theoretical orientation, experience and comfort level (Anderson et al., 2012). Despite the vast amount of career intervention literature (P J Hartung, Savickas, & Walsh, 2015), and numerous articles on how to evaluate career adaptability (Savickas & Porfeli, 2012; van der Horst & Klehe, 2018), there has been very little discussion of the mechanisms of change targeted in these interventions. Further to this, there has been no research yet reporting how to improve career adaptability skills in sportspeople of any competitive level.

To date only five interventions using pre and post-test measures have been conducted examining the development of career adaptability. However, at the time of intervention development in early 2014, only one of these studies had been published. In a study of 32 college students, Koen and colleagues (2012) reported significant changes in adaptability scores across all four sub-resources; concern, control, curiosity, and confidence post a one-day workshop intervention. Follow-up analysis indicated that scores on control and curiosity remained elevated at a six month follow up measure

(Koen et al., 2012). The intervention focused on teaching planning, decision-making, exploration and problem-solving skills. Topics and exercises within the training included personal reflection, visualization, and information gathering techniques, problem solving role plays, discussion, and action planning. Koen and colleagues suggested that (1) the use of a written plan to organize training content, (2) individualized interpretations of the training material, (3) in-session information on the world of work were critical to the effectiveness of the intervention, (4) use of exercises and workbooks that require attendees to write and plan their goals, (5) exposure to models who have successfully adapted to similar career transitions and (6) enhancing confidence by visualising the future were each a critical component of the intervention.

Another intervention found success when aiming to develop concern and curiosity by fostering positive attitudes towards career planning and exploration. The intervention offered six 90 minute weekly sessions targeting self-reflection, and self-esteem, and utilized exercises such as modelling, discussion of case studies and project work (Janeiro, Mota, & Ribas, 2014). The intervention developers also concluded that information provision alone is not sufficient to improve career adaptability scores (Janeiro et al., 2014).

An intervention delivered to university students in Hong Kong once a week for three hours for thirteen weeks resulted in an improvement in all mean scores for career adaptability sub-resources (Cheung & Jin, 2016). However, no significant difference was recorded between pre-test and post-test career confidence scores or between the intervention and control group in any sub- resources at post-test. The authors attributed this to the focus of the intervention which was primarily career exploration. The intervention had covered topics such as personality, vocational interests, and life-long career development using lectures, career development workshops, guest seminars, and group projects (Cheung & Jin, 2016).

In 2017, Ginevra and colleagues described an intervention which aimed to stimulate resources for coping with challenging times in a population of young adults with low education and experiences of migration. Results of this study were considered from a statistical, clinical and social perspective. Statistically, an experimental group achieved a greater number of actions and emotional components at post-test than a control group. Clinically, the experimental group also experienced enhanced career control, curiosity and confidence compared to pre-test measures, and socially, participants believed the intervention was useful to them and they indicated their satisfaction with particular aspects such as the use of a workbook, reflecting on their strengths and the future, and hearing about others' experiences. Authors reflected that using a workbook, providing information on how to reflect on one's future and small group discussion were key factors in the success of the intervention (Ginevra, Di Maggio, Nota, & Soresi, 2017).

Finally, an intervention to compare the effects of two types of career construction intervention in adolescent students found a workbook-based intervention produced statistically higher improvements in career concern and control than a traditional career intervention (Santilli, Nota, & Hartung, 2018). Similar to Janeiro et al., (2014) the authors evaluated the social validity of the intervention and found students considered the workbook-based intervention to be useful and satisfactory in helping them to cope with career transitions. The workbook-based intervention used guided self-reflection, visualisation (thinking about the future) and goal-setting to encourage participants to reflect on their career story and future aspirations. Information provision was also incorporated, specifically to highlight the importance of career adaptability skills in the modern career.

Table 1 Mechanisms of change evident in prior interventions to improve career adaptability skills

Article	Mechanism of Change	Intervention Strategy
Koen Et Al., (2012)	Psychoeducation Guided Self-Reflection Skills Training Modelling Visualization (Anticipating Future Problems)	Exercises Discussion Feedback Information Provision
Janeiro Et Al., (2014)	Psychoeducation Guided Self-Reflection Skills Training Modelling Visualization (Anticipating Future Problems)	Exercises Discussion Feedback Information Provision
Cheung & Jin, (2016)	Psychoeducation Guided Self-Reflection Skills Training Modelling (Peer and Role Models)	Exercises Information Provision
Ginevra, Di Maggio, Nota, & Soresi, (2017)	Psychoeducation Guided Self-Reflection Modelling Peer-Modelling Visualization Anticipating Future Problems	Exercises Discussion Information Provision
Santilli, Nota, & Hartung, (2018)	Psychoeducation Guided Self-Reflection Visualization (Anticipating Future Problems)	Information Provision Exercises Goal-Setting

Generally, group-based career interventions are described as having three components. The first component includes self-assessment, which is used to increase

participants' awareness of their interests, skills, working styles, and personality types. The second component is information provision which aims to improve participants' knowledge of different future options. The third component is skill development. Specifically, in interventions aiming to enhance career adaptability, skill development targets goal setting, planning, decision making, stress reduction and time management skills (Phillips & Imhoff, 2000). Table 1 above lists the mechanisms of change evident in the five career adaptability interventions reported to date.

Career adaptability comprises both cognitive (e.g., thinking about what their future will be like) and behavioural elements (e.g., planning). Cognitive interventions are typically used to assist clients in changing their thinking (Anderson et al., 2012). Mechanisms of change associated with such interventions include transactional analysis, postponement strategies, and cognitive restructuring. Cognitive restructuring can help the client alter their thoughts and core beliefs and therefore change their behaviour. Behavioural interventions aim to help clients replace existing ineffective behaviours with a more helpful one. Mechanisms of change associated with such interventions include social modelling; role play and rehearsal, systematic desensitization; and self-management techniques, for example, self-monitoring, self-rewards, or self-contracting (Anderson et al., 2012). Anderson et al. (2012) stressed the importance of selecting interventions on the basis of both clients' need and practitioners' preferences. Therefore, following this review, the intervention development team discussed the potential mechanisms of change identified in the review and their suitability for the Olympic and Paralympic context. To achieve the aim of the intervention to improve the attitudes, beliefs and competencies known collectively as career adaptability, an overall framework of psychoeducation was selected. Psychoeducation is a competence-based approach to health and well-being and is among the most effective, evidence-based interventions for mental health, in both

clinical and community populations (Lukens & McFarlane, 2004). Typically, a health-based psychoeducation intervention develops competencies in attendees through the delivery of health-specific information in addition to tools and strategies for managing issues related to the area of concern (Lukens & McFarlane, 2004).

The intervention development team proposed that both career concern and control may be affected by self-reflection and that career control (e.g., decision making) and career confidence (e.g., problem solving) might be affected by skill development. To date, career adaptability interventions have been delivered in group format which facilitates the use of group-interaction as a mechanism of change (Griffiths, 2006). This mode of delivery can enhance participant expectations, motivation to participate, within-group peer-support, and normalization of the attendees' personal experiences. Additionally, group delivery can afford participants the opportunity to engage with positive peer role-models (Griffiths, 2006). The intervention development team discussed the benefits of peer modelling to enhance career curiosity and confidence by providing attendees with anecdotal evidence from their peers who have successfully adapted to the post-Games career transition using the skills discussed in the workshops. Further detail on the group modality is provided in step four of the intervention development process A final decision to incorporate skill development (including, planning, decision-making and problem solving), peer modelling, and self-reflection as the mechanisms of change within a psychoeducation framework was made by way of discussion amongst the intervention development team. Table 2 outlines the intervention's logic model for improving career adaptability skills in Olympic and Paralympic athletes.

Table 2 Logic model for improving career adaptability skills in Olympic and Paralympic athletes, coaches and athlete support providers

Target Outcome	**Proposed Mechanism of Change**	**Intervention Strategy**
Concern	Psychoeducation	Information Provision
	Planning Skills Training	Skills Training, Observation of others
	Self-Reflection	Guided self-reflection, Feedback & Discussion, Observation of others
Control	Self-Reflection	Guided self-reflection, Feedback & Discussion, Observation of others
	Problem Solving Skills Training	Skills Training, Observation of others
	Psychoeducation	Information Provision
Curiosity	Psychoeducation	Information Provision
	Peer-Modelling	Peer Narrative, Observation of others
	Self-reflection	Guided self-reflection, Feedback & Discussion, Observation of others, Imagining self in alternate scenarios
Confidence	Skills (general)	Skills Training, Observation of others
	Peer-Modelling	Discussion, Observation of others
	Psychoeducation	Information Provision
	Problem Solving Skills	Skills Training
	Self-Reflection	Guided self-reflection, Feedback, Discussion, Imagining self in alternate scenarios, Observation of others

IV. Chapter 4: Identifying how to deliver the change mechanism

This chapter will describe the measures taken to follow step four of the 6SQuID model in sequence. The aim of this stage of development was to identify the what, when, who, where and how to deliver the mechanisms of change identified in Chapter three. It consists of three sections comprising narrative literature review, systematic literature review and an original qualitative investigation.

Career transition intervention modality

As limited resources are available for career development initiatives in Olympic and Paralympic sport, interventions should not only be effective, but also efficient and scalable in order to be a viable addition to any organization's services. Many more people can be assisted by offering career development through structured group interventions like career workshops, or computer-based interventions than one to one counselling (van der Horst & Klehe, 2018). Additionally, some adults who are reluctant to seek counselling may consider a workshop more socially acceptable, and group workshops offer the benefits of social support and interpersonal learning (Anderson et al., 2012). For example, as discussed above, in a group modality, attendees are afforded the opportunity to observe the behaviour of others and discuss how to approach career transitions and model their actions on the success of others. That said, intervention facilitators should also be mindful of the risks associated with group workshops such as confidentiality and confrontation and have risk minimization procedures in place in advance of delivery. Researchers have suggested intervention facilitators should take into consideration several factors when planning for an effective group workshop. These include focusing on the here and now, identifying clear goals, empowering group members to achieve the goals, an inclusive environment, and a reflective process that has a continuous assessment of attendee satisfaction. Additionally, intervention facilitators should take into consideration the requirements of the individual before inviting them to be a group member. For effective group functioning, attendees should

be able to take part in the primary task of the group and be able to self-disclose and possess a willingness and capacity to examine their interpersonal behaviours, as well as an ability to give and receive feedback (Anderson et al., 2012).

Career development interventions may be provided by public sector programs, employers, universities or any other organization with an interest in the well-being, employability and productivity of the workforce (Phillips & Imhoff, 2000). As evident from the mechanisms of change targeted in prior career adaptability interventions, the role of the intervention facilitator is to act as a role model for attendees. In fact, Savickas and colleagues (2009) identify four skills intervention facilitators must develop to assist clients in improving their career adaptability skills, the first of which is to act as a model. The authors describe intervention facilitators as "proactive, self-determined professionals with high levels of self-efficacy for performing their professional duties" (Savickas et al., 2009, p. 247). Additionally, the intervention facilitator should be willing and able to collaborate with others, and must be able to demonstrate their career narrative and how they have actualized their identity through meaningful activities (Savickas et al., 2009). The intervention facilitator must also be skilled in the direct provision of information, and facilitation of interpersonal learning (Anderson et al., 2012). As mentioned previously, inappropriate confrontation in a group setting can lead to sub-optimal outcomes and therefore intervention facilitators must model effective and non-judgmental behavioural feedback. They must also be comfortable in making decisions about how to handle personal disclosures by group attendees. Other attributes and capacities listed as necessary for career intervention facilitators include empathy, genuineness, unconditional positive regard, problem-solving skills, cultural awareness, and an understanding for the limits of confidentiality (Goodman & Anderson, 2012). Specific to the sport context, the trustworthiness of an intervention facilitator has been highlighted as a factor affecting help-seeking at elite

competitive levels (Gulliver, Griffiths, & Christensen, 2012), as has familiarity and perceived competency (McArdle et al., 2014).

Flexibility is a key characteristic of design in career interventions for adults as the needs of the target population can change as they grow and adapt (Anderson et al., 2012). While a facilitated group modality may be the most effective, computer-based interventions may be the most efficient (Whiston, Li, Goodrich Mitts, & Wright, 2017). Technology, and more specifically the internet, can facilitate large numbers of individuals‘ engagement in career interventions at reasonable prices (Sampson & Osborn, 2015). The field of health promotion has seen great advantage in digital delivery methods such as online videos, and the career transition literature has seen some investigation into the usefulness of tools such as ePortfolios (Brame, 2016; Schneider, Weinmann, Roth, Knop, & Vorderer, 2016; van der Horst & Klehe, 2018). Such tools have also been used with Olympic and Paralympic athletes, coaches and athlete support providers to facilitate engagement by those training abroad (Gulliver, Griffiths, Christensen, et al., 2012; Lundqvist, Ståhl, Kenttä, & Thulin, 2018). Brame et al., (2016) report that several meta-analyses have shown that technology (and more specifically digital videos) can enhance learning. However, there is still some debate as to which is more effective, with the conclusion usually being that it depends on the needs of the learner.

The interventions which have targeted career adaptability skills to date have primarily been delivered as psychoeducational workshops or seminars, which may or may not also include individual counselling, with the assistance of technology limited to PowerPoint presentations. Interventions have been delivered by a variety of individuals including; experienced trainers from a recruitment agency following an instruction manual; experienced school psychologists; a psychologist; and two career counsellors

who received training how to develop rapport and guide the participants through the workbook.

As discussed previously, mechanisms of change identified in career adaptability skills interventions to date have included psychoeducation, skills training, modelling, and guided self-reflection. Linking these mechanisms to the group modality of intervention delivery, Table 3 provides examples of what strategies could be used to implement the intervention. Psychoeducation can also be delivered in online format including short digital videos and greater detail of how this can be achieved is provided in chapter five

Table 3 Outline of how intervention strategies may be implemented in a group modality

Mechanism of change	**Intervention Strategy**	**Examples of how the strategy could be implemented within the intervention**
Psychoeducation	Information Provision	Learning points agreed in advance of workshop delivery Information provided on benefits of using skills Lecture style information delivery Concept definitions provided
Peer-Modelling	Peer Narrative/ Observation of others	Group based delivery Pair & Share exercises Workshop delivery co-led by athlete Quotes from well-known athletes used to support learning points Past competitors talking about their post-Games experiences and how they adapted Group tasks Video featuring athletes talking about the skills shown
Skills Training	Skills Training	Skill based worksheets Skill based homework assignment

Self-Reflection	Guided self-reflection	Worksheets for guided self-reflection Questions put to attendees by facilitator
	Feedback & Discussion	Pair & Share exercises Facilitator feedback

In sum, step four of the 6SQuID model should result in a comprehensive implementation plan which takes into consideration the context of intervention delivery. The authors of the 6SQuID model purport that key stakeholders and potential end-users should be consulted at this stage to ensure the implementation plan will be acceptable (Wight et al., 2016). Following the review of prior career adaptability skills interventions, two questions remained (1) what interventions have been implemented with Olympic and Paralympic athletes to enhance well-being, and what factors affected their implementation, and (2) what factors might affect engagement with a psychoeducation intervention to enhance career adaptability skills in Irish Olympic and Paralympic athletes in the pre-Games period?

Study 1: A systematic review of the characteristics of implementation of interventions to enhance well-being of Olympic and Paralympic athletes, coaches and athlete support providers

3.1.1 Summary

Addressing the first of the above listed questions, this section presents a systematic review of the implementation characteristics of interventions to improve well-being and personal resources of the Olympic and Paralympic population worldwide. Excluded from this literature review are articles related to interventions which were delivered solely to enhance athletic performance.

3.1.2 Abstract

Sport organizations are increasingly searching for methods to prevent damage to the well-being of Olympic and Paralympic athletes as a result of the pressures of their career path. The aim of this article is to review reports of interventions which have targeted well-being related factors with Olympic or Paralympic athletes, coaches or athlete support providers and extract the characteristics of their implementation. Potential benefits of greater knowledge of the characteristics of intervention implementation with this population include improved engagement and effectiveness of subsequent interventions. Data extracted was guided by a theoretical framework of implementation determinants These considered the intervention, facilities and resources needed to implement the intervention, the organization, the end-user and the socio-political context. The results highlight similarities and differences in the characteristics of implementation across countries. A single recommended method of implementation cannot be recommended based on the findings due to the huge variance in characteristics of implementation across interventions. Based on the findings we recommend sport organizations explore the context-specific determinants of implementation success with key stakeholders at the intervention development stage and conduct and report process evaluations of interventions.

A systematic review of factors affecting implementation of interventions to enhance well-being of Olympic and Paralympic athletes, coaches and athlete support providers

There is a rising concern about the health and well-being of Olympic and Paralympic athletes as they face significant stressors in the pursuit of athletic excellence (Howells & Lucassen, 2018; Rice et al., 2016). As a result, sport organizations are developing interventions and support services to counter these stresses. Implementation science is concerned with the methods and strategies used to promote the uptake of interventions that aim to improve population health (Bauer, Damschroder, Hagedorn, Smith, & Kilbourne, 2015). Best practice in intervention development is to do so systematically, using the best available evidence and appropriate theory, then to test them using a carefully phased approach, starting with a series of pilot studies targeted at each of the key uncertainties in the design, and moving on to an exploratory and then a definitive evaluation (Craig et al., 2008). The results should be disseminated as widely and persuasively as possible, with further research to assist and monitor the process of implementation. Researchers have noted that lack of effect may reflect implementation failure (or teething problems) rather than genuine ineffectiveness (Craig et al., 2008). Minimal reporting of variability in implementation has been a weakness of the reporting of complex intervention studies in the past (Craig et al., 2008), but relatively new guidelines for the reporting of interventions have been published which incorporate 12 items that researchers should include in their report (Hoffmann et al., 2014). These items include; giving the intervention a brief name, describing the rationale and theoretical background for intervention, describing all physical or informational materials used, describing each of the procedures, activities, and/or

processes (including any enabling or supporting activities), describing the expertise, background and training given to each category of intervention facilitator, describing the modes of delivery (e.g., face to face, online, individual or group), describing the type(s) of location(s) where the intervention occurred, including any infrastructure or relevant features, describing the dose and frequency of the intervention, including the number of times and over what period of time it was delivered, describe any adaptations and what, why, when and how it occurred. Additionally, fidelity should be assessed, and strategies employed to maintain fidelity should be reported. The reason it is important to report all of these items is they can impact intervention success. Key features such as duration, dose or intensity, mode of delivery, and essential processes as listed above can all influence efficacy and replicability but are often missing or poorly described (Hoffmann et al., 2014).

The first step of intervention development is to identify what is already known about similar interventions and the methods that have been used to evaluate them (Craig et al., 2008). However, to date there has been no synthesis of the factors affecting implementation of interventions targeting the health and well-being of Olympic and Paralympic athletes, coaches and athlete support providers. What we do know about implementing psychological support services with this population is that they are difficult to access and are often characterised by a reluctance to consider life beyond sport (Arnold & Sarkar, 2015; Haberl & Peterson, 2010; McArdle et al., 2014; Pearson & Petitpas, 1990). In addition, the culture of Olympic and Paralympic sport emphasizes the importance of superior toughness, creating an environment where athletes may be reluctant to acknowledge the need for assistance because they will be perceived by their

peers as weak (Schinke et al., 2018). Thus, it is critical that interventions are developed with prior knowledge of the factors which might affect implementation success and subsequently impact intervention effectiveness.

The general population health literature suggests factors affecting implementation can be categorized under five determinants (Fleuren, Wiefferink, & Paulussen, 2004). The first of these determinants is the intervention itself and includes factors like the compatibility of the intervention with current procedures, the clarity of procedures, the relative advantage of the strategies associated with the intervention, and the extent to which it is appealing to use. The second determinant in the model is the facilities and resources for implementation. These include the facilities available as well as the physical, time and personnel resources needed for intervention delivery. The third determinant outlined by Fleuren and colleagues (2004) is the implementing organization. This encompasses the size and structure of the organization, formal support networks, the chain of command, and the capacity of staff to implement the intervention. The fourth determinant is the end-user, which incorporates factors related to social support, self-efficacy, how the user expects the intervention will satisfy their needs, and the degree to which the user experiences work related stress. The fifth determinant described in the model, is the socio-political context. Fleuren and colleagues (2004) describe this as the willingness of participants to engage with an intervention and their awareness of the associated benefits. It also considers factors such as the financial, physical or emotional burdens to the participants associated with attendance, and participants' doubts about the delivery team's competency to deliver the intervention.

In sum, being a part of the Olympic and Paralympic cycle presents a unique situation in which an athlete is simultaneously at greater risk of challenges to well-being but may also be unable or disinterested in accessing support resources for their well-being. Given the necessity for sport organizations to enhance their offering of psychological support to Olympic and Paralympic athletes a review of the factors affecting implementation success is necessary and timely. The purpose of this study is to review literature which has attempted to enhance the well-being of Olympic and Paralympic athletes and extract data pertaining to the implementation characteristics of the intervention. Specifically, data was extracted according to the model of Fleuren and colleagues (2004) including the intervention, the facilities and resources required to implement the intervention, the implementing organization, the end-user and the socio-political context. Improving our understanding of these factors may facilitate greater engagement by athletes in longer term initiatives to protect their well-being, and thus enhance intervention effectiveness (Carswell et al., 2017).

3.1.3 Method

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were used to inform the procedure of this systematic review (Moher et al., 2009).

3.1.3.1 Sources

Using specific search terms, databases with an emphasis on psychology and sport were initially used to access articles

(SPORTDiscus, Science Direct, Taylor & Francis, MEDLINE, PsycINFO). The reference lists of all articles identified through the database search were subsequently searched, as were the content lists of relevant journals in sport psychology. These journals included; The Sport Psychologist, Sport & Exercise Psychology Review, Psychology of Sport and Exercise, Journal of Sport Psychology in Action, Journal of Sport & Exercise Psychology, International Journal of Sport and Exercise Psychology, Athletic Insight: The Online Journal of Sport Psychology, International Review of Sport & Exercise Psychology. Due to the inconsistency in keywords used in this field a range of synonyms related to the keywords were established to maximize potential for identifying original research. The search strategy is available upon request to the corresponding author and was used in MEDLINE, PsycINFO, and SPORTDiscus with Full Text via EBSCO.

3.1.3.2 Eligibility Criteria

To be included in the review studies had to be peer-reviewed, written in English, and present a predetermined intervention conducted with Olympic/Paralympic athletes, their coaches, service providers or family members during any modern Olympic/Paralympic cycle to date. The outcomes of the intervention must have been related to psychological well-being in any definition discussed by Lundqvist (2011) (including knowledge, attitude, skills, resources, behaviours).. Case studies or professional practice articles which did not present an evaluation of the described intervention were excluded. Articles were also excluded if the stated aim of the intervention was solely to improve the target population's athletic performance

3.1.3.3 Procedure

A review protocol was registered with (ID: CRD42015029192) at PROSPERO (International Prospective Register of Systematic Reviews). The study selection procedure was a four-step process. The first step was to assemble a full list of potential titles and screen the list for duplicates. The second step was a preliminary screening which identified and removed articles whose title was evidently not of relevance to the study aim (e.g., studies involving student-athletes). The third step involved two independent reviewers screening the title and abstract by the eligibility criteria. Any disagreements were discussed and resolved by consensus.

Once a complete list of articles for full-text screening was assembled, the final step involved was to confirm their eligibility against the inclusion criteria and assign each study a bibliography number.

3.1.3.3.1 Data Management

Data extraction criteria were chosen based on the implementation model described by Fleuren and colleagues (2004). Sample characteristics extracted included participant's role, sample size, gender, sport type, level of competition, age range and location. Data extracted pertaining to the factors that affected implementation success, including the intervention, the facilities and resources necessary for implementation, the implementing organization, the end-user and the socio-political context. A formal risk of bias assessment was not conducted as we did not aim to make a recommendation on the best methods of intervention. The third step of data management was a

qualitative synthesis of the extracted data. Thematic synthesis was specifically chosen, as it offers a method of integrating and structuring diverse types of evidence (e.g., qualitative and quantitative) by identifying prominent themes in the studies.

3.1.4 Results

A total of 7617 articles were identified. This was reduced to a final list of nine articles that met the inclusion criteria. Figure 1 denotes The Preferred Reporting Items for Systematic Reviews and Meta-Analysis flow diagram. Among the 39 full-text articles screened, one contained two independent samples, only one of which met inclusion criteria (Gould, Hodge, Petlichkoff, & Simons, 1990). Bibliography numbers are assigned to articles below Table 4. Across nine studies 396 individuals took part, with female (n = 181), male (n = 212) and not described (n = 3). Participants consisted of athletes (n = 178), coaches (n = 36), and other roles (n = 182). The published mean ages ranged from 24.5 to 48.4 years. Further details can be seen in Table 4. A detailed table was created which classifies the characteristics of the implementation plan according to the five determinants of implementation success model (Fleuren et al., 2004): (a) the intervention, (b) facilities and resources for implementation, (c) the organization, (d) the end-user, and (e) the socio-political context. Factors within the determinant are listed and further detail and/or examples are provided in

Table 6. The number of studies that data pertaining to the factor was extracted from is listed in the sample column.

