An examination of the crossover of sport psychology skills from marathon running to management.

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Abstract

This research was looking to address the rationale that sport psychology (SP) skills, considered to be the mental attributes that enhance performance in the sporting context, are transferable into the business environment. Marathon running is primarily an amateur, mass-participation sport, however the psychological mindset and mental attributes required to train for a marathon are considered to be intense, particularly for those that are looking to achieve the Boston Qualifying (BQ) time. There is growing research of the transferability of SP skills from a sporting domain to the business environment (Barker, Neil & Fletcher, 2016; Ievleva & Terry, 2008; Gordon, 2007; Lloyd & Foster, 2006; Jones, 2002).

The researcher applied a qualitative approach to gather primary data through the process of conducting semi-structured interviews with eight participants. All participants had achieved the BQ time in the marathon and were working in management. The purpose of the interviews was to gain experiential data that could address what Gordon (2007) describes as what the transfer between the domains of sport and business means in real life.

The primary research question and aim of the study was to examine the experiences of marathon runners who are also in management and evaluate whether or not the use of SP skills crossover from marathon running to management. The objectives were (1) to investigate whether marathon runners who have achieved a BQ time apply sport psychology skills within their marathon training; (2) to investigate whether the participants apply sport psychology skills within their work environment and to address areas of intersection and divergence.

Orlicks's (2008) Wheel of Excellence is presented in the literature as a vehicle for illustrating how a SP model could be used as a framework from the sport world and applied to the business world. The seven attributes of the wheel are; Focus, Commitment, Mental Readiness, Positive Images, Confidence, Distraction Control, and Ongoing Learning, and importantly all characteristics are considered within an individual's control, and all are associated with peak performance.

The research identified that the SP framework was applied by all participants in their marathon training, despite no sport psychologist interventions. The analysis identified that the SP skills crossed over and were demonstrated by the participants in their managerial roles. While all of the characteristics of the framework crossed over, there were some areas of divergence from marathon running to management in some key skills; goal-setting, confidence and positive images. These areas of divergence may warrant further exploration in future research.

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Contents

Abbreviations

BQ   Boston Qualifying (marathon time)

PB   Personal Best (running time)

PP   Peak Performance

SP   Sport Psychology

WoE   Wheel of Excellence (Orlick's, 2008 sport psychology framework)

Chapter 1 – Introduction:

1.1: Introduction:

This section will begin by giving a very brief overview of sport psychology (SP). The second section will look at the area of marathon running and why this sport was chosen. The third section looks at the merits of the Boston Qualifying time as a marker of peak performance (PP). The following section addresses the rationale for the study, followed by the framework and methodology used. Finally, the structure of the dissertation is laid out.

The researcher took the opportunity to look at the areas of SP and how it can deliver PP within the sporting domain, and to evaluate if SP has transferability to the business domain of management. The researcher sought to achieve this by looking to individuals who had experience of both marathon running and management.

1.2: Sport Psychology (SP):

SP as a discipline is firmly grounded in the mainstream psychology of cognitive theory and behaviour modification (Weinberg & McDermott, 2002). In sport, as in all performance domains, the psychology that underwrites the theory aims to develop a competitive edge through greater psychological skills with the potential outcome of performance excellence (Foster, 2002). The purpose of SP is that through psychological theory and evidence, a benefit can be delivered in real life issues (Woods, Breslin, Kremer, Cooke, Corrie & Clarke, 2014). Where practice and theory meet is how psychology and athletic performance interact with each other (Barker et al., 2016).

1.3: Marathon Running

According to a Spitznagel (2013), a first-time marathon runner should reach peak training in their schedule of at least five days a week with an average peak mileage of 42 miles. This level of training would enable an individual to finish the marathon as opposed to race the distance, which may require greater volume in training loads and possibly years of training

to build up to a level of peak performance. Marathon running requires a mentality that goes beyond recreational exercise (Zach, Xia, Zeev, Arnon, Choresh & Tenenbaum, 2017) and there are significant psychological costs and commitments required to overcome (Spitznagel, 2013; Ridinger et al., 2012; Ogles et al., 2003). Mental preparation, motivation and psychological training are addressed as equally important to the physical training required to run a marathon by participants in various research articles (Zach et al, 2017; Rupprecht et al., 2012). Indeed Stulberg & Magness (2017) highlight the example of runners slowing to a walk in the latter stages of a marathon, before running the last mile, as an example of mental as opposed to physical exhaustion.

The area of marathon running was chosen for the following reasons;

1. The current popularity of marathon running in Ireland ensured that the proposed sample would be accessible. For example, the Dublin marathon had just over 10,000 finishers 10 years ago, and for the second consecutive year they have sold out the 2018 race months in advance with a field of 20,000 expected (O'