Figure 4 Flow of information through systematic review

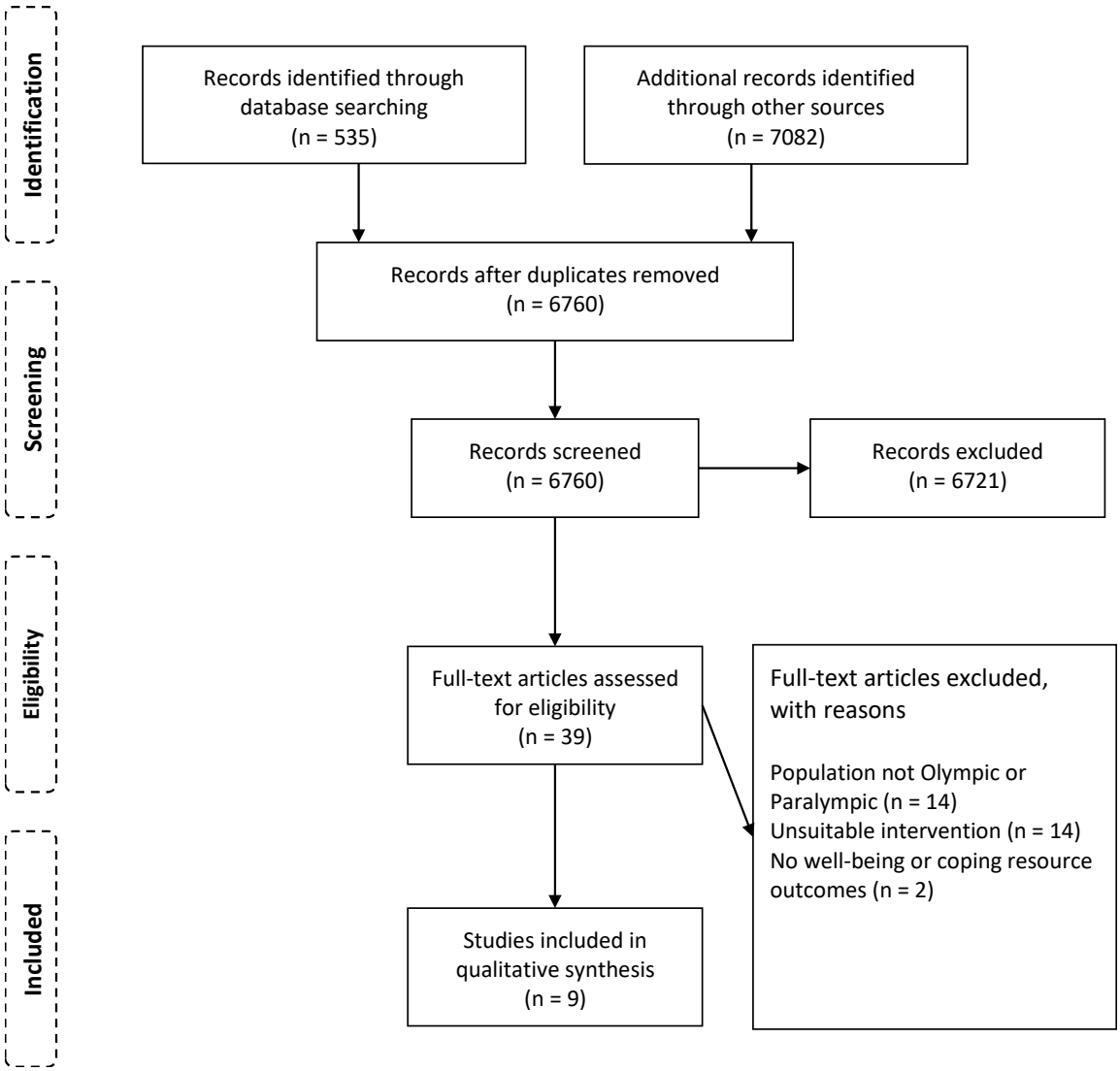


Table 4 Sample Characteristics

Study Characteristics	Number of studies	Bibliography Number
Design		
Qualitative	3	1, 5, 6
Quantitative	6	2, 4, 7, 8, 9
Mixed Methods	1	3
Follow-up measures	4	2, 7, 8, 9
Single sample	5	1, 2, 3, 5, 6,
Controlled intervention	4	4, 7, 8, 9
Data Collection		
Interview	3	1, 3, 6
Questionnaire	7	1, 2, 3, 4, 7, 8, 9
Observation	1	5
Sample size		
1 - 10	2	3, 5,
11 - 50	4	1, 2, 6, 7
51 - 100	2	4, 9
101 - 200	1	8
Level of competition		
Olympic	5	1, 2, 3, 5, 6
Paralympic	2	4, 7
Olympic, Paralympic and International	2	8, 9
Age range		
16 – 26	4	2, 6, 8, 9
27 - 40	6	2, 4, 6, 7, 8, 9
Over 40	4	4, 7, 8, 9
Unknown	3	1, 3, 5
Location		
North American	3	1, 2, 5
Europe	2	6, 7
Australia	2	8, 9
Asia	2	3, 4

Note: Bibliography numbers 1 = (Beauchamp, Harvey, & Beauchamp, 2012); 2 = (Gould et al., 1990); 3 = (Hung, Lin, Lee, & Chen, 2008); 4 = (Cheon, Reeve, Lee, & Lee, 2015); 5 = (Rushall, 1988); 6 = (McArdle et al., 2014), 7 = (Lundqvist, Ståhl, Kenttä, & Thulin, 2018); 8 = (Sebbens, Hassmén, Crisp, & Wensley, 2016), 9 = (Gulliver et al., 2012)

Table 5 Intervention aim, theory, mechanisms of change, strategies employed, outcome measures and effects

Bibliography number	Aim	Theory	Mechanisms of change	Example Strategies	Examples of outcome measures	Effects
1	Prepare the athletes for their best performance under the pressure of the Olympic Games.	Unclear or not reported	Psychological skills training	Cognitive behavioural mental skills workbook, Educational Seminars, Mental Training Log Book, Goal setting	OMSAT-3 RESTQ-sport CSAI-2 TAIS Stress levels EEG reaction times	Reported improvement in outcome measures but no data presented
2	Examine the effects of an educational psychological skills training program	Unclear or not reported	Psychological skills training	Relaxation, visualization/imagery, goal setting and mental preparation techniques	Wrestling experience, Knowledge of, importance attached to, and present use of	Significant improvement in at least one sub-item of relaxation, visualization and

Bibliography number	Aim	Theory	Mechanisms of change	Example Strategies	Examples of outcome measures	Effects
	over a 3-month period.			Battery of techniques, whether they underly one theory is questionable, more of a pragmatic approach Vealy	intervention techniques	goal setting in at least one time point
3	Decrease anxiety, increase concentration, increase performance under pressure and feeling of unity	Unclear or not reported	Psychological skills training	Breathing exercises Mental imagery	APSI Task & ego orientation SCAT	Decrease in SCAT score Increase in task and ego orientation Increase in 4/5 measure mental skills

Bibliography number	Aim	Theory	Mechanisms of change	Example Strategies	Examples of outcome measures	Effects
4	Increase autonomy-supportive coaching behaviours	Self-determination theory	Psychoeducation	Information provision Group-discussion of scenarios One to one discussion of application of learning	5-item Perceived Autonomy scale 19-item Engagement Scale 12-item Psychological Need Thwarting Scale Teachers' Sense of Efficacy Scale	Mixed outcomes across variables. Main target outcome not achieved.
5	Improve loss of confidence	Unclear or not reported	Covert modelling (cognitive restructuring)	Imagining scenes of others interacting with the environment, progressing to imagining oneself	Performance and self-reported improvement in confidence	Reported improvement in outcome measures but no data presented

Bibliography number	Aim	Theory	Mechanisms of change	Example Strategies	Examples of outcome measures	Effects
				interacting with the environment		
6	To assist athletes in managing the post-Games period	Account-making	Individual account-making Group-based account making (normalization) Peer-modelling	One to one consultation for account-making Peer-led group-based account-making targeting normalization and vicarious experience	Qualitative inquiry	Participants reflection indicate the intervention was useful
7	Stress Reduction	Cognitive - Behaviour	Psychoeducation Mindfulness Meditation	Web seminar Daily practice of breathwork	Perceived Stress Scale Rumination-Reflection Questionnaire Mindfulness	MAAS significantly higher in intervention

Bibliography number	Aim	Theory	Mechanisms of change	Example Strategies	Examples of outcome measures	Effects
				10-minute daily practice of mindfulness	Attention Awareness Scale Karolinska Sleep Questionnaire Acceptance and Action Questionnaire	PSS, RRQ, PF, KSQQ significantly higher post intervention (immediately and/or 6 weeks later) in intervention group. Moderate to large effect sizes
8	To improve mental health literacy in coaches and	Unclear or not reported	Psychoeducation	Information provision Scenario training	Depression Literacy questionnaire	Significant difference between control and

Bibliography number	Aim	Theory	Mechanisms of change	Example Strategies	Examples of outcome measures	Effects
	support staff working in elite sport environments			Facilitated discussions between participants and Presenters Case-studies Role-plays	Anxiety Literacy questionnaire Confidence (scale developed for the study)	experimental group at a single time-point on all outcome measures
9	To increase mental health help-seeking attitudes, intentions, and behaviour in young elite athletes	Unclear or not reported	Psychoeducation	Information provision, Normalization	10-item Attitudes Toward Seeking Professional Psychological Help-Short Form (ATSPPH-SF) 10-item Kessler Psychological Distress Scale	No significant increase in help-seeking measures Significant improvement in at least one sub-item of literacy and stigma

Bibliography number	Aim	Theory	Mechanisms of change	Example Strategies	Examples of outcome measures	Effects
					Depression Literacy questionnaire	

Table 6 Implementation determinants and factors identified in the studies

Determinants	Sample	Further Detail	Bibliography numbers
The intervention			
Extent to which the procedures/guidelines of the innovation are clear	2	One study discussed a lack of clarity of procedures wherein participants were unclear if participation in the intervention was part of their performance review and therefore a mandatory element of their funding. Another study discussed the use of a log book to ensure intervention procedures were adhered to	1, 6
Compatibility: degree to which the innovation is perceived as consistent with existing work procedures	3	Intervention content had to be adapted after recruitment began to fit with the current procedures	1, 2, 8,
Facilities and Resources for Implementation			
Delivery Format			
Group	6	Number of sessions ranged from 1 - 8 with maximum group size of 32 participants	1, 2, 3, 4, 6, 8
One to One	4		1, 2, 5, 6
Online delivery	2	Website portals were used with sites containing between 3 – 34 webpages	7, 9
Other	5	Bonding activities, mental skills workbooks, simulation, performance evaluation	1, 3, 6, 8, 9
Delivery Location			
Training or competition venues	7	Competition venue was the Olympic Games	1, 2, 3, 4, 5, 6, 8
Both training and competition	3	Competition venue was the Olympic Games	1, 5, 6
Web-platform	2	While website was used to deliver the intervention some participants in Gulliver et al., (2012) came to a	7, 9

		centralized location to fill-in the initial questionnaire in a computer lab.	
Timing of delivery			
Preparation phase	6	Interventions began implementation between two months and three years before the Games	1, 3, 4, 5, 7, 9 *3, 4, 7
Post-Games phase	1	In the one study delivered during the post-Games phase information dissemination did occur in advance of the competition	6
Unclear or not reported	2		2, 8
Delivery Team			
Sport psychologist only	8		1, 2, 4, 5, 7, 8
Clinical psychology student	1	Facilitator had 10 years of mindfulness instructing experience delivered the intervention	9
Multi-disciplinary team members	2	Other facilitators included sport chronobiologist, a life-style manager, the Director of Performance Services, a clinical support professional, and peer-mentors	3, 6
The organization			
Decision-making process and procedures in the organization: top-down or bottom-up/participatory	3	The need for intervention was identified in both top-down and bottom-up manners	5, 6, 7
Hierarchical structure: extent to which decision-making process is formalized through hierarchical procedures	3	In three instances national governing bodies assisted intervention implementation by championing and inviting participants to the intervention. The review found no evidence that management made participation in any of the interventions described herein mandatory.	6, 8, 9
Available expertise, in relation to the innovation in the	9	Each implementing organization was found to have the required expertise for intervention delivery	1, 2, 3, 4, 5, 6, 7, 8, 9

organization or department		available, however it is not clear if the expertise remained with the organization following implementation.	
End-User			
Support from/of key stakeholders	9	Key stakeholder (e.g., coaches) support was mentioned as both a barrier and facilitator of implementation	1, 2, 3, 4, 5, 6, 7, 8, 9
Extent to which the health professional suffers from work-related stress	2	Sources of workplace stress included inter-team rivalry and high workload	3, 7
Personal Characteristics[1]	1	One study reported participation in the intervention was significantly related to gender, with men less likely to participate than women. The same study also identified those who had no experience of counselling, were older, or had higher scores of psychological distress were more likely to participate.	9
The socio-political context			
Willingness of the patient to cooperate with the innovation	4	In some cases, the need for intervention was identified by the end-user, which implies a certain willingness to participate from the onset. Other studies reported significant difficulty in recruiting participants, and the need for information provision campaigns to encourage participation.	3, 4, 5, 7
Degree to which the patient is aware of the health benefits of the innovation	4	Authors reported a lack of awareness or low expectations of the value of engagement as a barrier to implementation.	3, 4, 6, 7

3.1.5 Discussion

The purpose of this review was to extract information pertaining to implementation factors in reports of interventions which have targeted well-being related in Olympic or Paralympic athletes, coaches or athlete support providers. Given the paucity of research on the topic, the present review took a broad and inclusive approach. Over 7000 titles were sourced for this review and a total of nine articles were considered to have some relation to coping resources or well-being. Of the 39 full-text articles screened, quite a number were excluded on the basis of not providing results based on the outcome measures they mentioned collecting. For example, two studies mentioned collecting POMS scale data but did not present it. Other frequent reasons for exclusion categorised as "unsuitable interventions" were articles framed as professional practice/case studies which presented a framework for intervention which was retrospective in nature or had not been empirically evaluated. Despite identifying thousands of potential titles, two that are included here were not found through traditional search means (Gulliver, Griffiths, Christensen, et al., 2012; Sebbens, Hassmén, Crisp, & Wensley, 2016). Both were identified by chance in a list of references provided by another systematic review (See Breslin, Shannon, Haughey, Donnelly, & Leavey, 2017). Neither article is published in a typical sport psychology journal and would not be indexed in the traditional sport science databases. The value of hand searches is evident for those conducting systematic reviews in sparsely researched areas.

Following a comprehensive assessment of the included studies, data was extracted and categorized according to the factors affecting the implementation plan (including the intervention, the facilities and resources required to implement the intervention, the implementing organization, the end-user and the socio-political context) as described by Fleuren and colleagues (2004). Within this review the sample

characteristics predominately represented athletes (n = 7) competing in the Olympic Games (n = 5). Despite the growing popularity of the Paralympic Games there remains a paucity of interventions implemented to improve the well-being of these athletes, as denoted by the singular intervention which specifically recruited Paralympic athletes.

Intervention development literature suggests the incorporation of existing evidence, theory and the views of potential end-users is of primary importance in creating intervention which will be successful and widely adopted (Bradbury, Watts, Arden-Close, Yardley, & Lewith, 2014). Within this review no interventions specifically discussed the development of their implementation plan or commented on provisions they made to ensure it was feasible and acceptable to the target population. While the inconsistency in reporting made data extraction difficult, there was evidence of how the determinants of implementation success as outlined by Fleuren and colleagues (2004) affected implementation plans. An additional challenge in completing this step of the review was the scoping nature of the model described by Fleuren and colleagues (2004). Several factors which are listed under one determinant could be listed under a different heading. For example, the willingness of an individual to participate would seem to be most logically categorized under the end-user, however the model describes it as a factor associated with the socio-political context. As much as is possible we have attempted to follow the categories as outlined in the model, however future reviews or intervention developers may modify the structure to better suit the sport population.

Factors related to the first determinant, the intervention, were identified in four studies. Specifically, these factors were the clarity of intervention procedures and the compatibility of the intervention with current procedures. Clarity was described from two perspectives. In one study participants comment on a lack of clarity in the intervention implementation and in the other the author described how a log book was

used to ensure participants had clarity. With reference to the compatibility of the intervention, authors highlighted that athletes engaged in their qualification attempt thought a comprehensive mental skills training program would be too great a change to their usual training plan and were therefor reluctant to participate.

The second determinant in Fleuren's framework is the facilities and resources for implementation. Factors related to this determinant were the most frequently reported of all five included in the model. Common factors included delivery format, location, timing, and delivery team. Group delivery was the most commonly used mode and has been identified as a pragmatic solution to limited financial and time resources (Wood, Barker, Turner, & Sheffield, 2018). The number of group sessions ranged from one to eight, with a maximum of 32 participants in one group reported. Little reflection was made on the efficiency of group sessions except in the work of McArdle et al. (2014) where participants suggested two points of contact with an optional third was ideal for the post-Games period. One to one delivery was the next most common mode of delivery, followed by online methods. Online methods are attractive due to their cost-effectiveness, anonymity in access, and accessibility (Andersson & Titov, 2014). Reflections on intervention implementation by the authors included recommendations to use behavioural contracting, mental skills training log books, and self-monitoring in future interventions. While two interventions did use online methods, location is an important consideration for accessibility, and it appears training ground and competition venues were the most frequently used. Time is a limited resource for this population as a result of demanding training schedules, which may also include large parts of the year spent in other countries (Stambulova et al., 2012). It is important therefore that any future interventions consider how the timing of intervention delivery can be optimised to ensure accessibility. Unfortunately, it was not possible to extract data pertaining to the time commitment involved in intervention participation due to inconsistent

reporting. The model by Fleuren and colleagues (2004) suggests that a participant's doubts about the intervention facilitator's expertise and competence will affect implementation. All but one intervention described herein was delivered by a sport psychologist, but it was not possible to ascertain the intervention participants' views on this factor.

The third determinant outlined by Fleuren and colleagues is the implementing organization. Factors related to the organization identified in the review were extremely limited. The model outlined by Fleuren and colleagues (2004) comprises 12 factors, three of which were evident in the included studies. These factors were; the decision-making processes of the organization, the extent to which decision making is formalized and the availability of expertise in the organization in relation to the intervention. A small but growing body of research is examining the role of the organizational processes in sport as they have been recognised to influence the behaviours and attitudes of individuals and the wider performance team (Arnold, Hewton, & Fletcher, 2015). Within this review, it is not clear in all cases whether inspiration for intervention arose at the top or bottom of the organization hierarchy. Some authors refer to the problem being identified by the end-user, whereas other interventions appear to be driven by a research agenda. Prior research has suggested that some sporting organizations may not recognize the prevalence and significance of mental health problems in elite athlete populations (Factor & Reardon, 2010). Additionally, a suggestion has been made that access to timely and appropriate mental health care may be limited if an athlete feels the culture of the organization is not supportive (Rice et al., 2016). The independent Duty of Care in Sport Report that explored various aspects of athletes' well-being including their mental health stated that: "Mental health and well-being is a major concern in British performance sport and should be treated accordingly" (Grey-Thompson, 2017, p. 23). The report recommended that sport

organizations engage with the mental health agenda and proposed that mental health training is provided for coaches, and mental health awareness training is made available for athletes. As mentioned previously, this was the case in four of the included studies. Evidently all interventions described herein had the expertise available to deliver the intervention, however it is not clear if the delivery teams remained with the organizations following implementation. Prior research has suggested that sport psychologists feel practical experience and good sport psychology expertise are necessary qualities a facilitator must have before working with athletes at Olympic and Paralympic level (Fortin-Guichard, Boudreault, Gagnon, & Trottier, 2018). Also of importance is the perception of the athlete, which can be influenced by a range of factors including gender, nationality, and age; and of the coach, which can be motivated by performance or personal development goals (Fortin-Guichard et al., 2018),

The fourth determinant is the end-user, and factors related to this determinant included social support, the degree to which the end-user experiences workplace stress, and personal characteristics. Social support from key influencers such as coaches, athlete support providers and higher management was evident in all included studies. Although previous literature has highlighted the importance of social support as a coping resources for stress in the career of an athlete (Baillie & Danish, 1992; Park, Lavallee, & Tod, 2013) this review found little to no evidence that social support was intentionally targeted as a coping resource, or that peer-modelling was specifically targeted as a mechanism of change. The literature suggests frontline staff such as coaches, physiotherapists, nutritionists etc., are well situated to promote mental health within sport systems due to their established and trusted relationships (Sebbens et al., 2016). Given some athlete groups have been found to have high levels of intentions to seek help it is important that those they are likely to seek help from are willing and able to do so (Gulliver, Griffiths, Christensen, et al., 2012). Also, literature demonstrates that

work-place stress can affect a coach's performance and ultimately affect both their own and the athlete's well-being (Cheon, Reeve, Lee, & Lee, 2015). The model charted by Fleuren and colleagues (2004) does not outline personal characteristics which may affect the successful implementation of interventions. However, one study in this review examined the relationship between personal characteristics and participation in the intervention (Gulliver, Griffiths, Christensen, et al., 2012). They found groups with specific characteristics (men, those with low stress scores, those with experience of counselling) were less likely to participate in an intervention to promote mental health help-seeking and suggested there may be value in tailoring recruitment strategies based on this observation.

The fifth determinant described in the framework is the socio-political context. In the included studies there was evidence for the impact of the end-user's awareness of the benefits of participation, and their willingness to participate. Educating participants about the benefits of participation was a common strategy mentioned. While not explicitly discussed, evidence of the willingness of individuals to participate in the included studies can be gleaned from the descriptions of recruitment strategies and on the reflections of the authors. For example, in the study described by Gulliver and colleagues (2012), of the 120 athletes who initially agreed to participate, 59 (49%) completed at least two measures. For future reports of interventions, it would be helpful if authors reported an estimate of the total population available for recruitment for comparison to the sample they gained access to.

The contribution of this study to the literature is a list of factors which have affected the implementation of interventions targeting well-being in Olympic and Paralympic athletes. The application of a general population model of determinants of implementation success was useful, however, a substantial number of factors within this model were not evident in the sport-context. Online delivery methods appear to be

favourable when delivering interventions to sports coaches and support providers. This is potentially due to the need for a low time burden for participation, whereas contact at the competition venue appears to be favourable when delivering an intervention to athletes.

3.1.6 Practical Implications

Several practical suggestions for intervention developers emerged from the present review. First, the 6SQuID model (Wight et al., 2016) is a useful tool for intervention planning and will assist developers in the consideration of a guiding theory which must be used to inform the mechanisms of change chosen for an intervention. Second, Fleuren and colleagues' (2004) model of the determinants of successful implementation may be useful in the planning stages of intervention development. Specifically, if the determinants are considered in advance the acceptability of the intervention to the end-user may be enhanced. Third, coaches and athlete support providers should be educated on the benefits of intervention and included in the target population for two reasons. The first reason being they have the established relationships to encourage athlete participation, and the second being they are also operating with an extremely stressful system and if their health is compromised it can impact the athlete. Finally, to date, reports of interventions have not reflected on the impact of implementation factors on the effectiveness of interventions delivered to enhance well-being. This is a critical gap in the existing literature which could not be answered by this review. In the future, intervention developers should consider elucidating the context-specific factors that might affect the feasibility and acceptability of interventions at the development stage.

3.1.7 Limitations

Several limitations are apparent in this review. Despite conducting a comprehensive search of published peer-reviewed literature, the review did not include

non-English language studies, grey literature, or unpublished research. This was decided based on the known difficulties in identifying and including relevant non- English studies and grey literature. Additionally, the traditional systematic review database searches were not sufficiently rigorous to identify all of the articles included herein. Hand searches are potentially required for literature review in this area.

While the description provided by Beauchamp et al (2012) is comprehensive in both intervention development and implementation, the outcome of the intervention is not clear. The authors provide no objective data to support their claim that the intervention may have contributed to the success of the team at the Olympic Games, though it is evident from their description that much data was collected and analysed throughout the three-year program. On this basis the article could be considered professional practice and therefore should not be included in this review. However, the volume of information provided with regard the implementation of the intervention ensures its contribution and relevance to this review. Many professional practice papers were excluded based on the eligibility criteria. It is possible that guiding theories will be more evident in such articles, and so a review of theoretical frameworks and implementation characteristics of professional practice papers would be of benefit.

The use of the model by Fleuren and colleagues, while useful, poses some challenges in filing the characteristics beneath a sub-heading. For example, coach buy-in and willingness of the participant to attend are described as separate factors, when within the research the terms are used interchangeably. A reader therefore may consider these to be mislabelled. However, if these factors are considered, the intervention development should benefit no matter how they are labelled.

Additionally, the variety found across studies in terms of the implementation plan made it impossible to provide a conclusive direction for intervention developers. However, the review applied considerable rigor to integrating and reporting such

diverse data. This is a significant strength of the study considering the apparent difficulty in synthesizing data in reviews of mixed studies.

3.1.8 Conclusions

In conclusion, this systematic review is the first to appraise implementation factors associated with intervention studies on well-being in Olympic and Paralympic athletes. The findings provide an important step in understanding intervention implementation plans with this population. This systematic review was a response to an increasing demand for sport organizations involved to meet their duty of care to an athlete's well-being. Close inspection of the studies to date indicates significant variety in factors affecting implementation. This is not entirely unexpected given each intervention targeted a different sport, or a multitude of sports, across a range of countries. This perhaps points to the need for sport and culturally specific interventions as suggested in the literature (Stambulova, 2017; Stambulova et al., 2009). Furthermore, existing well-being interventions do not address the unique context of Olympic and Paralympic and therefore details of implementation plans were sparse. Consequently, there exists a need for researchers to explicitly explain the development and delivery of the interventions they roll out and assess so others may learn from them.

3.1.9 Summary

Researchers have noted that engaging athletes in career development interventions is a difficult matter (Pearson & Petitpas, 1990). It is important therefore that the factors which affect engagement are understood at the intervention development stage. This study addresses the second remaining question outlined at the beginning of this chapter "what factors might affect engagement with a psychoeducation intervention to enhance career adaptability skills in Irish Olympic and Paralympic athletes in the pre-Games period?" This study builds on the systematic review of implementation characteristics by identifying if the factors found in the review would likely act as barrier or facilitators to engagement with a psychoeducation intervention in the Irish Olympic and Paralympic context.

3.1.10 Abstract

There is a growing need for crisis-prevention career transition interventions in elite sport. However, there is limited information available for intervention developers on the factors which affect athlete engagement in such interventions. The purpose of this qualitative study was to identify the factors that key stakeholders believe would act as barriers and/or facilitators of Olympic and Paralympic athletes' engagement in a crisis-prevention career transition intervention. A pragmatic qualitative approach was taken and directed content analysis was used to identify the factors. Twenty-one semi-structured interviews with Olympic/Paralympic athletes (n = 9), coaches (n = 6), and athlete support providers (n = 6), were analysed. Participants identified three main factors affecting engagement including the elite sport context (e.g., collaboration between sport organizations, policy decisions), logistical factors (e.g., format, timing, peer-led delivery), and personal factors (e.g., performance focus, fear of stigmatization). The implications of these results for the development of a crisis-prevention intervention to improve athletes' ability to adapt to the post-Games meta-transition is discussed.

3.1.11 Introduction

Due to the health and career consequences of an athlete failing to adapt to a career transition, advocacy for sport organizations to offer crisis-prevention interventions to improve athlete awareness of and ability to adapt to career transitions is rising (Alfermann & Stambulova, 2007; Hong & Coffee, 2018; Lavallee, Park, & Taylor, 2014; Ryba, Stambulova, & Ronkainen, 2016; Schinke et al., 2018). However, one of the biggest issues sport organizations face in relation to career transition interventions is athlete engagement (Chambers, Harangozo, & Mallet, 2019). From the perspective of the athletic career transition model (i.e. a crisis transition is preventable through the improvement of personal coping resources) the focus of the current study is the exploration of factors which key stakeholders including athletes, coaches and athlete support providers believe affect engagement in a crisis-prevention career transition intervention (Alfermann & Stambulova, 2007; Stambulova, 2003). Specifically, the aim of this study was to explore barriers to Olympic/Paralympic athletes' engagement in a career transition crisis-prevention intervention.

The career transitions associated with participation in the Games have been examined in the literature as a series of six meta-transitions including; (1) entering the program, (2) entering major international tournaments, (3) Games qualification, (4) focused preparation for the Olympic Games, (5) participation in the Games, (6) transition to the post-Games (Schinke et al., 2015). To date, research has mainly focused on the first five meta-transitions (i.e., preparing for and participating in the Games (Collins & Cruickshank, 2014; Poczwardowski et al., 2014; Wylleman et al., 2012). However, the demands of the post-Games meta-transition have been identified as particularly unique and emotionally challenging (Howells & Lucassen, 2018; McArdle et al., 2014; McCann, 2000; Schinke et al., 2015). The transition to the post-Games begins when an individual believes their participation in the Games is ending and it

causes a change in their assumptions about themselves or the world; this may occur at the closing ceremony, on the return home, or upon a failed qualification attempt (Schinke et al., 2015; Schlossberg, 1981). The demands of the transition may be specific to the individual, but generally athletes must analyse their Games experience, consider lessons learned and make a plan for their future (Schinke et al., 2015). Common contributors to difficulty meeting these demands are perceived heightened expectations from others, difficulty deciding on a career pathway, and perceived reduction in social support (Howells & Lucassen, 2018; Jackson et al., 1998; McArdle et al., 2014). From the perspective of the athletic career transition model, ineffective or insufficient coping resources for the transition to the post-Games results in a crisis situation where athletes report experiencing loss of motivation, low mood and anxiety (Alfermann & Stambulova, 2007; Howells & Lucassen, 2018; Jackson et al., 1998; McArdle et al., 2014; Schinke et al., 2015). The model further explains that if an athlete's crisis-coping resources are also ineffective, the difficulties may be exacerbated and lead to clinical symptoms of psychological distress, drug and alcohol abuse, injury, overtraining and criminal behaviour (Alfermann & Stambulova, 2007). Further, in a review of the literature from 1980-2000, it was found athletes who experienced an ineffective response to a crisis-transition were at risk of contemplating, attempting or completing suicide (Baum, 2005). Given that successfully coping with the demands of the transition to the post-Games can have such significant implications for an athlete's future it would be helpful to enhance athletes' ability to adapt to this particular transition.

A crisis-prevention intervention is a health promotion initiative which aims to prepare athletes to adapt to career transitions in advance of the transition. Interventions may consist of; identifying athlete's current resources and planning the development of additional resources such as decision-making and planning skills, education, or identifying barriers to adaptation in advance of the transition (Alfermann &

Stambulova, 2007; Chambers et al., 2019). However, Olympic athletes have reportedly been reluctant to engage in preparation for the transition to the post-Games due to the overwhelming demands of the series of meta-transitions leading up to the Games (Arnold & Sarkar, 2015; Jackson et al., 1998). Recent research suggests that the context of intervention delivery is predictive of intervention success (Fleuren et al., 2004; Hong & Coffee, 2018; Mellalieu, 2017). Given the health and career implications of successfully adapting to the transition to the post-Games it is important to understand those factors that might influence athlete engagement in a crisis-prevention intervention delivered during the pre-Games period (Fleuren et al., 2004).

Currently, there is limited information available for sport organizations and other athlete support providers to make well-informed decisions regarding the design and delivery of crisis-prevention career transition interventions to Olympic and Paralympic athletes. It has been suggested that the first step in career transition intervention planning should be to become familiar with the targeted sport context(Petitpas & Champagne, 2000). Implementation science aims to bridge the gap between evidence-based best practice recommendations and the provision of healthcare innovations. It does so by examining the factors that affect the use of interventions and programmes in practice (NIRN, 2016). These factors can broadly be grouped into five categories; (1) the socio-political context, (2) characteristics of the organization, (3) the adopting user, (4) the intervention/innovation, and (5) the facilities needed to implement the intervention (Fleuren et al., 2004). The first category; the socio-political context, refers to factors such as an athlete's perception of the benefits of the intervention and credibility of those delivering the intervention. In many cases those involved with career transition support such as sport psychologists, lifestyle advisors, lifeskills practitioners and career counsellors are specifically contracted to assist athletes with their career development. Recognising that the credibility of a facilitator affects engagement, a

number of sporting organisations worldwide have developed explicit training programme for those involved in the delivery of sport career transition support (Hong & Coffee, 2018). Other factors related to the socio-political context include financial implications for the end-user, any discomfort engagement may cause them, and their knowledge of the benefits of participation (Fleuren et al., 2004; McArdle et al., 2014). To facilitate engagement, information provision campaigns using text, electronic mail and social media have been suggested (Gulliver, Griffiths, Christensen, et al., 2012; McArdle et al., 2014).

Organizational factors are also purported to influence participant engagement (Fleuren et al., 2004). Factors such as operational systems, key organizational gatekeepers, and formal and informal power structures have been noted as important considerations for context-specific interventions (Stambulova & Schinke, 2017). For example, policy decisions regarding career transition support for self-funded athletes or mandatory attendance for government-funded athletes has been noted to affect engagement in general career development and crisis-coping transition interventions (Chambers et al., 2019; Lavallee et al., 2014; McArdle et al., 2014). Additionally, several health promoting interventions delivered to date have facilitated athlete engagement by first engaging key gatekeepers such as coaches, and directors of national governing bodies in the program (Gulliver, Griffiths, Christensen, et al., 2012; McArdle et al., 2014; Schinke et al., 2015). Other organizational factors thought to influence engagement include the size of the organization, and the nature of collaboration with other agencies (Fleuren et al., 2004). A third category thought to influence engagement is the characteristics of the adopting user. Considering the elite sport literature, factors such as lack of problem awareness, perceived stigma, and an athlete's sex have been identified as affecting engagement (Gulliver, Griffiths, & Christensen, 2012; Gulliver, Griffiths, Christensen, et al., 2012). Drawing from the general health promotion

literature, other characteristics of the adopting user to consider include the individual's self-efficacy, his or her perceptions of support from significant others and how the intervention outcomes are aligned with the individual's personal and occupational needs (Fleuren et al., 2004).

In the literature the nature of the intervention itself has also been shown to impact on engagement (Fleuren et al., 2004). Intervention factors include clarity of intervention procedures and the perceived benefit of participation. For example, research stemming from the Australian high performance system highlighted that athlete and coach engagement in a formal career development program was frequently inhibited by program ambiguity (Chambers et al., 2019). Additionally, research with Olympic/Paralympic athletes from Ireland and Canada suggest low perceived benefits of engagement in a crisis coping intervention negatively affected engagement (McArdle et al., 2014; Sinclair & Orlick, 1993). Finally, factors related to the facilities and resources needed to implement an intervention has also been shown to impact engagement. This includes logistical decision such as when, where, and how the intervention should be delivered, and who should be invited to attend. For example, training location has been noted as a barrier to accessing career transition interventions. Consequently to facilitate engagement sport organizations have increasingly utilized on-line options (Hong & Coffee, 2018).

In sum, research has highlighted the importance of preparing athletes for the transition to the post-Games to prevent negative outcomes such as mental health difficulties. While calls have been made to offer crisis-prevention interventions, it has been reported that Olympic athletes are reluctant to prepare for the transition to the post-Games in advance of the competition. A gap exists in our understanding of what factors affect engagement in interventions of this nature which limits sport organization's ability to deliver an intervention that is both feasible and acceptable to the target

population. As no studies to date have prospectively explored factors affecting engagement in a crisis-prevention intervention in the pre-Games period, a qualitative approach was chosen. Guided by literature from the career transition in sport and health promotion/implementation science fields, the current study sought to identify factors which acted as (1) barriers to engagement and (2) facilitators that could serve as solutions to these barriers.

3.1.12 Materials and methods

3.1.12.1 Participants

Participants were 21 (female n = 10, male n=11) Olympic or Paralympic athletes (n = 9), coaches (n = 6), and athlete support providers (n = 6). Inclusion criteria for this study included being aged 18 years of age and older, having experience of the Games (either having been a participant or actively involved in supporting a participant). Athlete participants were active or retired. Sports and professions are presented as a group in Table 1. Sport organizations represented by the participants included; athletics, canoe-slalom, boxing, para-swimming, para-athletics, para-cycling, gymnastics, shooting, sailing, rowing, and horse sport. Professions represented included athletes, coaches, physiologists, sport psychologists, sport directors, physiotherapists, and strength and conditioning coaches. Participants' ages are presented in a band to maintain confidentiality.

Table 7 Participant Demographic Details

Code	Sex	Role	Age Band (years)	Team or Individual Sport	Games Experience	Number of Games experienced
P1	Male	Athlete	30-39	Individual	Olympic	Three
P3	Male	Athlete	30-39	Individual	Olympic	One
P4	Male	Athlete	40-49	Individual	Olympic	Four
P5	Male	Athlete	30-39	Individual	Paralympic	One
P11	Male	Athlete	30-39	Individual	Olympic	Two
P14	Female	Athlete	30-39	Individual	Olympic	Three
P17	Male	Athlete	40-49	Individual	Paralympic	Three
P20	Female	Athlete	20-29	Individual	Olympic	One
P21	Female	Athlete	30-39	Individual	Olympic	One
P6	Male	Coach	50+	Individual	Olympic	Four
P8	Female	Coach	50+	Individual	Olympic	One
P9	Male	Coach	40-49	Team	Olympic	Two
P15	Male	Coach	50+	Individual	Paralympic	One
P18	Female	Coach	40-49	Both	Olympic	One
P19	Female	Coach	40-49	Individual	Olympic	Six
P2	Female	Support provider	30-39	Both	Olympic	One
P7	Female	Support provider	30-39	Both	Both	Three
P10	Female	Support provider	30-39	Both	Both	Two
P12	Female	Support provider	30-39	Both	Olympic	One
P13	Male	Support provider	40-49	Both	Olympic	Five
P16	Male	Support provider	30-39	Both	Both	Two

3.1.12.2 Procedure

With institutional ethical approval (DCUREC/2014/194) a steering group for the research was assembled. The purpose of the steering group was to inform the interview schedule, and for the recruitment of participants. Members of the group consisted of three full-time athletes, three coaches, five athlete support providers (two of whom had also previously competed at the Games), two members of management and one communications expert. The steering group was provided with the participant inclusion criteria, specifically, participants had to be over 18 years of age, with experience of the Games. The steering group subsequently identified 68 potential participants. Of the 68 suggested participants, 16 were not invited as no contact details were available. The remainder were contacted via email and a follow-up phone call with details provided by the Sport Ireland Institute. Twenty-two of those contacted did not respond to the invitation to participate. A further nine individuals who agreed to participate had to withdraw due to conflicts with their schedule. A total of twenty-one individuals agreed to participate.

Qualitative interviews were chosen for this study as a method of generating data. To facilitate the flexibility necessary for the exploration of an emerging topic, semi-structured interviews were chosen (Poczwardowski et al., 2014). The topic guide questions were guided by the five areas outlined by Fleuren et al., (2004) thought to impact on intervention engagement, namely the socio-political context, characteristics of the organization, the adopting user, the intervention, and the facilities needed to implement the intervention, as well as the career transition literature. The interview questions were exploratory in nature with the overall aim to understand factors which acted as (1) barriers to engagement and (2) facilitators that could serve as solutions to these barriers. Participants were initially asked to complete a short demographic questionnaire. This was followed by questions pertaining to the format of a crisis-

prevention intervention delivered in the pre-Games period, such as how it should be packaged and advertised. These questions were then followed by those linked to the logistics of delivery, such as who should attend the intervention, how best to deliver the content, where the intervention should be delivered, who should deliver the intervention, and when the intervention should be delivered. On the recommendation of the steering group questions related to the impact of qualification status, training abroad, sex and Games experience were also posed to participants. At the end of the interview, participants were invited to suggest amendments to the interview schedule (Bertollo, Saltarelli, & Robazza, 2009). Interview questions can be read in full in Appendix 2. With participant consent, interviews were audiotaped, and lasted on average 69 minutes and 59 seconds (*sd* = 12 minutes 24 seconds).

3.1.12.3 Data Analysis

Directed content analysis was applied to the generated data as it enables the comparison of newly generated data to existing theories and models (Hsieh & Shannon, 2005). NVivo 10 for Windows was used to organize the transcripts and transcribe them verbatim. In the first instance both authors read the transcripts independently in their entirety, without coding to become familiar with the content (Elo & Kyngäs, 2008). Following initial reading, factors affecting engagement were chosen as the units of analysis, and an unconstrained matrix of analysis was employed wherein codes were ascribed based on the topics covered in the semi-structured interviews and literature. These codes included “peer-support”, “timing”, “policy”, and “clarity” among others. Codes were subsequently grouped by their meaning and became the categories which were named during a final discussion between the authors.

3.1.12.4 Trustworthiness

Trustworthiness in this study is grounded in a pragmatic epistemological viewpoint and can be assessed by the study’s relevance, the representativeness of the sample, and

implications for practice. With respect to relevance, the importance of addressing barriers to engagement with crisis-prevention interventions specific to the post-Games meta-transition has been highlighted in the literature. Relevance of the research question was ensured through the consultation with a research steering group comprised of key stakeholders and by asking each participant for suggested amendments to the interview schedule (Bertollo, Saltarelli, & Robazza, 2009). Secondly, the aim of the research was directly relevant to those sampled, and the results had the potential to have impact at both an individual and contextual level. Third, the results are discussed with reference to implications for professional practice. Limitations of the study are addressed and while the area of exploration is specific to the sampled population, quotes from participants are provided so the reader may assess the transferability of the findings to other contexts.

3.1.13 Results

Three main categories of factors affecting athlete engagement in a crisis-prevention intervention targeted at the post-Games meta-transition were identified; elite sport context, logistical factors and personal factors. Table 2 provides an overview of the results. Each factor is outlined below, and quotes from the transcripts are used to illustrate the reflections of the participants. Quotes are followed by a pseudonym to protect the confidentiality afforded to participants. A pseudonym consists of the letter P and is followed by a number (e.g., P2). A pseudonym can be cross-referenced in Table 1 to find the participant's demographic characteristics.

3.1.13.1 Elite Sport Context

There was a consensus amongst participants that the relationships between sport organizations responsible for athlete preparation for the Games needed to be collaborative to maximize engagement, "I think it needs to be seen to be all the different groups come together, all coming into one and I think there needs to be a common

theme and message" (P13). Additionally, they said the intervention must have the endorsement of team managers and coaches. As P7 said,

> You can put it all down on a piece of paper and it all sounds lovely but if they can't go to the people that they deal with every day and go 'The Institute told me about this package of support do you know what it's about?' and you can't have a conversation with the athlete around how that will help you? What does that look like? Where will that fit in? - that it will be much harder to get buy in.

While discussion was limited to one participant, a final contributing factor was the effect of policy on engagement "If you make it mandatory even for the coaching, or the managerial staff, that could possibly work" (P1).

Table 8 Factors affecting engagement and suggested facilitators

Categories	*Factors*	*Suggested facilitator*
Elite Sport Context	Collaboration between sport organizations	All Games oriented organizations collaborate[b]
	Key stakeholder endorsement	Key stakeholder (team manager and coach) endorsement[b]
	Policy decisions	Mandatory attendance on a case by case basis[a]
Logistical Factors	Delivery Format	Individualized or group format[b] On-line option[b]
	Location	Training grounds[b]
	Timing of Delivery	12-18 months pre-Games[b] Mindful of the qualification pathway[b]
	Delivery Team	Perceived as competent and trustworthy[b]
Personal Factors	Performance Focus	Packaged using performance language[a]
	Fear of stigmatization	Personal development focus[a]
	Gender	Case by case basis for separate delivery[a]
	Prior Games experience	More experience potentially enhances engagement[b]
	Inclusive invitation to participate	Athletes, coaches and athlete support providers to attend[b]

Note: a = author suggestion, b = participant suggestion

3.1.13.2 Logistical Factors

Factors related to logistics included delivery format, location, timing and the intervention facilitator(s). Participants' suggestions for the delivery format of the intervention ranged from a standalone intervention, to integration within current services, and from group delivery to one-on-one sessions. One participant summarized the reason for disparity of opinion "I think there needs to be different packages, it is not just a set package. Because each person is going to be different so underneath there needs to be different levels of support" (P3). There was however a consensus that small, informal, interactive, group workshops would be acceptable,

> I think if you package something as like a workshop, and an interactive kind of thing so people don't feel like they're going to go up and listen to a lecture for the day on what they should be doing, and what they shouldn't be doing, something where people can kind of share their ideas. (P20)

Participants suggested that to maximize accessibility, the intervention should be "rolled out into each sport" (P9) and delivered in various locations "have it in Cork, have it in Galway, have it in Dublin, rotate it" (P5). However, other participants suggested this would be a barrier for those who train abroad, and therefore on-line delivery methods such as social media and short video clips were advantageous,

> I think something that is very effective is little videos clips. Little snapshot you know it could be 30 seconds little video clips that could actually be on YouTube that linked to the program and kind of have a guest athlete talking about their experience of a Games good/bad/indifferent. (P13)

While discussing intervention delivery, participants spent a significant portion of the conversation talking about the timing of delivery. Participants suggested that if the intervention was delivered prior to an athlete's successful qualification, they would be

less likely to engage because “nobody likes to count their chickens before they hatch” (P1). In addition, there was consensus amongst participants that to maximize engagement, intervention delivery would optimally begin “18 – 24 months out” (P2) and conclude at the latest six months prior to the Games.

Five participants discussed the familiarity, trustworthiness, and credibility of the team delivering the intervention as a factor affecting engagement. P14 said, “I think it is very important to have the right people doing it, and people I respect, and would actually want to work with”, and similarly P15 said “If you don't have their trust, and their respect then nothing you say gets endorsed by them. If they don't endorse it, then forget it”. Synonymous with trustworthiness was peer-led delivery,

> I think to have as many other athletes involved as possible if you are dealing with an athlete, I think they tend to glean more from other athletes. Whether it is in the form of case studies or interviews or athletes having a kind of a Q&A with another athlete, I think that’s probably a really good way to get information across. (P13)

3.1.13.3 Personal Factors

Participants discussed the single-minded focus of an athlete on performance in the pre-Games period and suggested engagement would be enhanced if the crisis-prevention intervention also held benefits for performance,

> I think one thing and whether it's right or wrong, if you can persuade an athlete that this is going to benefit their performance, in any way, they will do it. If they feel like this is something that is separate from the performance, much less likely to get the buy in to it. (P1)

Fear of stigmatization was acknowledged as a barrier to engagement. Some participants highlighted that interventions which were clinical in approach would be

perceived as pathogenic and “a little bit like you're admitting you're vulnerable, and you have weaknesses” (P14), and would therefore be unattractive. Some participants suggested athletes would be concerned that those competing against them for a spot on the team would use any demonstration of vulnerability against them “if there’s two or three of them [athletes] together who’d qualified, they wouldn’t open up about fears or weaknesses because the other one is going to think, ‘oh I can use that to my advantage’ and then they’re going to throw them an hour before the competition” (P11).

Participants held mixed views about whether a participant’s gender would impact their engagement. One participant said, “Gender is irrelevant. As is disability” (P15). On the contrary, some thought that male athletes may find a male-orientated intervention more appealing as “it is hard for men to expose their emotional side.” (P3), and because they relate better to mentors who are also male “I have found with some male athletes that they might relate well to another male athlete delivering information” (P12). On the contrary, some participants believed that orientating the intervention by gender would make it less appealing to female athletes,

> Female athletes do not like to be seen as different to males… females want to be seen on the same level as their male peers. So, I think keep it all as one, we are used to competing together, travelling together, so I think keeping it all together. (P20)

It was suggested that a poor understanding of the relevance of a crisis-prevention intervention due to a lack of experience of the Games may be a barrier to engagement. “When you’re heading for your first time Olympics you mightn’t see all this as being important and think you’re going to take it in your stride” (P4). However, there were mixed views on whether experience of the Games would challenge or reinforce this attitude. Some athletes suggested a prior negative emotional experience of

the Games, and perceptions that they "could never go through this again" (P3) would increase an athlete's desire to engage. On the other hand, it was suggested that those with Games experience might rely on their prior knowledge and therefore see no added value in engaging "if you are a second or third time Olympian you sort of know the nuts, and bolts of what's going to happen" (P7).

Finally, inviting all those involved in an athlete's preparation for the Games to participate in the intervention was highlighted as beneficial to engagement, "I think if it's quite inclusive, so if it is inclusive around their team, their service providers and if it is inclusive in terms of other athletes, so they are clear that other athletes are doing it" (P2).

3.1.14 Discussion

The career transition in sport literature suggests there is a need to deliver crisis-prevention interventions to athletes in advance of career transitions (Alfermann & Stambulova, 2007). To do so, sport organizations must strategically assign resources to their development and delivery. A common issue once interventions are delivered is athlete engagement. The implementation science and health promotion literature suggest understanding factors which affect engagement at the intervention development stage contributes to the design of feasible and acceptable interventions which maximize engagement. To date no study has explored the factors that affect Olympic and Paralympic athletes' engagement in crisis-prevention career transition interventions in the pre-Games period. This gap in the literature makes it difficult for intervention developers to decide how best to deliver a feasible and acceptable crisis-prevention intervention. From a pragmatic standpoint, the findings of this study suggest there are three main categories of factors for consideration when developing a crisis prevention

intervention targeted at the post Games meta-transition; elite sport context, logistical factors and personal factors.

The first category is the elite sport context. The results highlight three factors which may affect engagement; collaboration between sport organizations with responsibility for the preparation of athletes for the Games, key stakeholder endorsement of the intervention and policy decisions. In many countries such as Australia, New Zealand and the United Kingdom career transition support is provided to Olympic and Paralympic athletes by an organization independent of the national Olympic/Paralympic committees (Hong & Coffee, 2018). However, both the national committees and the national governing body of the sport are involved in the preparation of athletes for the first five meta-transitions. Based on the findings from this study, if a post-Games crisis-prevention intervention is to be delivered in the pre-Games period (i.e. when the first five meta-transitions are ongoing), all sport organizations will need to collaborate for engagement to be maximized. The results from this study also highlight the need for key stakeholders such as team managers and coaches to endorse the intervention to enhance engagement. This reflects the literature which has suggested that if the management team associated with Olympic athletes does not advocate and facilitate an athlete accessing career transition support services, the athlete is unlikely to do so (Chambers et al., 2019; Schinke et al., 2015). Recent research describing successful interventions from the perspective of sport psychologists has noted reduced effectiveness in interventions which were initiated by a coach without athlete involvement in the decision (Henriksen, Storm, Stambulova, Pyrdol, & Larsen, 2019). With this in mind, decision-makers in sport organizations should aim to recruit key stakeholders who are recognized for their capacity to influence the attitudes and beliefs of their peers to endorse and champion the intervention (Damschroder et al., 2009;

Gulliver, Griffiths, & Christensen, 2012). Advocates may be experts who achieve this influence through their authority and status, or peers who achieve it through their representativeness, and credibility (Damschroder et al., 2009). In addition to recruiting advocates for the intervention, decision makers within the organization have the ability to enforce policy decisions which support the athlete's engagement in the intervention (Fleuren et al., 2004). This may include allocation of both physical and financial resources, and the decision to make participation mandatory (Wylleman et al., 1999). Only one participant reflected on the effect of policy on engagement, and this may be a limitation of the sampling procedure, as few participants occupied this sort of role. However, the removal of an athlete's choice to participate is not a decision which should be taken without considering the impact this may have on the appeal of the intervention (Jackson et al., 1998; McArdle et al., 2014).

The second category, logistical factors, was included for discussion by Petitpas and Champagne (2000) in their outline of the practical considerations for career transition intervention implementation. They suggested the idiosyncratic aspects of the athlete's sport should be considered at the design stage. Such factors were identified by participants in this study as putative logistical barriers/facilitators of engagement. Elite athletes require customized support services (Hong & Coffee, 2018; Petitpas & Champagne, 2000). However, participants in this study outlined that a group-based, informal, crisis-prevention intervention delivered at the training grounds of the sport and co-led by high-profile peer mentors would be acceptable and encourage engagement. Group-based delivery has previously been used in crisis-prevention intervention related to the career-end transition, and in a crisis-coping intervention strategy to normalize the post-Games experience which was delivered during post-Games period (McArdle et al., 2014; Pearson & Petitpas, 1990). Participant reflections

on the post-Games crisis-coping intervention suggest it was an acceptable delivery format (McArdle et al., 2014). Similarly, the suggestion to deliver the intervention at the training grounds of the athletes is echoed in the literature (McArdle et al., 2014). The limitations of training abroad were highlighted by Olympic/Paralympic athletes in this study, and consistent with other research, participants suggested alternate delivery formats should be made available to those travelling (Hong & Coffee, 2018; Petitpas & Champagne, 2000). The most common solution discussed was technology-assisted delivery methods such as on-line videos. On-line video interventions have previously been used to distribute psychoeducation to the general population for a range of health messages (Van Daele, Hermans, Van Audenhove, & Van den Bergh, 2012). With the rise in countries using on-line methods to communicate career transition information to elite athletes it appears this may be a feasible and acceptable delivery method in many contexts (Hong & Coffee, 2018). While discussing intervention delivery, participants spent a significant portion of the conversation talking about timing. In some sports, the opportunity to qualify for the Games begins years in advance, and participation is not confirmed by the national governing body until the weeks leading up to the Games. Participants perceived delivery during an athlete's qualification attempt as a barrier to delivery. The final six months before the Games appears to be a particularly busy time within the schedule of the sport organizations and athletes. We therefore recommend the scheduling of crisis-prevention interventions should be done collaboratively with key gatekeepers within the sport organizations. Specifically, this should include the athlete, as reflections from practitioners have highlighted that what a coach and athlete perceive as an opportune time may differ (Petitpas & Champagne, 2000). The final factors related to logistics was the perceived competency of the intervention facilitator(s). Participants highlighted how important it is that an athlete perceives the intervention

facilitator(s) as competent and trustworthy. Synonymous with trustworthiness was peer-led delivery. Historically career transition support for athletes has been delivered by sport psychologists, lifeskills advisors, career coaches etc. However, some research suggests that past Olympians believe they are in the best position to give advice about life after the Games because they can speak from experience (Jackson et al., 1998). Sport psychologists in other elite sport contexts have noted that personal experience of playing or coaching the sport they now provide sport psychology services to has positively impacted athletes' perceptions of their credibility (Mellalieu, 2017). The suggestion of peer-led delivery may therefore potentially be both feasible and acceptable. Potential advantages of intervention delivery by a peer mentor include greater improvement in self-efficacy, empowerment, and self-management skills in the end-user (Repper & Carter, 2011). In addition, the peer mentors themselves experience benefits such as the opportunity to engage in valued work and the ability to discuss their own struggles with the issue at hand, which adds to self-esteem, and confidence (Repper & Carter, 2011). Although peer mentors are well placed to play a role in the delivery of a crisis-prevention program focused on the post Games transition, many may not have the skills or education necessary for the role. In order to maintain fidelity, non-specialist facilitators need to be given training, coaching, and feedback to improve their capabilities in intervention delivery (Repper & Carter, 2011).

The third category, personal factors, included performance focus, fear of stigmatization, gender stereotypes, prior experience, and the amount of social support available as potential influences on engagement. Factors such as social support, peer-modelling, self-efficacy, expectations, and work-related stress are typically found to effect engagement in health promotion interventions (Fleuren et al., 2004). Many of these factors were evident in discussion with participants in this study. Similar to

previous findings, athlete participants agreed that improvement in performance outcome was highly valued amongst Olympic and Paralympic athletes (McCann, 2008; Woods, Meade, Mahoney, & Breslin, 2015). Recent research has confirmed the link between engagement in career transition interventions and enhanced performance (Lavallee, 2019). Given the value placed on performance, it is therefore important to introduce and deliver interventions in the language of the athlete, which in this case is performance oriented (Mellalieu, 2017; Stambulova & Schinke, 2017). Another personal level barrier to engagement reflected in the results was fear of stigmatization. Participants suggested this may be due to the fear of being perceived as weak by their fellow competitors. It has previously been suggested these concerns are exacerbated where group participants are in competition with one another (Petitpas & Champagne, 2000). A potential solution to this barrier which has been successful when targeting career adjustment in professional athletes, is framing the intervention as a personal development initiative instead of a clinical intervention (Lavallee, 2005). Participants held mixed views about whether a participant's gender would impact their engagement in a pre-Game's crisis-prevention intervention. Prior research indicates that female athletes are more likely to participate in sport psychology interventions (Woods et al., 2015), but research with general populations has suggested identification with stereotypical gender-identities is more influential than sex (Roper, 2013). Research with the general population suggests that endorsement of typical male stereotypes such as 'feeling in control,' can be addressed by reframing help-seeking as 'taking action' (Seager, Barry, & Sullivan, 2016). In addition, the use of humour in delivery, and the recruitment of male mentors who are willing to disclose their personal experiences may be of benefit (Kingerlee, Woodley, & King, 2016). Whilst this could be a potential solution to male engagement rates, some participants believed that orientating the intervention by gender would make

it less appealing to female athletes. Intervention developers will therefore need to consider their specific context to decide which solution to employ. Another factor acting as a barrier to engagement was lack of experience of the post-Games meta-transition. However, there were mixed views on how gained experience would impact engagement. Based on the variety of views on how personal factors may affect engagement we recommend that intervention developers remain cognizant that what an athlete finds appealing may change with accumulated experience. Therefore, it may be prudent to design the intervention in a modular structure, so it can be adapted for different organizations or populations. Finally, inviting all those involved in an athlete's preparation for the meta-transitions associated with the Games (coaches, management and support providers) to attend the intervention was highlighted as beneficial to engagement. In addition to facilitating engagement, peer involvement through group delivery can foster the development of social networks which may in turn improve adaptation to further career transitions, such as retirement (Lukens & McFarlane, 2004; Park et al., 2013). Other benefits may include social learning, normalization, and group reinforcement of positive changes (Lukens & McFarlane, 2004).

In sum, the athletic career transition model highlights the need for crisis-prevention interventions to improve athlete awareness of and ability to adapt to upcoming career transitions (Alfermann & Stambulova, 2007; Stambulova, 2003). However, once developed, sport organizations face the issue of low athlete engagement with offered services (Chambers et al., 2019; Petitpas & Champagne, 2000). Specifically, Olympic athletes have been reluctant to engage with preparation for the transition to the post-Games during the pre-Games period, which can result in experiences of a crisis-transition (Arnold & Sarkar, 2015; Howells & Lucassen, 2018; McArdle et al., 2014). The contribution of this study to the literature is the identification

of factors key stakeholders believe will affect athlete engagement in a crisis-prevention intervention aimed at developing Olympic/Paralympic athletes' ability to adapt to the post-Games meta-transition. While limitations such as no representation from team sports exist in this study, a strength of it is the sample size as a proportion of the population due to take part in the Rio 2016 Games. Two hundred athletes, coaches and athlete support providers were anticipated to contribute to the program for Rio 2016, and the participants in this study collectively had experience of 60 Games. This amount of experience adds gravity to the key findings which suggest the elite sport context, logistics and personal characteristics of the end-user should be considered during intervention development. In terms of organizational/contextual factors, the results highlight the requirement for collaboration between all sport organizations involved in the Games. Additionally, coaches, team managers and other individuals of influence in the preparation of athletes for the Games should be recruited to act as advocates for engagement. A further consideration was the application of policies which affect engagement such as funding and mandatory attendance which we recommend be considered on a case by case basis. Logistical factors to be considered in the development of a crisis-prevention intervention include the delivery format, location, timing and facilitation team. Participants suggested the most feasible and acceptable format would be an informal group setting, delivered at the training grounds of the sport. Participants also suggested individualized delivery, and on-line options could be necessary. Ideally a crisis-prevention intervention should be scheduled 12-18 months ahead of the Games with the assistance of key gatekeepers within the sport organization to ensure that it does not clash with an athlete's other commitments, including their qualification attempt. The intervention delivery team must be perceived as competent and trustworthy. Participants suggested delivery co-led by their peers would achieve

this. Personal factors such as performance focus, fear of stigmatization, gender, prior Games experience, and participation in the intervention by their peers and support network would affect engagement. Information and marketing efforts for this type of intervention should use language which emphasizes personal development and performance to maximize the intervention's appeal to athletes. Given the variety of views on the effect of personal factors such as gender and Games experience on engagement, we recommend intervention developers remain cognizant that what an athlete finds appealing may change with accumulated experience. Therefore, it may be prudent to design the intervention in a modular structure, so it can be adapted for different organizations or populations. Finally, participants believed engagement would be enhanced if an athlete's peers and support team were seen to participate in the intervention, and we therefore recommend crisis-prevention interventions be offered to all stakeholders in the preparation of athletes for the meta-transitions associated with the Games. Future research should consider the relevance of the identified factors in the context of other competitive levels, and in other countries.

V. Chapter 5: Pilot testing the intervention

Summary

Based on the findings of Chapters three (e.g., mechanisms of change) and four (e.g., elite sport context, logistical factors and personal level factors), a decision was made to use two modes of delivery for psychoeducation to enhance career adaptability skills; digital video and a group workshop. Once the initial design of an intervention has been resolved, in most cases its feasibility needs to be tested and adaptations made. Feasibility testing is useful when a set of findings are required to determine whether an intervention should proceed to efficacy testing (Bowen et al., 2009). As discussed above, the meta-transitions associated with competing at the Games have been identified as a critical window in terms of athlete mental health (McArdle et al., 2014; McCann, 2000). Consequently, there is a need to support athletes in their adaptation to this phase in their careers by providing crisis-prevention interventions. Research suggests that successful transitions are partially facilitated by their predictability, and also by an individual's career adaptability skills, both of which can be addressed through psychoeducation. The results of the qualitative investigation of barriers and facilitators of engagement directly informed the implementation plan of the intervention (e.g., when, where, how and who delivered the intervention described below). Online psychoeducation has proven to be easily and repeatedly accessible and effective for communicating health information in non-athletic populations (Andersson & Titov, 2014; Denny, Vahidy, Vu, Sharrief, & Savitz, 2017). Therefore, a decision was made to develop a short digital video containing information about the Games experiences and associated career meta-transitions with an emphasis on the post-Games meta-transition. Additionally, group format workshops have been shown to be effective for enhancing career adaptability skills in a range of populations (Johnston, 2018). Therefore, this

chapter presents a feasibility assessment of two types of psychoeducation interventions; digital video and a group workshop.

Study 3 Olympic career transition success: Learning from a psychoeducation video

4.1.1 Abstract

Objective: Prior research has noted Olympic and Paralympic athletes are often unaware and unprepared for upcoming career transitions, resulting in experiences of psychological distress. The purpose of this study is to explore the effectiveness of a psychoeducation video to educate viewers about upcoming career transitions and strategies they could use to adapt to the experience.

Design: A post-survey design was employed.

Method: Video development was guided by entertainment-education theory. Participants were shown the video at a centralized training location and asked to fill in questionnaires following viewing. Specifically, subjective and objective recall of the intended learning points were assessed. Additionally, participants' appreciation of the content and design were measured. Analysis was descriptive in nature.

Results: Participants included 168 Olympic/Paralympic, athletes (n = 116), coaches (n = 10), and athlete support providers (n = 47). Immediately following viewing participants could accurately recall between one and three learning points, and at 72 hours post-viewing this range fell to one to two learning points. Participants indicated they enjoyed the video, identified with the narrators, and found it informative, and personally relevant.

Conclusion: The results of this study suggest a digital video 155 seconds in length is a useful psychoeducation tool for up to three learning points. The results support the development of video psychoeducation resources using education-entertainment theory and also support the social validity of video as a psychoeducation tool in Olympic and Paralympic sport.

Olympic career transition success: Learning from a psychoeducation video

4.1.2 Background

The Olympic and Paralympic Games (the Games) are considered a pinnacle experience in an athlete's life and career (Blumenstein & Lidor, 2008; Schinke, Stambulova, Trepanier, & Oghene, 2015). However, with the experience comes several emotionally resonant transitions, which athletes must adapt to in order to continue on their chosen career path (Stambulova et al., 2009). Failure to adapt predicts a number of negative outcomes for both an athlete's career and mental health (Howells & Lucassen, 2018; McArdle et al., 2014; McCann, 2000; Taylor & Ogilvie, 1994). A successful adaptation to a career transition is affected by an athletes' personal and external resources for meeting the demands presented by the phase, and also by the predictability of the phase (Henriksen, Schinke, et al., 2019). Personal resources for managing the demands of a career transition are described in the literature as career adaptability (Savickas & Porfeli, 2012). Comprising four cognitive and behavioural skills (concern, control, curiosity and confidence), career adaptability is positively associated with life satisfaction, positive affect, self-rated health, and quality of life (Johnston, 2018). There is evidence to support the use of psychoeducation to improve career adaptability (Johnston, 2018). However, within the Olympic and Paralympic community, athletes are often unaware of the career transitions associated with competing at the Games, and thus feel unprepared to manage the experience (Arnold & Sarkar, 2015; McArdle et al., 2014). Therefore, there is a priority need for psychoeducation interventions to provide information about upcoming career transitions, including strategies and supports athletes can use to adapt to the experience.

Within this context, the sport organization responsible for athletes' preparation for the Rio 2016 Games sought to develop a psychoeducation intervention to inform athletes about the career transitions associated with competing at the Games and strategies they could use to adapt successfully ahead of the competition. Typically, a health-based psychoeducation intervention delivers health-specific information in addition to tools and strategies for managing issues related to the area of concern (Lukens & McFarlane, 2004). Prior psychoeducation interventions to improve individuals' career adaptability have been delivered in group format over a number of weeks (Johnston, 2018). However, this delivery method has previously been described by Olympic athletes as sub-optimal (McArdle et al., 2014). Culturally, Olympic and Paralympic sport places great value on strength, and athletes have discussed a reluctance to participate in psychoeducation for fear of being perceived as weak (Schinke et al., 2018). Additionally, participants in a study exploring the factors associated with intervention implementation success in this population suggested the demands on an athletes' time in the lead up to the Games is substantial and they may therefore be reluctant to allocate time to participate in psychoeducation (Burrows & McArdle, in review). For both of these reasons brief alternative delivery methods are necessary for implementation success with this population.

Online video-based psychoeducation can potentially address both of these barriers. Benefits of online psychoeducation include cost-effectiveness, anonymity in access, and greater ease of access than face to face methods (Andersson & Titov, 2014). Improvements in technology have made online video watching so readily available that 72% of people in the United Kingdom claim to watch short-clip videos online, 32% of which claim they watch either daily or at least weekly for information and entertainment (Ofcom, 2015). However, despite the growing evidence for the effectiveness of online

psychoeducation for health initiatives (Naslund, Marsch, Mchugo, & Bartels, 2015), and the relative ease of access for mobile-phone users, the effectiveness of video as a delivery method for psychoeducation is less understood. Specifically, the effectiveness of video-based delivery to educate individuals about upcoming career transitions has not yet been explored in either sport or general populations. Best practice in intervention development is to collect sufficient evidence of effectiveness of an intervention prior to committing to a large-scale evaluation (Wight et al., 2016). Therefore, this study aims to pilot-test a video-based psychoeducation intervention to educate Olympic and Paralympic athletes, coaches, and athlete support providers about an upcoming career transition and strategies they can use to adapt to the experience.

4.1.3 Theoretical Basis of Intervention Materials

The development of the video content was guided by entertainment-education theory. Entertainment-education theory proposes that a viewer's enjoyment of an online video positively facilitates learning (Schneider et al., 2016). Learning from online videos can be measured by examining the ability of a viewer to recall the intended learning points of the video (Watson & McKinstry, 2009). Recall is predictive of both attitude, and intent to change behaviours (Schneider et al., 2016). It can be assessed both subjectively (the viewer's belief they can recall the learning points) and objectively (the accuracy of content they recall) (Schneider et al., 2016). Despite learning being the objective of a psychoeducation resource, prior research has indicated participants in health education programs accurately recall as little as 30% of the communicated information (Lewkovich & Haneline, 2005).

Entertainment-education theory offers a communication strategy which addresses this issue through the purposeful design of a digital video to increase a

viewer's knowledge about a topic of interest (Dalgleish et al., 2008). Several styles of health-education online videos exist (e.g., talking head, cartoon, lecture, live audience), each with their own way of capturing the interest of the audience and communicating their key learning points. The tenets of entertainment-education theory suggest that recall of targeted learning points (i.e., the central messages of the medium) is influenced by several factors specific to the target audience, including the nature of the video content, appreciation of the video and design features (Dalgleish et al., 2008; Schneider et al., 2016).

In terms of content, research suggests that online psychoeducation videos that are five minutes in duration can be an effective learning tool for up to 7 learning points (Denny et al., 2017). Appreciation is linked to recall in that greater perceived appreciation is associated with higher content recall (Schneider et al., 2016). Within the literature appreciation is conceptualized as a subset of enjoyment and is associated with eudemonic experiences (Oliver & Bartsch, 2010). Appreciation is thought to be linked to the fulfilment of autonomy, competence, and relatedness goals as described by Ryan & Deci (2001). Videos which result in higher levels of appreciation are typically described as more serious, moving, or thought provoking (Oliver & Bartsch, 2010). Typically, such videos explore meaningful life questions and are created so that the viewer can identify with the visual and/or narrative content in a personally relevant way (Bartsch & Schneider, 2014; Moyer-Gusé, 2008).

Regarding design features, the length of the video and communication modalities employed also influence recall. Short video narratives (approximately 3 minutes or less) which use multimodal communication methods (voice, images and sometimes music) are thought to enhance recall (Alonso, Molina, & Requejo, 2013; Schneider et al., 2016). For example, background music, personal images from the

narrator's life, and the use of the narrator's own voice can provide information such as gender, age and socio-cultural background, facilitating viewers' identification with key messages (Alonso et al., 2013). Other design features that influence recall include the length, omission of extraneous information (e.g. keep learning points minimal and brief), and the integrated presentation of related text and graphics (Brame, 2016; Dalgleish et al., 2008; Woo, Lam, & Kung, 2018). Recall can further be enhanced by labelling key information which may involve visual (e.g. arrows, highlighting), or audio (e.g. change in music) cues, which tell the viewer where to direct their attention (Brame, 2016).

In sum, this study aims to assess video-based psychoeducation as a means to prepare athletes, coaches and athlete support providers for an upcoming career transition. Based on the entertainment-education literature, the assessment of the video-based psychoeducation intervention was completed through the measurement of both subjective and objective recall and the viewers' appreciation of the video. Additionally, the social validity of the video was explored through viewer's opinions of the features of the video (e.g., length, volume of information communicated) and their suggestions for improvement.

4.1.4 Methods

4.1.4.1 Participants

Prior to recruitment, ethical approval was obtained from the Dublin City University Research Ethics Committee (DCUREC/2014/194), and potential participants were presented with an information sheet that explained the aims of the project and their right to confidentiality. To be eligible to participate in this study, participants had to be over the age of 18, a current competitor in the Irish Olympic or Paralympic systems (on

the qualification pathway for the Rio 2016 Games), or be involved in the preparation (e.g. coach, physiotherapist, sport psychologist, high performance director, physiologist etc.) of an athlete for the Rio 2016 Games. Participants included 168 athletes (*n* = 116), coaches (*n* = 10), and athlete support providers (*n*=47). Participants age ranged from 18 to 62 years (M = 30.59 ± 10.10) and included 73 females and 95 males. The participants' education level included second level (*n* = 50), third level (*n* = 95) and other (*n* = 13), which included qualifications received outside of Ireland. The highest level the athlete participants had previously competed at were National (*n* = 4), European (*n* = 10), World (*n* = 68), Olympic (*n* = 12) and Paralympic (*n* = 14), and 44 had already qualified to compete at the Rio 2016 Games. Nine participants did not indicate their highest competitive level. Sport organizations represented included Cerebral Palsy football (*n* = 11), rowing (*n* = 11), hockey (*n* = 17), boxing (*n* = 8), rugby 7s (*n* = 22), sailing (*n* = 6), triathlon (*n* = 16), modern pentathlon (*n* = 8), athletics (*n* = 11), mixed-event Paralympics (*n* = 28), and a range of others (*n* = 30), including an elite coaching group, and those who were employed as support providers across a range of sports. With their consent to participate in the study, recruited participants were shown the video in a group setting at their training grounds from September 2015 to April 2016. Participants were asked to fill in a pen and paper multi-section questionnaire immediately post viewing the video. Follow-up questions were asked by text message 72 hours later.

4.1.4.2 The Video

Based on the research on entertainment-education videos, the psychoeducation video developed for this intervention lasted 155 seconds, and used a technique called 'hand-drawn' animation. The video primarily targeted eudemonic enjoyment

(appreciation) to enhance recall. Audio for the video was captured during a structured discussion with three past Olympic and Paralympic athletes. Athletes were chosen as the primary target of the intervention and therefore no coaches or athlete support providers were recruited. Interview questions were based on eight intended learning points which were devised through literature review and consultation with prior competitors. Broadly these learning points pertained to the Games experience and to strategies that could be applied to ease the transition through this experience. The learning points and their associated career adaptability competency can be seen in Table 1. Each learning point aimed to address at least one of the career adaptability competencies. Concern and curiosity were addressed in the video content by raising awareness of the Games meta-transitions and encouraging the viewer to consider their future career options, while control and confidence were targeted by informing them of behaviours/strategies they could use to adapt to the demands of the meta-transitions. Confidence was additionally targeted using peer-modelling. The three athlete-peers were introduced at the beginning of the video and the viewer was presented with details of their event and competitive record. The content then progressed to comparing the emotional experiences of the Games in the pre-build up phase, the competitive phase, and the post-Games phase. Included in the post-Games segment were athletes' narratives on management strategies to facilitate the adaptation to these meta-transitions. The audio from the athlete interviews was used as a voice over in the video to encourage viewers to see the personal relevance of the content. Images of the three athletes included animations of their journey through their Olympic experience. Music and background sounds such as crowds cheering were also used to evoke the typical feelings of excitement associated with the Games. Within the video, labelling was used to separate information about the competitive phase and the transition out of

competition, and to draw the viewers' attention to strategies that could be used to adapt to the post Games transition. Music, background sounds and written messages within the video were used as labels. The video is freely available online at vimeo.com

4.1.4.3 Assessment Measures

4.1.4.3.1 Recall

Similar to the measures employed by Gumport, Williams and Harvey (2015) and Perez et al. (2015) recall was measured both subjectively and objectively. Subjective recall was measured by asking participants to indicate yes or no to the question "Did you learn anything from watching this video?" To measure objective recall participants were asked to describe what they believed they had learned from watching the video in an open text box style question immediately following viewing and again within 72 hours of viewing.

4.1.4.3.2 Appreciation

Seven questionnaire items related to appreciation were measured on a 5-point Likert scale from strongly disagree (1) to strongly agree (5). Items included; "I found this video enjoyable", "I identified with the people in the video", "This video was relevant to me", "I found this video informative", "I would watch this video again", "I would recommend this video to a friend" "I thought the video's message was authentic".

4.1.4.3.3 Social Validity

Participants were asked to answer two open-text box questions relating to what they liked about the video, and what suggestions they had to improve the video. Participants' opinions of the length of the video was assessed by asking whether they

thought the video was too short, too long or the right length. Participants' opinion of the distribution of the information was captured on a 5-point Likert scale in response to the statement "There was too much information in this video".

4.1.4.4 *Analysis*

Descriptive statistics were used to analyse questionnaire data collected from close-ended questions (Likert scales, yes/no etc.), and are presented as frequencies, or where appropriate with a mean score and the standard deviation (Tables 8, 9 and 10). Where the full sample failed to answer a question, the final count is presented alongside descriptive statistics. The open text box questions related to the appreciation of the digital video were grouped based on the entertainment-education theory. To analyse objective recall a coding scheme was developed, and each learning point was represented by a unique code that was ascribed to the participants' responses by two independent reviewers using Microsoft Word (Gumport, Williams, & Harvey, 2015; Merkt, Weigand, Heier, & Schwan, 2011; Perez et al., 2015). Each code was considered once per answer.

4.1.5 Results

Where quotes are used to reflect the opinion of a participants, they are followed by a pseudonym to protect the confidentiality afforded to participants. A pseudonym consists of the letter P and is followed by a number (e.g., P002)

4.1.5.1 ***Recall***

In response to the question on subjective recall *n* = 153 participants indicated that “yes” they learned something from the video and *n* = 15 indicated “no” they did not learn something from the video. Table 1 presents the results of the measure of objective recall. Participants accurately recalled between 1 and 3 learning points (mean = 1.13 ± 0.65) immediately following viewing. Sixty-six participants answered the follow-up questions at 72 hours post viewing. At this point participants accurately recalled between 1 and 2 learning points 72 hours later (mean = 0.58 ± 0.70). Learning Point 5 “An athlete can plan in advance for the post-Games meta-transition” was the most frequently recalled immediately post viewing (*n* = 83), and 72 hours later (*n* = 23). Learning Point 3 “An athlete cannot predict how they are going to respond after the Games” was the least frequently recalled immediately post viewing (*n* = 1) and 72 hours later (*n* = 0). In addition, participants failed to recall learning points six, “An athlete should accept any help offered to them during the post-Games period”, seven “An athlete will accomplish things in their lives beyond the Games “, and eight, “An athlete should be prepared that the Games experience will be different to other competitions” at 72 hours follow up.

Table 9 Frequencies of Objectively Recalled Learning Points

Code	Learning Point	Targeted CA dimension	Seconds spent on LP	Frequency of recall post viewing (% of all accurate recall)	Frequency of recall within 72 hours (% of all accurate recall)
1	Preparing for and participating in the Games can elicit many types of emotion.	Concern Curiosity	20	9 (5)	3 (8)
2	The 'post-Games blues' is a normal experience for many athletes returning from the Games.	Control	18	40 (24)	10 (26)
3	An athlete cannot predict how they are going to respond after the Games	Concern	7	1 (1)	0 (0)
4	How an athlete responds to the post-Games experience is individual.	Curiosity	22	4 (2)	1 (3)
5	An athlete can plan in advance for the post-Games meta-transition	Concern Confidence	23	83 (50)	23 (61)
6	An athlete should accept any help offered to them during the post-Games period.	Control Confidence	6	6 (4)	0 (0)
7	An athlete will accomplish things in their lives beyond the Games.	Concern Curiosity	7	18 (11)	0 (0)
8	An athlete should be prepared that the Games experience will be different to other competitions.	Concern Curiosity	12	5 (3)	0 (0)
	Number of participants who answered			147	66
	Total comments made			186	73
	Total accurate comments			166 (89)	37 (51)
	Total inaccurate comments			20 (11)	36 (49)
	Accurate comments per participant			1.13 ± 0.65	0.58 ± 0.70

4.1.5.2 Appreciation

Overall participants agreed (score > 4) that they found the video enjoyable (4.08 ± 0.70), relevant (4.06 ± 0.86), informative (4.11 ± 0.60), that they identified with the people in the video (4.01 ± 0.86), found the video message to be authentic (4.29 ± 0.69), and would recommend the video to a friend (4.14 ± 0.74). In response to the question "I would watch this video again" participants gave an overall score of 3.96 ± 0.87. Further descriptive statistics related to the appreciation of the digital video by participants can be seen in Table 10.

4.1.5.3 Social Validity

Responses to the open-text box questions fell under the following themes; content, relatability and design features.

4.1.5.3.1 Content

Participants said they enjoyed the content of the video, "I liked how they showed you that you should be prepared for the Olympic and post Olympics. Also, how they said it's ok not to feel ok post Olympics. And, how you should prepare for other things post-Olympics" (P080). Participants mentioned the use of "Past athletes sharing their experience" (P117) to deliver the message as a likeable feature. Participants also suggested they enjoyed that multiple athletes shared their experiences, "included a range of athletes "(P117). A suggestion for improvement was to include more detail about why the Games are different from other competitions, and why an athlete may experience the post-Games blues, including the link between post-Games blues and performance at the Games "Dislike – lack of linkage with performance" (P007)

Table 10 Descriptive Statistics Appreciation Items

Item	SD	D	ND/NA	A	SA	n =	Mean ± SD
I found this video enjoyable	2	2	16	103	39	162	4.08 ± 0.70
This video was relevant to me	2	8	18	83	49	160	4.06 ± 0.86
I found this video informative	1	1	12	112	35	161	4.11 ± 0.60
I identified with the people in the video	1	9	25	76	48	159	4.01 ± 0.86
I thought the videos message was authentic	1	1	13	81	65	161	4.29 ± 0.69
I would recommend this video to a friend	1	3	19	87	51	161	4.14 ± 0.74
I would watch this video again	1	11	25	80	44	161	3.96 ± 0.87
There was too much information in this video	55	84	16	5	2	162	1.86 ± 0.81

4.1.5.3.2 Relatability

Participants also mentioned that they enjoyed that Irish athletes who were familiar to them were in the video, “I liked how I knew the person” (P162). Suggestions for improvement included presenting the athletes “real” faces during the video and the inclusion of an athlete with experience of a team sport “It was not really team orientated” (P127).

Numerous participants also mentioned that they enjoyed the honest and authentic tone of the messages delivered in the video, “Honest evaluation of post-games experience” (P152) and “Mentioned real problems coming home from the Games” (P098). They also said they enjoyed the practicality and relevance of the advice given “I liked how relatable the video is, even though I’ve played in nothing as near as big as a World Cup it's nice to see how common it is that readjusting is hard” (P189).

4.1.5.3.3 Design Features

Participants said they enjoyed the animated visuals, “drawings were very good. Captivated the imagination” (P262), and they found structure and length to be “brief but really informative” (P195). Several participants said they liked the audio, specifically mentioning the impact of the music stopping at the transition from the Games to the post-Games. One participant mentioned how the voiceover nature of the video can “allow you to put yourself into that character” (P325). In contrast to what most participants found enjoyable about the video, some found the animations distracting and suggested they missed some of the underlying message as a result. With regards the length of the video participants indicated the video was too short (n = 35), right length (n = 115), or too long (n = 0). On average, participants disagreed (1.85 ± 0.81) that there was too much information in the video. Fifty-five (32.7%) of respondents strongly

disagreed, 84 (50%) disagreed, 16 (9.5%) neither agreed nor disagreed, five (3%) agreed and two (1.2%) strongly agreed there was too much information in the video.

4.1.6 Discussion

An athlete who is aware of and prepared for an upcoming career transition is more likely to adapt successfully and experience positive health outcomes, and satisfaction within their sport role, and their personal life (Johnston, 2018; Stambulova et al., 2009). Based on the concept of career adaptability (Savickas & Porfeli, 2012) the video designed for this intervention aimed to educate viewers about upcoming career transitions including strategies they could use to adapt to the experience. Interventions to improve career adaptability have shown a single, face to face, group-based, psychoeducation workshop is effective for increasing three of the four career adaptability sub-items immediately following intervention (concern, control, and curiosity) (Koen et al., 2012).

The results of this study suggest the video was an effective psychoeducation tool for this topic. Objectively, 89% of what all participants recalled was accurate, with individuals accurately recalling between one and three of the intended learning points immediately following viewing. A lower percentage of coaches believed they learned something from the video than athletes and athlete support providers, but objectively they accurately recalled a similar number of learning points per respondent. As was expected, the accuracy of the participants' recall fell within 72 hours to 51% accuracy. Additionally, on average, after 72 hours, participants accurately recalled between one and two of the intended learning points, and almost half of the responses received were inaccurate. A further limitation of this study is the absence of an assessment of residual effects. We therefore cannot comment on how viewing the video may have affected adaptive behaviours or how an additional exposure to the video may impact recall.

Further study into the long-term effect of video-delivered psychoeducation resources which are available online after initial exposure is required. Specifically, the impact on recall is of interest. With regard to the ratio of inaccurate comments, it is possible that the ratio of learning points to time allocated in the video was not optimised, or that content which was used as a bridge between learning points was more memorable. It is also possible that presentation bias played a role in participants responses.

The learning points delivered by the psychoeducation video in this study targeted each of the four sub-items of career adaptability (Savickas & Porfeli, 2012). Learning point 5 "An athlete can plan in advance for the post-Games meta-transition" was the most frequently recalled immediately following viewing, and targeted both concern and confidence sub-items. The second most frequently recalled learning point (2) "The 'post-Games blues' is a normal experience for many athletes returning from the Game" targeted control. Less frequently recalled was Learning point 4 "How an athlete responds to the post-Games experience is individual." which targeted curiosity. Ninety-one percent of participants in this study believed they learned something from viewing the video. It is difficult to ascertain the reasons for lack of recall of some of the learning points. It could be that some of the learning points may have been diluted (Watson & McKinstry, 2009). Alternatively, it may be that 8 learning points in a 2 minutes 35 seconds video is too many, and that 3 learning points may be optimal.

Entertainment-education literature suggests that when a participant appreciates the video resource, objective recall is enhanced (Schneider et al., 2016). For a viewer to appreciate an online psychoeducation video, they must see the personal relevance of the content of the video to their life. To do this, the digital video must give them an opportunity to share the feelings and perspective of the character (Moyer-Gusé, 2008; Schneider et al., 2016). For this study, the digital video was developed to offer multiple

perspectives of the post-Games experiences, and included current and retired, male and female, Olympic and Paralympic athletes as narrators. Therefore, it is not surprising that coaches and athlete support providers scored lower than athletes on appreciation items related to relevance of the video, and their identification with the people in the video. Prior research with [redacted] Olympic and Paralympic athletes suggested that athletes will respond positively to information delivered by other athletes as they add credibility to the content being delivered (manuscript in review). This is further supported by the comments of participants in this study which highlighted the use of "real" athletes and their "honest experiences" as an enjoyable feature of the video. In addition to the authenticity that this offered, participants said they also enjoyed that the narrators were [redacted] suggesting that similarities between the personal characteristics of the narrator and viewer are also related to an enjoyable experience. (Alonso et al., 2013). Previous research on learning from online videos has suggested there is a significant predictive relationship between appreciation and objective learning (Schneider et al., 2016). While exploring that relationship is beyond the scope of this study, it is encouraging that in line with the entertainment-education literature, Olympic/Paralympic athletes, coaches and athlete support providers found the resource enjoyable, informative, and personally relevant (Moyer-Gusé, 2008; Oliver & Bartsch, 2010).

In addition to content, design features such as the length of the video, and communication modalities are thought to impact participant's ability to recall intended learning points (Brame, 2016; Dalgleish et al., 2008). The length of the video was determined by the number of learning points and the number of seconds the narrators took to communicate them. During the editing process audio segments were shortened to keep the total time below three minutes. Overall participants believed that given the topic, the video was the right length, and disagreed that there was too much information

communicated. To highlight learning points, labelling such as a sudden change in the style and volume of the music was used. When asked what they enjoyed about the video, several participants specifically mentioned the sudden change in music, suggesting the use of this particular label was noticeable. Labels in the video were followed by the most frequently recalled learning points, Learning Point 5 “An athlete can plan in advance for the post-Games meta-transition” and Learning Point 2 “The post-Games blues is a normal experience for many athletes returning from the Games”, both immediately following, and at 72 hours after viewing, While the research design did not facilitate an analysis of the relationship between labels and recall, future research should examine the differences in recall rates in videos which alternately employ the use of labels.

4.1.7 Conclusion

This study is the first exploration of video-delivered psychoeducation to educate a population about an upcoming career transition, including strategies they could use to adapt to the experience. This study is also the first to employ video as a psychoeducation tool with Olympic and Paralympic athletes, coaches and athlete support providers. The results of this study provide support for the use of a psychoeducation video 155 seconds in length to educate viewers about an upcoming career transition. Future development of video as a psychoeducation tool should consider the exploration of the optimum ratio of learning points to length. The results also support the use of entertainment-education theory as a framework to guide video development. Specifically, participants agreed they found the video enjoyable, relevant, and informative. Additionally, they found the video message to be authentic, they identified with the people in the video, and would recommend the video to a friend.

Future video productions should include multimodal communication methods such as voice, image and music, and examine the relationship between recall and labelling. Regarding the social validity of video as a psychoeducation tool for this population, the results are encouraging. Viewers enjoyed features related to the content and design of the video. Of note was the recruitment of past competitors to narrate the video, and the use of Olympic/Paralympic athletes' personal experiences as a framework on which to base the intended learning points. Additionally, viewers were satisfied with the length and volume of information communicated. Finally, video developers should consider the online distribution channels available to them as personal relevance is also thought to be higher when the individual finds the online video for themselves, or a friend recommends the video to them (Bondad-Brown, Rice, & Pearce, 2012).

Study 4 Learning career adaptability skills: An exploration of the transfer of learning

4.1.8 Abstract

There is a growing interest in improving Olympic and Paralympic athletes' ability to adapt to career transitions to prevent negative consequences. While career adaptability skills interventions have shown sustainable improvements following group interventions, little is known about the transfer of learning to the real-world context. Intervention development was guided by literature on career development and implementation studies examining the context of Olympic and Paralympic sport. Participants included 98 Olympic/Paralympic, athletes (n = 78), coaches (n = 7), and athlete support providers (n = 13). This study employs a multiple time-point evaluation of both near and far transfer, in addition to post-intervention exploration of participant reactions and adaptation outcomes. Participants indicated they were satisfied with the workshop intervention and found it useful and relevant. They specifically mentioned enjoying the co-delivery of the intervention by a peer-facilitator. A significant improvement was seen in near-transfer pre to post intervention, and a proportion of participants applied the skills they learned in the workshop intervention within 48 – 72 hours of the intervention and following a career transition. The results of this study suggest a group workshop intervention is a feasible and acceptable method of delivering psychoeducation to Olympic and Paralympic athletes, coaches and athlete support providers which facilitates transfer of learning.

4.1.9 Introduction

Career adaptability is operationalized as a multi-dimensional psychosocial resource reflected in four resources, specifically concern, control, curiosity and confidence. Career construction theory (Savickas, 1997, 2005, 2012) purports that these four resources are integral to the individual's ability to negotiate career related challenges and transitions. Further, each of these four resources is thought to have different antecedents and each are thought to influence the individual's ability to adapt to changing career situations in unique ways (Savickas, 2002; Savickas & Porfeli, 2012). It is argued that career adaptability skills are dynamic and learnable (e.g. Savickas, 1997, 2005) and intervention studies support this contention (e.g., Ginevra, Di Maggio, Nota, & Soresi, 2017; Koen, Klehe, & Van Vianen, 2012). To date, no research has systematically explored the transfer of learned career adaptability skills to scenarios outside of the intervention. In the present study we address this gap by evaluating the transfer of learned career adaptability skills to the real-world context of the Olympic/Paralympic athletic career.

Participation in the Olympic and Paralympic Games (the Games) is often the most prestigious competition in the career of a sportsperson. However, participating in these competitions has also been characterized as exceptionally challenging. Participation in the Games comprises a number of phases which have been examined in the literature as a series of six career meta-transitions: (1) entering the program, (2) entering major international tournaments, (3) Olympic qualification, (4) focused preparation for the Olympic Games, (5) participation in the Games, (6) transition to the post-Games (Schinke et al., 2015). While research has mainly focused on the first four meta-transitions (i.e., preparing for participation in the Games (e.g., Arnold & Sarkar, 2015; Collins & Cruickshank, 2014; Gordin & Henschen, 2012; Poczwardowski, Diehl,

O'Neil, Cote, & Haberl, 2014; Wylleman, Reints, & Van Aken, 2012), the demands of the post-Games meta-transition have been identified as particularly unique (Schinke et al., 2015) and emotionally challenging (McCann, 2000). The consequences of an ineffective adaptation to post-Games career meta-transition include, but are not limited to, psychological distress, inability to make career-decisions, feelings of isolation, decrease in self-esteem, and maladaptive coping strategies such as drug and alcohol abuse (Howells & Lucassen, 2018; McArdle et al., 2014; Wylleman et al., 1999). Further, Baum (2005) in a review of the literature from 1980-2000 of athletes who had contemplated, attempted or completed suicide identified poor adaption to a career transition out of sport as a risk factor. Given that successfully navigating the post-Games meta-transition can have such significant implications for an athlete's future it would be helpful to enhance athletes' career adaptability skills for this particular transition.

Defined as an expected or unexpected change in career which alters an individual's perception of themselves or the world, a career transition necessitates the adaptation of attitudes or behaviours to meet the demands of the transition (Pearson & Petitpas, 1990; Schlossberg, 1981; Stambulova et al., 2009). Career construction theory proffers that the four dimensions of career adaptability namely career concern, control, curiosity and confidence are linked to various adaptation results (Savickas & Porfeli, 2012). For example, concern is a future focused dimension of adaptability and is conceptualized as thinking about the future and includes planning and preparing for upcoming career challenges and changes (Savickas & Porfeli, 2012). Career control is underpinned by processes reflected in self-determination (Ryan & Deci, 2000), in that the individual engages in self-directed decision making and exhibits personal responsibility for, and self-efficacy in, managing career challenges. Career curiosity

entails exploration of new opportunities, contemplating different ways of doing things and is thought to underpin behaviour change (Rudolph, Lavigne, Katz & Zacher, 2017). The fourth resource, career confidence is reflected by the person's self-belief and their belief in their ability to navigate career challenges to achieve their career goals (Savickas & Porfeli, 2012). Higher levels of career adaptability skills are associated with higher global and career-related well-being, life satisfaction, positive affect, quality of life and reduced work stress (Johnston, 2018). Whereas low or ineffective levels of career adaptability skills are associated with negative affect, career entrenchment and perceived inability and/or unwillingness to pursue other career options (Johnston, 2018).

To date a number of pre-post evaluations have shown participants in a psychoeducation intervention can learn career adaptability skills (Cheung & Jin, 2016; Ginevra et al., 2017; Janeiro et al., 2014; Koen et al., 2012; Santilli et al., 2018), and career adaptive responses (van der Horst & Klehe, 2018). However, while improvements in self-reported career adaptability skills have been noted, intervention attendees have not been assessed on their ability to transfer what they learned in a career adaptability intervention to the real-world context, and no studies have been conducted with elite athletes. Transfer of learning is considered to be a trainee's application of material/skills/resources learned in an intervention to the real-world context of their job. Often transfer of learning is measured in two dimensions; near and far-transfer. Near-transfer is the ability of trainees to generalize the learned skills to a scenario or task that overlaps in surface features, while far-transfer is their ability to generalize the learned skills to a task or scenario in which there is less overlap with the intervention tasks (LeMoult et al., 2018). Both types of transfer are thought to be affected by several factors related to the trainee (ability, motivation, individual differences, prior

experiences, and reaction to intervention), the intervention (content and design), and the implementing organization (preconditions and supports) (Baldwin & Holton, 2003; Broad & Newstrom, 1992; Day & Goldstone, 2012a).

Transfer of learning is of particular interest to funding organizations, as millions of dollars are spent annually on human resource development, and researchers estimate less than 20% of what is learned is transferred to the work context (Broad & Newstrom, 1992). Researchers suggest there are several strategies which can be employed before and during intervention which encourage transfer of learning. Broad and Newstrom (1992) list actions a manager, facilitator and trainee can take to maximize transfer of learning. Prior to intervention, a manager can; involve supervisors and trainees in the needs analysis process and program planning, discuss the importance of the intervention with trainees, provide time to attend, offer rewards for attendance, and provide orientations for supervisors. The facilitator can enhance transfer by aligning the intervention with the strategic plan of the organization, systematically design the instruction, provide opportunities to practice, and create a peer-coaching component that will last beyond the intervention. (Broad & Newstrom, 1992). More recently research has highlighted the need for the facilitator to frame learning contexts in an expansive manner, linking content and its applicability to potential future contexts and also to examples of past contexts (Engle, Lam, Meyer, & Nix, 2012). The trainee themselves can enhance transfer of learning by engaging in intervention planning, actively exploring intervention options and participating in preparatory activities. Of particular importance is the trainee's motivation to transfer the learning to new contexts. Research has suggested that even if the trainee possesses the cognitive ability to draw comparisons across scenarios which would allow them transfer the learning, the similarities will not be seen if they are not motivated to draw them out (Goldstone &

Day, 2012; Perkins & Salomon, 2012). During the intervention a manager can enhance transfer by developing a transfer action plan, advocate for the program at all levels of the organization, monitor attendance, and planning an assessment of transfer of new skills to the job. The facilitator can enhance transfer of learning by providing realistic work-related opportunities to practice the skills, providing visualization experiences, giving individualized feedback, creating opportunities for social modelling, assist in the development of action plans, and discuss how to negotiate a contract of new behaviours with management. During intervention the trainee can facilitate their own learning transfer by engaging fully with the intervention, finding peer support, developing a list of ways they can apply the skills, and anticipating potential roadblocks to transfer (Broad & Newstrom, 1992).

Evidently, the purpose of a career adaptability skills intervention is to enhance a participant's ability to adapt to a career transition; therefore, demonstration of a clear link between intervention and adaptation improvement is required for intervention programs to receive continued financial support (Baldwin & Holton, 2003). The Kirkpatrick program evaluation model (Kirkpatrick & Kayser Kirkpatrick, 2016) represents one of the most complete strategies for evaluating organizational training. This evaluation strategy has been used to explore the success of training for general practitioners, emergency medical doctors, airline staff, hotel employees, and college students among others. The model proposes that training programs should be evaluated on four levels; level one: participant reactions, level two: participant learning, level three: transfer of learning, and level four: main outcomes. It is argued that intervention development should begin by considering the fourth level of the evaluation model; main outcomes (Kirkpatrick & Kayser Kirkpatrick, 2016; Wight et al., 2016). By identifying the target outcome, intervention developers can conceptualize a step by step process

(logic model) to achieve this aim. The aim of the intervention described herein was to enhance athletes' adaptation to the post-Games meta-transition. In developing the intervention, the four career adaptability dimensions (i.e., concern, control, curiosity and confidence) were identified as a malleable personal resource and selected as the target outcome. Working backwards from targeted outcomes, as per the Kirkpatrick model, we then identified behavioural indicators of adaptation results. Derived from the literature, these were identified as planning, problem-solving, decision-making and self-reflection skills (Rudolph, Lavigne, & Zacher, 2017; Savickas & Porfeli, 2012; van der Horst & Klehe, 2018). In line with level two of the Kirkpatrick model, we employed the literature base to ascertain key learning points associated with the four resources of adaptability. Learning (near-transfer) is assessed at this level by asking trainees to complete a cognitive and behavioural generalization task. The final consideration in the intervention logic model is the first level of evaluation in the Kirkpatrick model. This level should consider what is acceptable to the target population and collect measures of trainees' reaction to and satisfaction with the intervention. It is helpful to consider what trainees might find acceptable at the intervention development phase, as the evaluation model suggests the more positive the reaction to the intervention the more likely trainees will acquire the intended knowledge, attitudes and competencies.

In the present study, we developed an intervention (workshop) aimed at enhancing Olympic/Paralympic athletes' career adaptability skills to aid their adaptation to the post-Games career meta-transition. As per career construction theory, the workshop focused on enhancing the four resources associated with career adaptability namely concern for the future, control over decision making, curiosity to explore, and confidence to deal with barriers. We employed Kirkpatrick's program evaluation model (Kirkpatrick & Kayser Kirkpatrick, 2016) to assess (1) the reaction to the workshop

from the perspective of the trainees (2) the trainee's ability to generalize their learning to a similar scenario), (3) the trainee's ability to generalize their learning to the real-world context, and (4) the trainee's self-reported adaptation effectiveness following a career meta-transition.

4.1.10 Materials and Methods

4.1.10.1 Design and procedure

All procedures were approved by Dublin City University Research Ethics Committee (DCUREC/2014/194). Recruitment was purposive and an initial email invitation containing an information sheet and invitation to participate was sent to performance directors, team managers, head coaches, national governing bodies Workshop delivery was scheduled with the assistance of each sport's national governing body. Participants filled in a survey during workshop participation which included demographic questions and measures of their reaction, learning, transfer of learning to the real world and adaptation outcomes. Follow-up measures were collected by text messages 48 – 72 hours after workshop participation and again following participation in the Games by email survey.

4.1.10.2 Participants

140 individuals comprised of Olympic and Paralympic athletes, coaches and sport science and medicine support personnel attended the workshop. Of the 140 attendees, ninety-eight attendees consented to participate in the research. Sports represented included Cerebral Palsy football, mixed Paralympic events, hockey, boxing, rugby 7's, athletics, rowing, triathlon, pentathlon, badminton. Demographic characteristics are presented in Table 11. Participants were aged between 18 and 60 years old with a mean age of 28.35 (± 8.39) years.

Table 11 Demographic Characteristics

Characteristic	n =	%
Sex		
Male	58	58.6
Female	40	40.4
Role		
Athlete	78	78.8
Coach	7	7.1
Athlete Support Provider	5	5.1
Other	3	3
Performance Director	6	6.1
Education		
Leaving Certificate	22	22.2
NFQ Level 5 Certificate (FETAC awarded)	5	5.1
NFQ Level 6 Higher/Advanced Certificate	1	1
NFQ Level 7 Ordinary Bachelor Degree	6	6.1
NFQ Level 8 Higher Bachelor Degree	31	31.3
NFQ Level 9 Postgraduate Diploma/Master's Degree	14	14.1
NFQ Level 10 Higher Doctorate/Doctoral Degree	1	1
Other	12	12.1
Missing	7	7.1
Athlete Employment Status		
Full time student/ part time athlete	5	
Full time athlete/ part time student	9	
Full time employed/ part time athlete	12	
Full time athlete	25	
Full time athlete/ part time employed	19	
Missing	8	

Note: NFQ – National Framework of Qualifications

4.1.10.3 Career Adaptability Intervention

Based on prior research on factors affecting engagement of the Irish Olympic and Paralympic population with career transition psychoeducation, a workshop format was selected (Burrows & McArdle, in review). The workshop was designed to facilitate the learning of career adaptability skills. Implementation commenced 10 months before the Rio 2016 Olympic Games and was completed five months prior. The workshop was delivered at the training grounds of each sport, and groups were all-inclusive with regard to role (athlete, coach, support provider), gender and experience (Olympic/Paralympic, first-time/prior participation). The workshop was scheduled for 90 minutes with a mix of lecture, case scenarios, discussion, worksheets, group work and video delivery methods. Each attendee was provided with an educational pack to support the workshop content, and an e-resource with all learning materials and direction to further support. Following content development, a list of 17 learning points was compiled by the authors. Examples of these learning points include; “Reflecting on and reviewing your preparations can help recognize problems”, “having a plan for the future is important”, and “time and energy can be wasted if we do not get the most important things done”. PowerPoint presentations were developed to assist in the communication of the learning points, and a set time for the delivery of each section of the workshop was agreed.

The workshop consisted of eight sections. In the introductory section, in line with Savickas et al. (2009) and Savickas (2013), the relevance and importance of career adaptability skills was presented. Additionally, attendees completed the first learning measure. Section one primarily targeted the concern and curiosity dimensions. For example, the facilitators provided information on the post-Games career transition, including examples from their own experience. Sections two through five, described

below, comprised of information provision, guided self-reflection, skills training and modelling. The content of each section was delivered following a standard format of; (1) introduction to the skill (2) examples of tasks to complete to practice the skill (3) an example (video or quote) from a high-profile athlete applying the skill (4) a task to practice the skill. Participants were encouraged to practice the skills outside of the workshop by following a template provided by the facilitators.

In section two, topic one addressed the importance of career concern through planning how to pursue future options. Specifically, the learning point addressed scheduling and goal setting through the analogy of big and little picture planning. The task associated with this topic was the completion of a weekly planning schedule. In section three, topic two participants were provided with information on the psychological benefits of making lists. This section primarily targeted the concern, control and confidence dimensions. The task associated with this topic was to write a list of all responsibilities the individual needed to address in the coming week to work towards their long-term goal. In section four, topic three, participants were provided with information about the benefits of prioritization and the facilitators listed examples of when prioritizing can be used. This section primarily targeted the control and confidence dimensions. The task associated with this topic was to assign a priority to the list of responsibilities completed in topic two. In section five, topic four, participants were provided information on the benefits of periodic self-reflection. This section targeted all four career adaptability skills. The task associated with this topic was to complete a worksheet which asked the following questions “what do you enjoy most now?”, “what are you finding difficult?”, “are you avoiding or putting off tasks?”, “do you need to reflect on these tasks with your coach/training partner?”, and “do you need to change things?”. In the sixth section a video specially developed for the workshop

about the Games experience was shown and was followed by a group discussion of the video content. The seventh section revisited the ideas covered in sections two through five to encourage participants to consider how they would apply the skills discussed to a future career transition. The primary purpose of this discussion was to facilitate the transfer of learning and enhance the confidence dimension of career adaptability. In the final section of the workshop the post-workshop assessment was conducted.

The workshop was facilitated by a sport psychologist and a past Olympian (peer facilitator) who received training in group facilitation prior to implementation. The role of both facilitators was to deliver the PowerPoint presentation, facilitate the completion of the tasks and guide discussion of the learning points. Each facilitator was responsible for different sections which are outlined in Table 12. The tasks described in the table were developed based on the findings from Chapter three pertaining to the development of career adaptability workshops and the recommendation that workshop content be developed with the experience of the facilitators in mind. The facilitators emphasized career adaptability as a personal resource which is beneficial to performance, career transitions, and life beyond the Games. Additionally, the peer-facilitator shared his own Games experience and highlighted how career adaptability skills were useful to him in adapting to the post-Games meta-transition**.**

Table 12 Workshop Outline

	Lesson Plan	Primary Facilitator	Time Allocated	Tasks	Primary Dimension	Mechanisms of change
1	Introduction	Sport Psychologist	10 minutes	Pre-Learning measure	Concern Curiosity	Information Provision Observation of others Guided Self-Reflection Practice
2	Topic 1: Schedule	Sport Psychologist and Peer-facilitator	9 minutes	Weekly Planner	Concern Control	Information Provision Guided Self-Reflection Skills Training (worksheet*)
3	Topic 2: List	Sport Psychologist and Peer-facilitator	8 minutes	To-do list	Concern Control Confidence	Information Provision Guided Self-Reflection Skills Training (worksheet*)
4	Topic 3: Prioritize	Peer-facilitator	9 minutes	To-do list prioritized	Control Confidence	Information Provision Guided Self-Reflection Skills Training
5	Topic 4: Reflect	Peer-facilitator	16 minutes	Answer written questions	Concern Control Curiosity Confidence	Information Provision Guided Self-

						Reflection Skills Training
6	Discussion	Sport Psychologist, Peer-facilitator and Researcher	22 minutes	Post-Learning Measure Discuss with other attendees	Concern Curiosity Confidence	Feedback Discussion Guided Self-Reflection
7	Summary	Sport Psychologist	13 minutes	Relating learning to new situations	Concern Curiosity Confidence	Information Provision Observation of others Guided Self-Reflection
8	Conclusion	Researcher	3 minutes	Reactions Measure		

4.1.11 Measures

Participants were asked to complete a multi-section questionnaire evaluating each level of the Kirkpatrick program evaluation model (2016) and to respond to several demographic questions.

4.1.11.1 Level 1 Reaction

Three questions of attendees' satisfaction with the workshop were developed and administered immediately post-workshop. Overall satisfaction of the workshop was assessed by asking participants to respond on a 5-point Likert scale from 1 (poor) to 5 (excellent) to the following statement "what is your overall assessment of the workshop. Employing a 5-point scale from one (strongly disagree) to five (strongly agree), participants were then asked to indicate their agreement with statements related to individual elements of the workshop (e.g. "the facilitator demonstrated comprehensive knowledge of the subject matter", "the material was informative and easy to understand"). Finally, participants were asked to describe what they liked about the workshop and suggestions for improvement in an open-text box.

4.1.11.2 Level 2 Near-transfer

Similar to the procedure of Maunder et al., (2008) and Gumport et al., (2015) near-transfer was assessed by the attendees' ability to accurately generalize the learning points to two vignettes describing meta-transitions associated with competing at the Games. One vignette and the corresponding questions was presented at the beginning of the workshop and the second was presented at the end of the workshop. The first vignette posed the scenario "You've heard that your event at the Games will be different to the normal format for Worlds and Europeans but you're not sure how this will impact you" and the second vignette posed the scenario "When you return from the games,

there is often a lack of structure to the days, weeks, even months. Athletes (and coaches) have told us this is a difficult part of the post-games experience". For each vignette cognitive generalization was determined by the response to the questions, "what is your first thought?" and "what is your second thought?" and behavioural generalization was measured by their response to the question "what would you do?"

4.1.11.3 Level 3 Far-Transfer

Similar to the protocols outlined by Maunder et al., (2008) and Gumport et al., (2015), far-transfer was assessed cognitively and behaviourally. Participants were asked to respond to questions assessing application of learning to the real word at three time points. Specifically, text messages were sent at 48 to 72 hours post the workshop to assess cognitive and behavioural far-transfer. Cognitive far-transfer of learning was assessed by asking participants if they had thought about the content discussed in the workshop, and if yes what came to mind. Behavioural far-transfer was assessed by asking participants if they had actioned any of the content, and if yes, to describe what they had done (Gumport et al., 2015; Maunder, Milne, & Cameron, 2008). The second assessment time point of far-transfer was post participation in the Olympic Games. Participants were sent an email including a link to an on-line survey eight weeks post-Games. Cognitive far-transfer of learning was assessed by asking participants whether or not they had thought about the workshop content and if they had, to describe what came to mind. behavioural far-transfer was assessed by asking participants to respond yes or no to the question "Did you apply anything you learned at the workshops over the course of your Games experience (before, during, after the Games)?". If they responded yes, they were asked to describe what they applied.

4.1.11.4 Level 4 Adaptation Outcomes

Included in the post-Games email survey was a question asking participants to rate the effectiveness of their adaptation to the post-Games meta-transition out of 100 (0 = very negative, 100 = very positive) and also asked what (if anything) they found helpful in adapting to the post-Games meta-transition.

4.1.12 Data Analysis

Data was analysed in several ways, including descriptive statistics, categorization, and significance tests. Data analysis is outlined according to each level of the evaluation.

4.1.12.1 Level 1 Reaction

To assess the satisfaction with the workshop, the answers to the first and second question (overall satisfaction and satisfaction with the specific components of the workshop) were analysed descriptively. Similar to Ginevra et al., (2017) the responses to the third and fourth question were categorized thematically according to the specific components of the career workshop perceived as likeable, and suggestions for improvement.

4.1.12.2 Level 2 Near-transfer

Learning was assessed by participants' ability to generalize the information to a given scenario before and after the workshop. Workshop content covered a predetermined list of 17 learning points. The responses were scored by the lead author by comparing the responses to the predetermined list of learning points. Each accurate response was attributed a score of one. For cognitive generalization (two questions), participants were attributed a score of zero, one or two and for behavioural generalization (one question) participants were attributed a score of zero or one. Subsequently a total score was calculated for pre and post measures by summing the

score of the individual questions. A minimum score of zero and maximum score of three were possible. After the answers were coded, preliminary analysis was conducted, and followed by a Wilcoxon-signed rank test to determine whether accurate response scores differed significantly from pre to post measure. The effect sizes were examined using the procedure outlined by Pallant (2007).

4.1.12.3 Level 3 Far-transfer

Transfer to real world settings was assessed by participants' responses to questions pertaining to their application of their learning from the workshop. The responses were assessed for evidence of included learning points by the lead author by comparing the responses to the predetermined list of learning points. Level 4 Adaptation Outcomes

Data concerning participants' transition outcomes were analysed descriptively and open-text box question responses were categorized thematically.

4.1.13 Results

4.1.13.1 Level 1 Reaction

4.1.13.1.1 Overall Satisfaction.

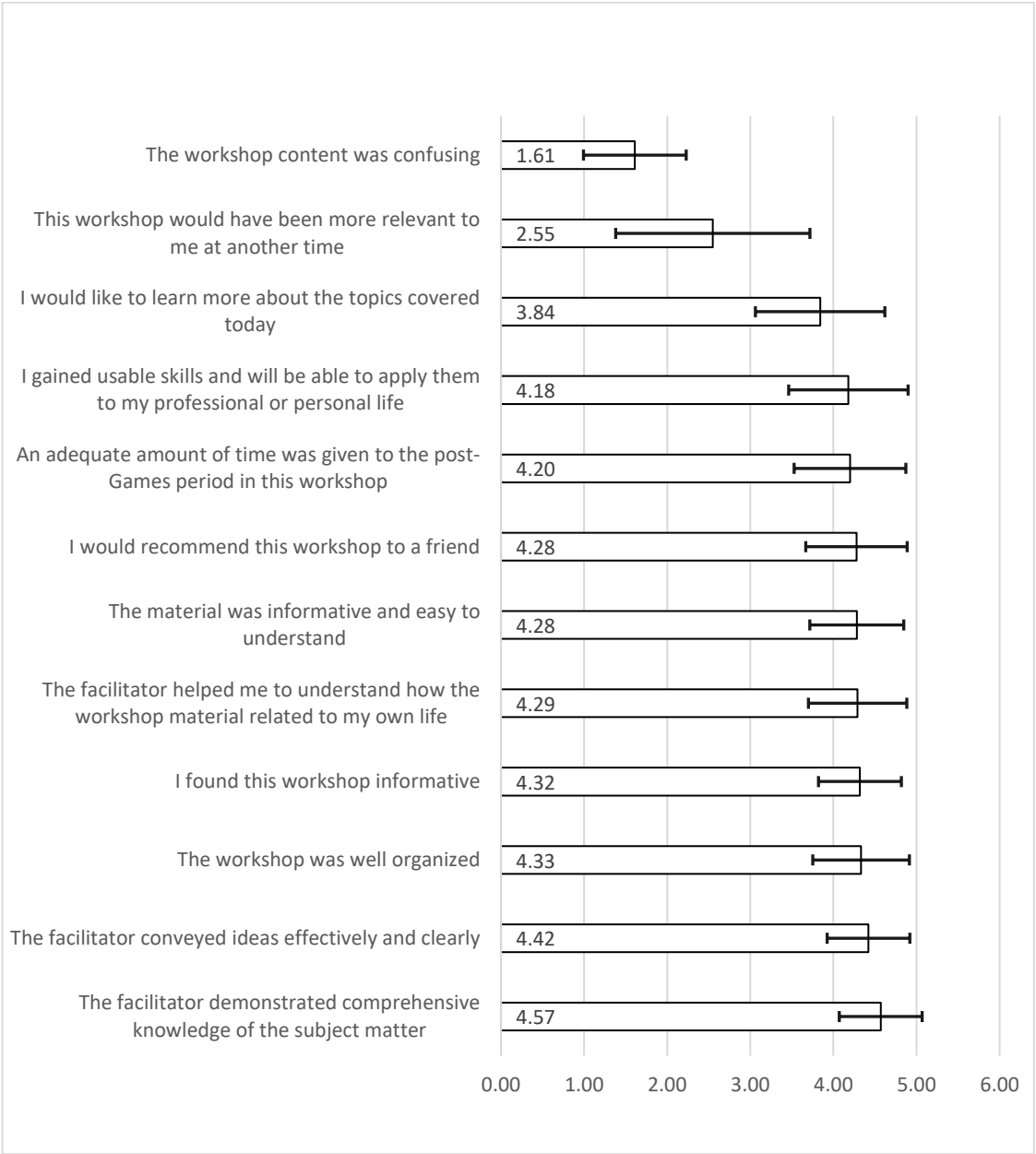
Twenty-one participants did not answer the question. The average score out of five was 4.10 (*sd* = 0.64). Frequencies of response were poor = 0, fair = 0, good = 12, very good = 45 and excellent = 20.

4.1.13.1.2 Satisfaction components.

As evident in Figure 5, the majority of participants reported high levels of satisfaction with workshop components. Satisfaction ratings greater than 80% were achieved on the three questions pertaining to the facilitators' level of topic knowledge, ability to convey ideas, and ability to relate the content to the life of the athlete;

suggesting participants believed the facilitators' to be competent. With regard to the workshop content, participants agreed they gained useable skills and would be able to apply them, they would recommend the workshop to a friend, material was informative and easy to understand, and the workshop was well organized. Participants disagreed that the workshop content was confusing.

Figure 5 Satisfaction Components



4.1.13.1.3 Open ended questions

4.1.13.1.3.1 Factors participants enjoyed.

At the end of the workshop participants were asked to indicate what they had most enjoyed about the workshops. Two main factors were apparent, the delivery format and the workshop content. Participants stated they enjoyed the interactive nature of the workshop and practicing the skills taught. Feedback was positive about the peer-facilitator with participants saying they enjoyed listening to someone who had competed at the Games talk about the experience. Additionally, participants mentioned they enjoyed the mix of content including the use of research, quotes from athletes, and videos. Regarding the content, participants discussed the usefulness of the skills taught and referred to the content as informative and practical. Participants specifically mentioned the usefulness of thinking about the future and prioritization.

4.1.13.1.3.2 Suggestions for improvement

Following the workshop participants were asked to offer suggestions for improving the workshop. Their answers reflected on communication, delivery, content, and further resources. With regards to communication a suggestion was made that the clarity of the workshop aims needed to be improved. With regard the delivery of the workshop participants suggested the time commitment be shortened or a break be provided. Suggestions for the format of delivery included scheduling it for completion earlier in the day, include more opportunities for discussion with other sports, and run a separate workshop for coaches and staff. A further suggestion was made to allocate more time to practicing the skills. Suggestions to improve the content of the workshop include providing more examples of athlete experience, including successful transition stories, and more information about; mental health, how the Games is different from

other competitions, skills for part-time athletes, and where to find help. Finally, a suggestion was made to offer one to one informal peer mentoring in addition to the workshop.

4.1.13.1.4 Level 2 Near-transfer

The Shapiro-Wilk test was used to assess normality of distributions for scale level data. This test indicated that data collected regarding generalization of learning were not normally distributed and therefore non-parametric testing was used.

4.1.13.1.4.1 Cognitive

Wilcoxon signed-rank test showed a significant change in cognitive generalization scores (Z = -6.173, p = 0.000). Further, effect size calculation (r = 0.44) suggested a moderate to high practical significance. The mean score increased from pre-workshop (m = 0.90) to post-workshop (m = 1.67).

4.1.13.1.4.2 Behavioural

Wilcoxon signed-rank test showed a significant change in behavioural generalization scores from pre-workshop (m = 0.57) to post-workshop (m = 0.84), (Z = -4.111, p = 0.000). Further, effect size calculation (r = 0.29) suggested a small to moderate practical significance.

4.1.13.1.4.3 Total

Wilcoxon signed-rank test showed a significant change in total generalization scores (Z = -6.473, p = 0.000). Further, effect size calculation (r = 0.46) suggested a moderate to high practical significance. The mean score increased from pre-workshop (m = 1.47) to post-workshop (m = 2.51).

4.1.13.1.5 Level 3 Far-transfer

4.1.13.1.5.1 Initial follow-up.

4.1.13.1.5.1.1 Cognitive

Attrition at 48 to 72-hour follow-up was high. Twenty-eight participants answered the question, two of which said they did not think about the workshop content. Twenty-one of the twenty-six (80.76%) reported thoughts were accurate in that the content recalled correctly reflected key learning points from the workshop. For example, participants mentioned thinking about the scheduling and prioritization tasks completed in the workshop, and the peer-facilitator's presentation.

4.1.13.1.5.1.2 Behavioural

Twenty-two participants responded at 48 to 72-hour follow-up, six of whom said they did not apply the workshop content. Of the 16 (72.72%) participants who reported applying the content, 13 responses (81.25%) indicated that participants applied strategies and skills introduced at the workshop, for example participants reported making lists, using the prioritization and self-reflection worksheets.

4.1.13.1.5.2 Post-Games follow-up

4.1.13.1.5.2.1 Cognitive

Attrition at post-Games follow-up was high, with nineteen participants responding. Fourteen participants described what they had thought about post-Games and 13 (92.86%) of the responses reflected key learning points from the workshop. For example, participants discussed thinking about the post-Games emotional comedown and the importance of having a plan in place to manage their emotions.

4.1.13.1.5.2.2 Behavioural

Of the 19 participants who responded, 12 (63.16%) indicated they had applied the workshop content, and one (0.05%) did not expand on the application. All 11 descriptions of application of content/learning from the workshop reflected the learning points of the workshop. For example, participants mentioned planning in advance for unexpected challenges, having a plan in place for the post-Games period, setting new goals, contacting organizational support services and taking a holiday.

4.1.13.1.6 Level 4 Adaptation Outcomes

From a maximum score of 100, participants on average rated their post-Games transition as $m = 71.68$ ($sd = 20.69$). Scores ranged from 30 – 100. In response to the question regarding what they found useful in adapting to the post-Games meta-transition, participants mentioned returning to education, going on holiday, support of friends and family, having a plan in advance of the Games, accessing support services, moving to a new house, engaging with the community and keeping busy.

4.1.14 Discussion

The aim of this research was to assess transfer of learning from a career adaptability intervention targeted at Olympic/Paralympic athletes. The intervention aimed to develop the four career adaptability skills outlined in Savickas' career construction theory (1997, 2005, 2012) and promote transfer of learning. Near-transfer was assessed by both cognitive and behavioural generalization pre and post intervention and far-transfer were assessed within 48 – 72 hours of intervention attendance and following the post-Games career meta-transition. The main findings from this study was that a 90-minute intervention can positively affect near and far-transfer of the resources

underpinning career adaptability. Specifically, the results showed participants significantly improved on measures of generalization following the intervention and a percentage of participants applied the learning points to the real-world context.

Practically, learning without transfer of what has been learned is almost always un- productive and inefficient. Although the efficiency of learning in terms of speed and retention of knowledge is often measured, a relatively neglected and subtler component of efficiency is the generality and applicability of the acquired knowledge. A noted limitation of psychoeducational interventions is trainees' ability to transfer the information received to new situations that are only superficially different from the examples used to teach the information/skills (Day & Goldstone, 2012b; Gumport et al., 2015; Shapiro et al., 1995). In this study, significant improvements were found in cognitive, behavioural and overall generalization following workshop attendance. While effect sizes ranged from small to moderate, the findings suggest the workshop content was delivered in a way that facilitated generalization. Strategies such as analogies and metaphors, presenting multiple examples, and revisiting ideas are known to impact individual's ability to transfer learning, and were therefore included in the workshop and may have influenced this result (Day & Goldstone, 2012b). Additionally, participants' reaction to an intervention is thought to impact their subsequent ability to transfer learning (near and far). Similar to other career adaptability skills interventions (Ginevra et al., 2017; Santilli et al., 2018), participants in this study rated the workshop content as relevant and useful. Additionally, participants stated they were satisfied with the group format of the workshop, and particularly enjoyed hearing the perspective of the peer-facilitator. The positive ratings of the facilitators support previous research which suggested perceptions of the trustworthiness and competence of a workshop

facilitator is a factor affecting engagement of Olympic and Paralympic athletes in career transition intervention (Burrows & McArdle, under review). Instruction on the development of career adaptability interventions has suggested a highly-skilled facilitator (such as a career counsellor or psychologist) must facilitate the workshop to act as a model for participants to base their behaviour on (Koen et al., 2012). However, the results of this study suggest a peer-facilitator may also be appropriate when adequate training is provided. Reflecting on the results of level one of the evaluation, it is possible that in-line with what is suggested in the literature (Baldwin & Holton, 2003), satisfaction with the intervention content and design affected the improvement of generalization. The Kirkpatrick model (Kirkpatrick & Kayser Kirkpatrick, 2016) suggests that engagement and relevance are the two key measures which should be considered while evaluating trainee satisfaction. Best practice in intervention development is to explore factors which might affect engagement at the development stage (Wight et al., 2016). Involving potential end-users in the development of the intervention is one way in which to ensure engagement is maximized and personal relevance is assured. Given the relationship between satisfaction and learning from a psychoeducation resource, future research should endeavour to explore the factors which might enhance these variables at the intervention design stage.

Researchers have found significant improvements in both career adaptability skills and career adaptive responses following group-based career interventions. However, the need for less subjective and longer term measures of intervention effectiveness has been stated (Cheung & Jin, 2016). Researchers have suggested that, if a psychoeducation resource is ineffective recipients may report higher levels of career adaptability to compensate for the time invested in psychoeducation (Cheung & Jin,

2016). This means they may report higher career adaptability skills but not actually be able to transfer their learning to the real-world when faced with a career transition. In response, the third level of evaluation in this study considered the far-transfer of learning from the workshop context to the real-world context. Recent research suggests the transfer of learning from an intervention context to a dissimilar real-world context can occur but does not often happen spontaneously (Goldstone & Day, 2012). This means intervention developers must actively attempt to affect far-transfer. Steps taken in the design of the intervention described in this study to encourage far-transfer included; carefully structured content, discussion of the application of the learned skills, anecdotes on the use of skills by the peer-facilitator,

Lower reported rates of cognitive far-transfer were found in this study compared to the findings of Gumport et al., (2015). However, a comparatively higher accuracy rate of cognitive far-transfer was found in this study. Gumport et al., (2015) noted a general decrease in accuracy of cognitive transfer over time, which is replicated in this study where a decline in the percentage of total participants who cognitively transferred the learning points following the Games is evident. The differences in accuracy rates of cognitive far-transfer may be explained by the intervention design, or potentially by the health status of the participants. While it is encouraging that some participants in this study were successful in cognitive far-transfer, it is important to note that the overall percentage of participants who transferred learning cognitively is within the estimated range of less than 20% noted in the literature (Broad & Newstrom, 1992). Similarly, low rates of far-transfer were found for behaviours at both initial follow-up and post-Games. However, the rate at which learning points from the intervention were present in the reports of far-transfer were also higher than those found by Gumport et al., (2015).

Interestingly, prior intervention studies using Likert style questions to evaluate career adaptability skills such as “exploring my surroundings”, and career adaptive responses such as “I have made plans regarding my future career”, have found significant improvement following group-based intervention delivery. However, the results of the current study suggest while participants may believe they have improved their career adaptability skills, only a small percentage go on to transfer the learning to a real-world context. Given that in this study improvements were seen in participants’ generalization scores (near-transfer), but low rates of far-transfer were achieved, it is possible that the workshop did not satisfy the conditions necessary to encourage far-transfer of learning.

Logically, organizations want as high a return on investment as possible (Baldwin & Holton, 2003; Broad & Newstrom, 1992). Therefore, the fourth level of evaluation considered participants’ self-reported adaptation effectiveness to a career meta-transition. Encouragingly, on average, participants rated their adaptation positively and listed several skills taught in the workshop as useful to them in the post-Games period, including having a plan and seeking social support. However, the range of ratings was large, indicating, as suggested in the literature , that individual differences may affect workshop effectiveness (Baldwin & Holton, 2003). Additionally, the measure taken was subjective in nature, and as adaptation to a career transition is a phase, the outcome should ideally have been measured numerous times. Further objective investigation into the long-term use of career adaptability skills, and subsequent career adaptive responses following intervention is required to better understand far-transfer. Researchers have suggested that managers can support far-transfer by providing opportunities to practice, giving positive reinforcement, role modelling the skills, publicizing success, and holding them accountable. Additionally,

the facilitator can support far-transfer following the workshop by conducting evaluations and providing feedback in addition to providing follow-up support. Finally, the trainee themselves can enhance far-transfer following intervention by reviewing intervention material, seeking a mentor, and maintaining contact with others who attended the intervention (Broad & Newstrom, 1992). Therefore, future interventions could be enhanced by including a task such as creating an action plan for future career transitions or discussing in pairs how they would apply the intervention material in the real world. Additionally, researchers should consider what organizational factors might affect the far-transfer of learning materials to the real-world and consider if organization-level intervention is required to facilitate far-transfer of learning.

4.1.15 Limitations

One limitation of this study is the results cannot be compared to those of other career adaptability skills interventions due to a difference in collected measures. Despite the use of open-ended questions and analysing the accuracy of responses, the subjectivity associated with the use of self-report measures remain. While a pre-post design is an improvement on prior evaluations of learning, causality cannot be inferred. Results should be interpreted accordingly, and future research should include questions at follow-up measures pertaining to other activities participants may have engaged in which would affect their career adaptability skills. The total number of people involved in the Rio 2016 Games was approximately 200, 140 of which attended the workshop and 98 agreed to participate in research. This population are typically difficult to reach, and attrition in follow-up measures is known to be high and therefore methods which were most convenient to the participant were used to collect data. While non-responders

were expected, it is possible a proportion of those who did not answer the questions chose not to respond because they had not thought about or applied any of the content. A further limitation of the study is the analysis of the near and transfer responses by a single coder.

4.1.16 Future Research

One strength of this study is the co-delivery of the workshop by a peer-facilitator. Given the emphasis in the literature on intervention facilitators as role models (Savickas et al., 2009), and the positive reaction to the peer-facilitator in this study, this line of enquiry may be expanded to consider athletes, coaches and athletes support providers as models of career adaptability for athletes. Interpersonal learning appears to be a key feature of learning career adaptability skills, therefore if such intervention was offered to all employees in an organization, daily opportunities for peer-modelling could further enhance transfer of learning to the real world. While success has been found in enhancing career adaptability skills, future research should also consider the relationship between self-reported career adaptability skills and both near and transfer of learning. Further to this, research on the learning process and more specifically how career adaptability workshops can be designed to facilitate near, and transfer of learning is required. The positive reaction of participants to the content and design of the intervention likely affected the improvement in generalization. Researchers should consider how interventions can be designed to be both feasible and acceptable to the target population in order to enhance intervention effectiveness. With regard the large range in self-reported adaptation effectiveness to a career transition suggests there is a requirement for further exploration of the long-term impact of career

adaptability skills workshops, and the role of individual differences in intervention effectiveness. Finally, methodological issues outlined in previous studies remain, and for a variety of practical reasons it was not possible to compare sub-groups or examine if incidental learning in the year following workshop attendance impacted level four of the evaluation. Ideally researchers should also consider an observational measure in addition to self-report at all levels of evaluation.

4.1.17 Concluding Remarks

As stated by Savickas and colleagues (2009), it is necessary to look to the future and proactively develop career adaptability skills so that opportunities are maximized, and individuals are best prepared for challenging career transitions. Therefore, the aim of this intervention was to proactively prepare the participants for the post-Games meta-transition. According to Kirkpatrick's model, if evaluation of the intervention, materials, and facilitators shows that the program was well received, and key information was learned then the program can be called effective training (Saks & Burke, 2012). Less expensive interventions which can be scaled up easily are more attractive to intervention funders, but if the intervention is not affecting real-world change, any investment is meaningless (Janeiro et al., 2014; van der Horst & Klehe, 2018). The findings of this study suggest that following 90-minute career adaptability workshop participants can successfully transfer learning (both near and far). We surmise that the inclusion of strategies to make the workshop satisfying, engaging and relevant to participant affected this outcome. Overall, this study provides preliminary evidence for the suitability of a brief psychoeducational workshop to teach career adaptability skills to Olympic and Paralympic athletes, coaches and athlete support providers in a manner which facilitates both near and transfer of learning.

VI. Chapter 6: Discussion and Concluding Remarks

The aim of this thesis was to outline the development and feasibility testing of a theory-informed career intervention to increase career-adaptability skills in Irish Olympic and Paralympic athletes, coaches and athlete support providers. The objective to develop a conceptual model of transition in sport that captures complexity, change and unpredictability was addressed through literature review. Research examining career transitions in sport has typically done so within a stage-based model of predictable transitions. However, the pace of change which impacts individuals and organizations involved in the Olympic and Paralympic games demands they be adaptable. To understand how to develop an intervention to develop personal resources to match these challenges Chapter three reviews theoretical perspectives and empirical research from a variety of fields including intervention development, career development, the demands of Olympic and Paralympic sport and prior interventions delivered to improve career adaptability, and general career development interventions available to Olympic and Paralympic athletes. Drawing from these broader knowledge bases provided a holistic view of how we might develop career adaptability from the individual and organizational perspectives. The athletic career transition model proposes three types of intervention are required to assist athletes in the management of career transitions; prevention, crisis-coping and maladaptive coping (Stambulova, 2016). To date, the literature has focused on providing models for intervention for crisis-transitions. This thesis contributes to the existing knowledge by integrating the premise of career construction theory to the athletic career transition model and Schlossberg model of human adaptation to propose a model of preventive intervention which promotes effective adaptation and therefore reduces the chances of damage to well-being. This contribution is detailed in Chapter three where the first three steps of the process of intervention development was discussed in depth. The 6SQuID model was helpful due to its simple and non-prescriptive nature, meaning we could use the

methods of enquiry most feasible for the objectives of the thesis. Overall, the development phase took one year to complete. It required the input of over 30 people involved in Olympic and Paralympic sport in Ireland. Collaborating with a group this size in the development of the intervention was challenging at times, but we hoped the collaborative nature of the development of the intervention would improve the chance of the intervention being feasible and acceptable to the target population.

The first step in the intervention development process was defining the problem based on literature and the context in which it presented itself (Wight et al., 2016). Literature review, discussion amongst the intervention development team and the input of the project steering group was invaluable during this step. The second step was to use this understanding of the problem to identify potential causal pathways and choose a target outcome. It should be noted that the determinants of compromised well-being presented in Figure 3 are those of any career transition in the career of a sportsperson. The majority of research conducted on career transitions in sport has focused on the career-end transition (Park et al., 2013; Wylleman et al., 2004) and these determinants are therefore heavily biased towards this context. Those underlying factors contributed by the project steering group are specific to the post-Games meta-transition. Literature suggests that successful adaptation to a transition takes place when the athlete is able to develop and effectively use all the necessary resources to overcome any barriers in the coping process (Stambulova et al., 2009). As the aim of the intervention was to prevent compromised well-being, and the remit of the intervention was to intervene at the individual level, the most logical choice was to attempt to address the mediating person-level factors identified in the causal model. If the aims of the intervention were different, a different target outcome may be chosen, and future research may examine how the characteristics of the individual, environment and transition might be affected directly to prevent compromised well-being. The third step in the process was to

develop a conceptual model of how the target outcome, career adaptability, could be improved. The addition of the personal resource career adaptability to the athletic career transition model is a further development of the career transitions in sport literature.

Once a conceptual model of career transition in elite sport had been developed, and career adaptability has been identified as the malleable factor, the second objective of the thesis was to systematically define the main components of the intervention. This process consisted of two parts; deciding what is needed to affect career adaptability and deciding how to deliver it (Fifer, Henschen, Gould, & Ravizza, 2008). Chapter three focuses on the first part, while chapter four examines how interventions have previously been implemented in the Olympic and Paralympic sport context, and what factors might affect engagement. With reference to the main components of the intervention, a systematic review of the implementation characteristics of interventions to improve well-being and personal resources of the Olympic and Paralympic population worldwide was conducted. The results of the review suggest there are five main factors to be considered when developing further transition support programs; the intervention, the facilities and resources needed to implement the intervention, the organization, the end-user and the socio-political context. Considering these factors at the intervention development stage can enhance the feasibility and acceptability of the intervention to the target population. The results of the review suggest that researchers to date have given little consideration to the impact of implementation factors on intervention effectiveness. Therefore, a single recommended method of implementation cannot be recommended. Based on the findings we recommend sport organizations explore the context-specific determinants of implementation success with key stakeholders at the intervention development stage and conduct and report process evaluations of interventions.

Chapter four then goes on to detail the factors that key stakeholders believe would affect Irish athlete engagement in a psychoeducation intervention to improve their career adaptability skills. The findings from the study pertaining to the elite sport context, logistics of delivery and personal factors directly informed the implementation plan for the intervention described in Chapter five. Most sport psychology journals have a strong emphasis on professional practice, and the largest contribution this thesis makes in this regard is outlining the facilitators and barriers to engaging in psychoeducation interventions from the perspective of the end-users, as typically they are understood from the perspective of the practitioner. The identification of these factors has the potential to inform the practice of sport psychologists, lifestyle advisors and sport organizations in Ireland working with Olympic and Paralympic athletes. Finally, the results of this study informed the subsequent implementation plan of the interventions presented in studies three and four targeting the improvement of career adaptability of the Rio 2016 Olympic and Paralympic Irish teams. Specifically, the decision to develop both a workshop and digital video was influenced by this study, as was the timeline for delivery and the invitation for all key stakeholders to participate.

Chapter five, describes the development and assessment of a digital video to inform athletes about the post-Games career meta-transition. This study addresses the thesis objective to analyse the feasibility of digital narratives from former elite athletes as a means of disseminating information about athlete career transition to the current athlete cohort. The premise of this study was an athlete who is aware of and prepared for an upcoming career transition is more likely to adapt successfully and experience satisfaction within their sport role, and their personal life (Johnston, 2018; Stambulova et al., 2009). Based on the concept of career adaptability (Savickas & Porfeli, 2012) the video designed for this intervention aimed to educate viewers about upcoming career transitions including strategies they could use to adapt to the career transition. The

contribution of this study to the literature is the pilot testing of digital video as a delivery method for psychoeducation to Olympic and Paralympic athletes, coaches and athlete support providers. The results of this study suggest the video was an effective psychoeducation tool for this topic. The digital video was developed following the guidance of entertainment-education theory to offer multiple perspectives of the post-Games experiences, and included current and retired, male and female, Olympic and Paralympic athletes as narrators. The results support the development of video psychoeducation resources using education-entertainment theory for this population. An additional contribution of this study to the literature is that it is the first exploration of video-delivered psychoeducation to educate a population about an upcoming career transition, including strategies they could use to adapt to the experience.

Chapter five describes an assessment of the group-based psychoeducation intervention to stimulate transfer of learned career adaptability skills This study addresses the thesis aim to test the feasibility of the intervention for teaching career adaptability skills. It has been suggested that assessments of vocation related interventions need to consider the clinical and practical significance of their effects (Brown, 2015). The Kirkpatrick framework for training evaluation provided a structure for assessing (1) the reaction to the workshop from the perspective of the participants (2) participant learning denoted by their ability to accurately generalize their learning, (3) accuracy of the transfer of learning to the real-world context, and (4) the self-reported effectiveness of participants' adaptation to a career meta-transition. The results suggest participants were satisfied with the group format of the workshop, and particularly enjoyed the opportunity to hear other athletes' stories and discuss their future with others. The results also support those of chapter four which suggested athlete engagement would be facilitated through peer-facilitation. A further contribution of this study to the literature is the impact of carefully constructed content on cognitive,

behavioural and overall generalization following workshop attendance. Intervention developers in both the career adaptability field and psychoeducation will benefit from using analogies and metaphors, presenting multiple examples, and revisiting ideas (Day & Goldstone, 2012b). Fundamental to the pragmatic paradigm is the ecological validity of scientific enquiry, that is, the actual change to an individual's life caused by the enquiry. Van der Horst & Klehe (2018) and Whiston et al., (2017) have both noted the lack of brief career intervention studies and the resultant a gap in our knowledge of the effectiveness of once-off group workshops. Interestingly, in chapter five, a relatively small percentage of participants reported transferring the learned career adaptability skills to the real-world context. This is interesting given other interventions studies have found sustained improvements in self-reported career adaptability skills following intervention. Also of interest is the accuracy of reporting of the use of the skills taught in the workshop. These findings are important for the career adaptability literature as they demonstrate a relatively short workshop can be co-delivered by a non-expert in a way that is relevant and useful to attendees. In sum, the body of research included in this thesis contributes to the literature across Olympic and Paralympic sport and career development.

Limitations and Strengths

Limitations of individual studies have been discussed within each chapter, however some issues are evident in the thesis as a whole. Career construction theory discusses measures of adaptation beyond career adaptability, including adaptivity, adaptive behaviours and adaptive outcomes which are only briefly considered herein. It is possible therefore that we have under or overestimated the effects of the intervention. Additionally, models of career transition in sport argue that transitions outside the career such as personal and educational ones should be considered in tandem. A holistic

approach may have been more helpful to participants and is a worthy line of enquiry for future research. A further limitation of the thesis is there is no comparison of career adaptability scores to previous research. Other methodological issues arise from the subjectivity associated with the use of self-report measures remain, and the lack of control groups, or staggered baseline. Greater levels of quantitative analysis would have also been preferred in studies three and four but the distribution of responses in collected measures were unfavourable. Additionally, combining assessment of both the video and workshop elements proved difficult. Future research should conduct separate assessments of learning tools. Strengths of these studies are also evident. In chapter five the rigorous process of a systematic review was observed; however, it was found to be unsuitable for addressing the research question as the literature has not been reported in a systematic manner. In the qualitative study, a relatively large sample from an often difficult to access population has been accessed. Participants in this study had amassed significant experience of the Olympic and Paralympic Games and represented a multitude of perspectives from the population. The strength of chapter five lies in the development of a digital video from a theoretical perspective, thus enhancing its potential to stimulate learning and recall. The strength of chapter five is reflected in the breadth of data collected, spanning all four levels of the Kirkpatrick model (Kirkpatrick & Kirkpatrick, 2008). It is also reflected in the pre-post design, which is an improvement upon prior studies examining transfer of learning.

Practical Recommendations

There are several practical recommendations arising from the studies in this thesis. Firstly, with regards implementation characteristics of interventions with Olympic and Paralympic populations, an initial needs analysis should be conducted at the intervention design stage. This needs analysis should include discussion with key

stakeholders about the barriers and facilitators of engagement with the target group. Intervention developers might consider the potential role of the elite sport context, logistics of delivery and the individual in this discussion. With regard to the development of digital videos as an information provision tool for career transition planning, I would recommend videos of less than one minute be developed, or a longer video be developed in a way that facilitates it being cut into less than one-minute segments. Additionally, developers should include the use of audio and text labels to highlight the key learning points in the video, multiple narrators to increase chances that the viewer finds the narrator relatable and a whiteboard/animated format but also include images of the "real" people.

Finally, career adaptability skills interventions have shown sustainable improvements following group interventions; however, little is known about the transfer of learning to the real-world context. The aim of the final study was to explore the transfer of learning from a group-based psychoeducation intervention delivered over the course of a 90-minute workshop. Transfer of learning is of particular interest to funding organizations, as millions of dollars are spent annually on human resource development, and researchers estimate less than 20% of what is learned is transferred to the work context (Broad & Newstrom, 1992). Researchers suggest there are several strategies which can be employed before and during intervention which encourage transfer of learning which are outlined in Table 13.

Table 13 Strategies which can be employed to encourage transfer of learning. Adapted from (Broad & Newstrom, 1992)

	PRIOR	DURING	AFTER
Manager	Involve supervisors and trainees in the needs analysis process and program planning, discuss the importance of the intervention with trainees, provide time to attend, offer rewards for attendance, and provide orientations for supervisors.	Developing a transfer action plan, advocate for the program at all levels of the organization, monitor attendance, and planning an assessment of transfer of new skills to the job.	Providing opportunities to practice, giving positive reinforcement, role modelling the skills, publicizing success, and holding them accountable
Facilitator	Aligning the intervention with the strategic plan of the organization, systematically design the instruction, provide opportunities to practice, and create a peer-coaching component that will last beyond the intervention.	Providing realistic work-related opportunities to practice the skills, providing visualization experiences, giving individualized feedback, creating opportunities for social modelling, assist in the development of action plans, and discuss how to negotiate a contract of new behaviours with management Frame learning contexts in an expansive manner, linking content	Conducting evaluations and providing feedback in addition to providing follow-up support

		and its applicability to potential future contexts and also to examples of past contexts	
Trainee	Engaging in intervention planning, actively exploring intervention options and participating in preparatory activities. Research has suggested that even if the trainee possesses the cognitive ability to draw comparisons across scenarios which would allow them to transfer the learning, the similarities will not be seen if they are not motivated to draw them out	Engaging fully with the intervention, finding peer support, developing a list of ways they can apply the skills, and anticipating potential roadblocks to transfer.	By reviewing intervention material, seeking a mentor, and maintaining contact with others who attended the intervention

The results of Chapter five suggest a group workshop intervention is a feasible and acceptable method of delivering psychoeducation to Olympic and Paralympic athletes, coaches and athlete support providers which facilitates transfer of learning. However future delivery of similar workshops should consider the following;

- Interpersonal learning appears to be a key feature of learning career adaptability skills, therefore if such intervention was offered to all employees in an organization, daily opportunities for peer-modelling could further enhance transfer of learning to the real world.
- Additionally, researchers should consider the impact providing career adaptability training for coaches and athlete support providers could have given the stressful nature of their jobs, and the potential for them to act as advocates and role models for athletes to consider their own futures.
- Role modelling has been repeatedly described as a key ingredient for group workshops to improve career adaptability. Future research should further explore the potential for peer-facilitators to act as change-makers.
- Studies should be designed to consider the relationship between self-reported career adaptability skills and the accuracy of their transfer to the real world.
- A further examination of the differences in sub-groups of the athletic population, stimulated by the range of self-rated adaptation effectiveness is also warranted.

Future Research

Several lines of inquiry have been identified as a result of the findings from this thesis. From chapter four's systematic review, we learned of the diversity in design and implementation of well-being-oriented interventions in Olympic and Paralympic sport. Methodologically, such interventions would benefit from process evaluations, and exploration of the social validity of the intervention. The next step for researchers in this

field is for greater consistency in the reporting of interventions, specifically in the description of implementation plans. The exploration of factors which might affect engagement in chapter four impacted the design of both the digital video and the career adaptability workshop. Based on the findings of studies three and four, we highly recommend this approach to intervention development. While the findings are context-specific, cross-country examinations of the factors affecting engagement in career interventions in the pre-Games period would be of interest. Additionally, researchers might examine how the factors affecting engagement change with experience. Overall, future research might consider the utility of entertainment-education theory and the Fleuren implementation model as guiding frameworks for other pro-social interventions targeted at the Olympic and Paralympic population. Step six of the 6SquID model recommends the researcher collects sufficient evidence of effectiveness to justify rigorous evaluation. What should be done at this stage is consider some of the short- and medium-term outcomes expected from the intervention. Ideally future research on this topic will include measures of career adaptability and psychological well-being, in either a randomised control trial study or at the minimum a staggered baseline study. Additionally, further consideration could be given to the nature of multiple transitions occurring in the life of an athlete at one time.

In conclusion, preventive career transition interventions are required in Olympic and Paralympic sport to protect the well-being of the population during the post-Games period. Taking a six-step approach to intervention development, guided by the 6SquID model, this thesis aims to address four key objectives

From a narrative review of the career transition literature, objectives one and two were addressed and career adaptability was identified as a personal resource which could be targeted for improvement ahead of the Games, thus facilitating the protection

of well-being during the post-Games period. From a systematic review of interventions targeting well-being in this cohort we learned that little emphasis has been placed on factors affecting implementation of interventions, which may affect engagement and intervention success. Subsequently, a qualitative study of the factors key stakeholders believed would affect engagement with a preventive career transition intervention was conducted, and three major factors were identified (elite sport context, logistics and personal factors). Carrying this knowledge forwards, an intervention was developed which targeted the enhancement of career transition awareness and career adaptability skills. The knowledge gained through the qualitative study directly informed the implementation plan of this intervention, including the delivery of it through both digital video and group workshops. Addressing objective three of the thesis a study of the effectiveness of a digital video for career transition awareness was conducted. Digital video was found to be effective for communicating up to three learning points immediately following viewing, with a drop-off in recall after 72 hours. Importantly, participants indicated they enjoyed the video, identified with the narrators, and found it informative, and personally relevant. The final study of the thesis addressed objective four by exploring the feasibility of a 90-minute group-based psychoeducation intervention for transfer of learning. Overall participants rated the workshops as satisfactory, useful and relevant to their career. A pre-post evaluation of participants' ability to accurately generalize the content of the intervention found significant improvement in thoughts and behaviours following the intervention, with small-large effect sizes calculated. However, less than 20% of all participant's successfully transferred their learning to the real-world context at two time points following intervention. Overall, participants rated their adaptation to the post-Games career meta-transition positively, and listed skills learned at the workshop as helpful during this adaptation., demonstrating group workshops are a feasible method for teaching career

adaptability skills but adaptation of the content and format is required to maximise transfer of learning to the real-world context.

VII.Bibliography

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VIII. Appendices

Interview Participant Characteristics

Service Provider

We are interested in learning a little more about you. Please read the items below and respond to the questions honestly and carefully. There are no right or wrong answers.

1. **Date of Birth** _____

2. **Gender (Please circle)** Male/Female

3. What level of education have you completed to date?
Please tick the appropriate answer

a) Primary School _____
b) Secondary School _____
c) College/University _____
d) Other (please specify) _____

4. What is your main occupation?_____

5. How many years have you been working with athletes?_____

6. Do you work primarily with athletes from one or two sports or a range of sports? Please specify

_____

7. **Where do the athletes you work with predominantly live and train for elite competition?**

_____

8. **Have you attended an Olympic Games?**
    a. Yes
    b. No

9. **If yes, how many?**

_____

10. **Have you been involved in the preparation of athletes for an Olympic Games?**
    a. Yes
    b. No

11. **If yes, how many and what year?**

_____

12. Are you hoping to participate in Rio in some capacity?

a. Yes
b. No

Please provide details of the nature of your involvement.

_____

Athlete

We are interested in learning a little more about you. Please read the items below and respond to the questions honestly and carefully. There are no right or wrong answers.

1. **Date of Birth** _____

2. **Gender (Please circle)** Male/Female

3. What level of education have you completed to date?
Please tick the appropriate answer

e) Primary School _____
f) Secondary School _____
g) College/University _____
h) Other (please specify) _____

4. Are you –

Please tick the appropriate answer & fill in the details

a. Full time athlete? ____
b. Full time athlete / part time student ____
    i. What university? _____
    ii. What course? _____
    iii. Which year? _____
c. Full time athlete / part time worker ____
    i. What occupation? _____
    ii. What company? _____
d. Full time student / part time athlete ____
    i. What university? _____
    ii. What course? _____
    iii. Which year? _____
e. Full time employed / part time athlete ____

i. What occupation? _____

ii. What company? _____

5. **What sports do you have experience with?**

_____

6. **Where do you predominantly live and train for elite competition?**

_____

7. **What is the highest level that you've competed at?**
   a. European
   b. World
   c. Olympic (Junior / Senior)

8. **Have you competed at an Olympic Games?**
   a. Yes
   b. No

9. **If yes, how many?**

_____

10. **Are you hoping to compete in Rio?**

_____

Interview Schedule

Qualitative Interview Schedule – Athlete

Confidentiality

Confidentiality of the interview will be reiterated to the participant at the start

The purpose of this project is to develop an elite performance preparation programme designed for elite athletes by elite athletes, service providers and coaches.

Start of interview:

Develop rapport with participant by asking them a little more about themselves.

Topic Guide:

Section 1

What is it like to participate at an international competition such as the European, World or Olympic Games?

Probe for challenges encountered and how these were managed

If they have attended an Olympic Games, ask the following if not go **to Section 2**

Was there a difference between Olympics and other competitions? – can you identify up to three things that you would say are:

The same at all competitions

Different at the Olympics

If you could summarise your Olympic experience in three words what would they be?

- Can you elaborate on that description?
- IF MULTIPLE GAMES – can you identify differences in your Olympic experience over the 2 / 3 / 4 Games that you've attended?

Section 2-

- What do you think most helped you to prepare for international competition?

- Was there anything that you think hindered or negatively affected your preparation for international competition?
- Was there anything that you did beforehand that helped you during competition?
- Was there anything that you did prior to competition that helped you in the period afterwards?

For those who have attended the Olympics and said there were NO DIFFERENCES in the Olympics and international competition ask questions in Section 2. If they said there was a difference go to section 3

Section 3

- What do you think most helped you to prepare for the Olympics?
- Was there anything that you think hindered or negatively affected your preparation for the Olympics?
- Was there anything that you did beforehand that helped you during the Olympics?
- Was there anything that you did prior to the Games that helped you in the period afterwards?
- How might second and third time attendance at the Olympics have implications for preparation?

Section 4

- If you were to design a program to enhance elite athletes' psychological preparation for the Olympics, and for the transition period afterwards, what would it entail?
    - Probe for psychological elements
    - Probe for who the program should target
    - Probe for logistics of program such as; the delivery of the program, how it should be packaged, how it should be advertised, when it should be delivered and how long before it is available it should be advertised.
    - Probe for motivation to use support

- What kind of barriers are there for an athlete to access a program like the one you have suggested?
    - Probe for specific issues to be addressed

- Probe for solutions
- What kind of barriers might there be in delivering a support program like the one you suggested?
- Do you think the athlete being abroad would affect them accessing a program like the one you have suggested?
- What is the best way of engaging athletes who are training abroad for longer periods of time?

- How might qualification status influence an athlete's willingness to engage in a program like the one you suggested?
  - Do you think qualification status is an important consideration?
  - Probe why or why not?
  - (If athlete has participated in the Olympics – ask about their own experience of the qualification process. If the athlete has not participated in the Olympics, ask them about the qualification process for their sport.
  - Do you think how an athlete qualifies for a competition is an important consideration?
  - Probe why or why not?

- Would you design a program like you have suggested differently for male and female athletes?
  - Probe for reasons
  - Probe for differences
- Would you design a program like you have suggested differently for athletes with experience of Olympic competition and those without?
  - Probe for reasons
  - Probe for differences

Section 5

Do you think that the focus of an elite performance preparation programme prior to the Olympics should focus on preparation for the Olympics and the transition afterwards or focus on enhancing skills to prepare for major competitions in general?

- Probe why or why not

- Is there anything else you would like to add?
- Are there any areas you think would be beneficial to ask athletes about that we have not included?

Summarise responses to participant.

Thank participant and end interview

Study 1 Systematic Review Search Strategy Keywords

- olymp* or paralymp*
- AND Intervention OR Strategy OR Program OR Project OR Model OR Approach OR Protocol OR Service OR Consultation OR Trial OR Analysis OR Evaluation OR Involvement OR Mediation OR Database OR Scheme OR Suite OR method OR Curriculum OR facility OR discussion OR test OR Agenda OR method* OR Platform OR Plan OR simulation OR tactic OR etiquette OR provision OR talk OR Assignment OR study OR appraisal OR Course OR Instruction OR System OR Development OR reproduction OR Train OR package OR session OR experiment OR investigation OR estimation OR Intercession OR Procedure OR Series OR Mission OR check OR attitude OR practice OR conference OR scrutiny OR calculation OR Task OR Undertaking OR Endeavour OR Venture OR example OR attempt OR practise OR amenity OR try-out OR meeting OR breakdown OR valuation OR Blueprint OR Design OR demonstrate OR Job OR paradigm OR tackle OR conventions OR ritual OR sounding OR audition OR inquiry OR estimate OR template OR exemplar OR deal with OR consider OR pattern OR handle OR modus operandi OR rite OR advantage OR assessment OR enquiry OR costing OR examination OR testing OR assistance OR standard OR manage OR proprieties OR help OR benefit OR probe OR exploration OR consideration OR provision OR organize OR augment OR Consult OR grow OR Build OR Improve OR Advise OR Analyze OR mend OR communicate OR direct OR follow OR scrutinise OR appraise OR organise OR back OR refer OR impart OR check OR counsel OR teach OR assess OR recover OR show OR recommend OR adopt OR evaluate OR gauge OR encouragement OR plan OR boost OR abet OR mature OR access OR advance OR join OR make OR progress OR train OR champion OR guide OR consider OR gage OR sponsorship OR practice OR prepare OR groom OR defence OR look up OR change OR form OR rally OR clarify OR perfect OR favour OR question OR assistance OR practise OR heighten OR support OR cultivate OR confer OR ripen OR promotion OR foster OR convalesce OR instil OR warn OR uphold OR explore OR finance OR get ready OR prime OR help out OR suggest OR help OR create OR espousal OR encourage OR recuperate OR demonstrate OR opine OR advocate OR probe OR patronage OR acquire OR assemble OR make ready OR aid OR assist OR breed OR cooperation OR alert OR correct OR educate OR give advice OR expand OR dissect OR enlarge OR explain OR better OR edify OR widen OR reinforce OR get OR co-operation OR titivate OR adjust OR tutor OR further OR inform OR examine OR amplify OR elaborate OR enhance OR coach OR expound OR sustain OR obtain OR collaboration OR amend OR tweak OR school OR notify OR enrich OR study OR lecture OR tell OR increase OR scrutinize OR price OR value OR extend OR weigh OR calculate OR estimate OR develop OR instruct OR upgrade OR investigate
- AND prep*

  AND attitude or behav* or mental or psych*

Video Feedback Questionnaire

1. What did you like and/or dislike about this video?
2. Did you learn anything from this video?
    a. Yes/No
3. If yes, what did you learn?
4. Given the topic was this video
    a. Too short/ Right Length/ Too long

	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
I found this video informative					
I would watch this video again					
I would recommend this video to a friend					
This video was relevant to me					
I identified with the people in the video					
I found this video enjoyable					
I thought the videos message was authentic					
There was too much information in this video					
I do not understand why this video was shown					

Workshop Demographics Questionnaires

Athlete: The Evolution Series Questionnaire.

This project is called the "Feasibility, acceptability and effectiveness of a transition programme to increase career adaptability and psychological well-being in elite Irish athletes".
It is a collaborative project between Dublin City University and the Irish Sports Council. The principal investigator is Dr. Siobhain McArdle, DCU. The other researcher involved in this project is Emma Burrows, Dublin City University. This project is jointly funded through the Irish Sports Council and the Irish Research Council and has received ethical approval through the DCU Research Ethics Committee.
Successful athletes, coaches and service providers tell us that the ability to respond and adapt to the Games environment is one of the fundamental skills that underpins delivering a performance, enjoying the experience and adjusting to the post-games experience.The aim of this project is to help you prepare, adapt and evolve to survive and thrive on your Olympic journey.

If you decide to participate in this project there will be the option of attending three 90 minute workshops at pre-determined dates. You will be required to fill out a questionnaire as part of your attendance. These workshops may be video recorded, and you may be contacted by phone after attending a workshop. You may also be asked to participate in interviews after the programme as part of the project.

If you take part in this study, you can say you do not want to be part of the study anymore at any point without any negative consequences. Dublin City University will protect all your personal information. However, confidentiality of information provided is subject to legal limitations. Your identity and personal information will not be revealed in the results of the study. The study findings may be presented at scientific meetings or presented in scientific journals. Dr. Siobhain McArdle will delete all data files two years after the project has ended.

By continuing you are confirming that:
You have read the information provided (or had it read to you)
You understand the information provided
You have had an opportunity to ask questions
You have received satisfactory answers to all your questions
You are aware that the workshops you attend may be videotaped

1. I confirm I have read and understood the information provided and give my consent to participate in this research project

Print Name

Signature

Athlete: The Evolution Series Questionnaire.

* 2. What is your age in years?

* 3. What is your gender?

- ◯ Female
- ◯ Male

* 4. What is the highest level of education you have completed? Please select one from the following options.

- ◯ Junior Certificate or equivalent
- ◯ Leaving Certificate or equivalent
- ◯ NFQ Level 5 Certificate (FETAC awarded) or equivalent
- ◯ NFQ Level 6 Higher/Advanced Certificate or equivalent
- ◯ NFQ Level 7 Ordinary Bachelor Degree or equivalent
- ◯ NFQ Level 8 Higher Bachelor Degree or equivalent
- ◯ NFQ Level 9 Postgraduate Diploma/Masters Degree or equivalent
- ◯ NFQ Level 10 Higher Doctorate/Doctoral Degree or equivalent
- ◯ Other (please specify)

5. What is your current role in the high performance system? (Please choose the answer that is most appropriate)

- ◯ Athlete
- ◯ Coach
- ◯ Team Manager
- ◯ Performance Director
- ◯ Other (please specify)

Other

6. What is the highest level you have competed at?

- ◯ National
- ◯ European
- ◯ World
- ◯ Paralympics
- ◯ Olympic Junior
- ◯ Olympic Senior

Other (please specify)

7. How many times have you competed at that level?

- ◯ 1
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5
- ◯ More than 5

8. Which of the following best describes you?

- ◯ Full time athlete
- ◯ Full time athlete/ part time student
- ◯ Full time athlete/ part time employed
- ◯ Full time student/ part time athlete
- ◯ Full time employed/ part time athlete

9. Have you qualified to compete at Rio 2016?

- ◯ Yes
- ◯ No

Other (please specify)

Coaches: The Evolution Series Questionnaire.

This project is called the "Feasibility, acceptability and effectiveness of a transition programme to increase career adaptability and psychological well-being in elite Irish athletes". It is a collaborative project between Dublin City University and the Irish Sports Council. The principal investigator is Dr. Siobhain McArdle, DCU. The other researcher involved in this project is Emma Burrows, Dublin City University. This project is jointly funded through the Irish Sports Council and the Irish Research Council and has received ethical approval through the DCU Research Ethics Committee.

Successful athletes, coaches and service providers tell us that the ability to respond and adapt to the Games environment is one of the fundamental skills that underpins delivering a performance, enjoying the experience and adjusting to the post-games experience.The aim of this project is to help you prepare, adapt and evolve to survive and thrive on your Olympic journey.

If you decide to participate in this project there will be the option of attending three 90 minute workshops at pre-determined dates. You will be required to fill out a questionnaire as part of your attendance. These workshops may be video recorded, and you may be contacted by phone after attending a workshop. You may also be asked to participate in interviews after the programme as part of the project.

Dublin City University will protect all your personal information. However, confidentiality of information provided is subject to legal limitations. Your identity and personal information will not be revealed in the results of the study. The study findings may be presented at scientific meetings or presented in scientific journals. Dr. Siobhain McArdle will delete all data files two years after the project has ended.

By continuing you are confirming that:
You have read the information provided (or had it read to you)
You understand the information provided
You have had an opportunity to ask questions
You have received satisfactory answers to all your questions
You are aware that the workshops you attend may be videotaped

1. I confirm I have read and understood the information provided and give my consent to participate in this research project

Print Name

Signature

Coaches: The Evolution Series Questionnaire.

2. What is your age in years?

3. What is your gender?

- ◯ Female
- ◯ Male

4. What is the highest level of education you have completed? Please select one from the following options.

- ◯ Junior Certificate or equivalent
- ◯ Leaving Certificate or equivalent
- ◯ NFQ Level 5 Certificate (FETAC awarded) or equivalent
- ◯ NFQ Level 6 Higher/Advanced Certificate or equivalent
- ◯ NFQ Level 7 Ordinary Bachelor Degree or equivalent
- ◯ NFQ Level 8 Higher Bachelor Degree or equivalent
- ◯ NFQ Level 9 Postgraduate Diploma/Masters Degree or equivalent
- ◯ NFQ Level 10 Higher Doctorate/Doctoral Degree or equivalent
- ◯ Other (please specify)

5. What is your current role in the high performance system? (Please choose the answer that is most appropriate)

- ◯ Athlete
- ◯ Coach
- ◯ Team Manager
- ◯ Performance Director
- ◯ Other (please specify)

Other

6. How many years have you been working in your current role?
Please select one from the following options.

- ◯ <1 year
- ◯ 1-2 years
- ◯ 2-3 years
- ◯ 3-5 years
- ◯ 5-7 years
- ◯ 8-10 years
- ◯ 11-15 years
- ◯ 15+ years

7. Have you previously held a different role within the High Performance System?

- ◯ Yes
- ◯ No

8. If yes, what was that role? How many years were you in that role?

Role	
Number of years	

Service Providers: The Evolution Series Questionnaire.

This project is called the "Feasibility, acceptability and effectiveness of a transition programme to increase career adaptability and psychological well-being in elite Irish athletes". It is a collaborative project between Dublin City University and the Irish Sports Council. The principal investigator is Dr. Siobhain McArdle, DCU. The other researcher involved in this project is Emma Burrows, Dublin City University. This project is jointly funded through the Irish Sports Council and the Irish Research Council and has received ethical approval through the DCU Research Ethics Committee.

Successful athletes, coaches and service providers tell us that the ability to respond and adapt to the Games environment is one of the fundamental skills that underpins delivering a performance, enjoying the experience and adjusting to the post-games experience.The aim of this project is to help you prepare, adapt and evolve to survive and thrive on your Olympic journey.

If you decide to participate in this project there will be the option of attending three 90 minute workshops at pre-determined dates. You will be required to fill out a questionnaire as part of your attendance. These workshops may be video recorded, and you may be contacted by phone after attending a workshop. You may also be asked to participate in interviews after the programme as part of the project.

Dublin City University will protect all your personal information. However, confidentiality of information provided is subject to legal limitations. Your identity and personal information will not be revealed in the results of the study. The study findings may be presented at scientific meetings or presented in scientific journals. Dr. Siobhain McArdle will delete all data files two years after the project has ended.

By continuing you are confirming that:
You have read the information provided (or had it read to you)
You understand the information provided
You have had an opportunity to ask questions
You have received satisfactory answers to all your questions
You are aware that the workshops you attend may be videotaped

1. I confirm I have read and understood the information provided and give my consent to participate in this research project

Print Name

Signature

Service Providers: The Evolution Series Questionnaire.

* 2. What is your age in years?

* 3. What is your gender?

- ◯ Female
- ◯ Male

* 4. What is the highest level of education you have completed? Please select one from the following options.

- ◯ Junior Certificate or equivalent
- ◯ Leaving Certificate or equivalent
- ◯ NFQ Level 5 Certificate (FETAC awarded) or equivalent
- ◯ NFQ Level 6 Higher/Advanced Certificate or equivalent
- ◯ NFQ Level 7 Ordinary Bachelor Degree or equivalent
- ◯ NFQ Level 8 Higher Bachelor Degree or equivalent
- ◯ NFQ Level 9 Postgraduate Diploma/Masters Degree or equivalent
- ◯ NFQ Level 10 Higher Doctorate/Doctoral Degree or equivalent
- ◯ Other (please specify)

5. What is your current role in the high performance system? (Please choose the answer that is most appropriate)

- ◯ Athlete
- ◯ Coach
- ◯ Team Manager
- ◯ Performance Director
- ◯ Service Provider
- ◯ Other (please specify)

Other

* 6. How many years have you been working in your current role?
Please select one from the following options.

- ◯ <1 year
- ◯ 1-2 years
- ◯ 2-3 years
- ◯ 3-5 years
- ◯ 5-7 years
- ◯ 8-10 years
- ◯ 11-15 years
- ◯ 15+ years

7. What 2 sports do you primarily work with?

1

2

* 8. Have you previously held a different role within the High Performance System?

- Yes
- No

9. If yes, what was that role? How many years were you in that role?

Role

Number of years

Workshop Questionnaire

Effective Planning

Research Booklet

This Booklet contains

- Worksheet 1
- Worksheet 6
- Worksheet 7
- Worksheet 8

Please hand this back to the research team at the end of the workshop

Worksheet 1

You've heard that your event at the Games will be different to the normal format for Worlds and Europeans but you're not sure how this will impact you….

- What are your first thoughts in this situation…?

- What are your second thoughts…?

- What do you do?

EFFECTIVE PLANNING
WORKSHEET #6

1. What did you like and/or dislike about this video?

2. Did you learn anything from this video?

a. Yes b. No

3. If yes, what did you learn?

4. Given the topic was this video

a. Too short b. Right Length c. too long

	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
I found this video informative					
I would watch this video again					
I would recommend this video to a friend					
This video was relevant to me					
I identified with the people in the video					
I found this video enjoyable					
I thought the videos message was authentic					
There was too much information in this video					
I do not understand why this video was shown					

Worksheet #7

When you return from the games, there is often a lack of structure to the days, weeks, even months… Athletes (and coaches) have told us this is a difficult part of the post-games experience

- What are your first thoughts in this situation…?

- What are your second thoughts…?

- What do you do?

EFFECTIVE PLANNING
WORKSHEET #8

1. How did you hear about the workshop?

2. What did you enjoy most about the workshop?

3. Do you have any suggestions to improve the workshop?

4. Given the topic, was this workshop

a. Too Short b. Right Length c. Too Long

5. Did you learn anything new from this workshop?

a. Yes b. No

6. If yes, what did you learn?

7. What is your overall assessment of this workshop?

Poor	Fair	Good	Very Good	Excellent

EFFECTIVE PLANNING
WORKSHEET #8

	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
I found this workshop informative					
The workshop content was confusing					
The facilitator demonstrated comprehensive knowledge of the subject matter					
The facilitator helped me to understand how the workshop material related to my own life					
The facilitator conveyed ideas effectively and clearly					
An adequate amount of time was given to the post-Games period in this workshop					
The material was informative and easy to understand					
I gained usable skills and will be able to apply them to my professional or personal life					
I would like to learn more about the topics covered today					
The workshop was well organized					
I would recommend this workshop to a friend					
This workshop would have been more relevant to me at another time					

Workshop - Initial follow up questions

1. Did the Effective Planning workshop come to mind in the 24 hours following it?

   a. Yes b. No

2. If yes, what about the workshop came to mind?
3. Did the image associated with the workshop come to mind?
4. Since attending the workshop have you had an opportunity to apply anything you learned?

   a. Yes b. No

5. If yes, what did you apply?

Questions for post-Games follow up

1. Did you think about the Evolution Series workshop content at any point over your Games experience (before, during, after the Games)?
    a. Yes/No
    b. If yes, how many times?
2. If yes, when did the content come to mind (tick the boxes that are relevant)
    a. Prior to the games
    b. during the games
    c. post the games
3. If yes, what came to mind?
4. Did you apply anything you learned at the workshops over the course of your Games experience (before, during, after the Games)?
    a. Yes/no
    b. If yes, what did you apply?

Workshop exercise sheets

EFFECTIVE PLANNING

Worksheet #2a

Example of a daily schedule

Time	
6 – 8 am	
8-10 am	
10 – 12 pm	
12 – 2 pm	
2-4 pm	
4-6 pm	
6-8 pm	
8-10 pm	

Remember:
What I will do for myself today
Time for adequate rest

PREPARE
SCHEDULE

EFFECTIVE PLANNING

Worksheet #3

Use the guidelines below to make a task list for the week

Week Beginning:	Task	Day
Things I have to get done this week (put a day beside each item as a deadline)		
Things I can do this week if time allows		
Things which I need to put on next week's list		

Questions to ask yourself...
When do I need to have these done by?
Do I have everything I need?
Who do I need to meet?
Where do I need to be?

PREPARE
LIST

EFFECTIVE PLANNING

Worksheet #4

Every two weeks or so, look at your list of things to do and available time on your schedule and put items into one of the following four categories:

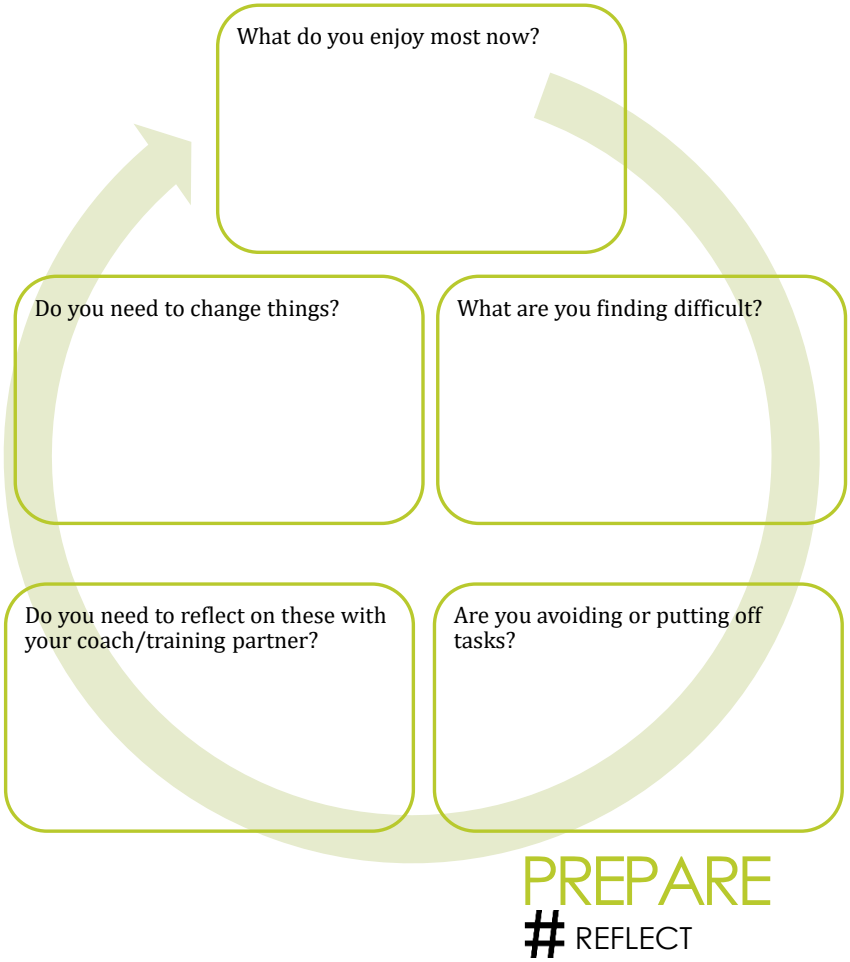
	Urgent	Not Urgent
Important	**Do it...**	**Diary it...**
Not Important	**Delegate or Drop it**	**Drop it**

PREPARE
PRIORITISE

EFFECTIVE PLANNING

Worksheet #5

Once a month, complete this form and think about sharing it with your coach/training partner and identify any changes you may want to make as a result.



PREPARE
REFLECT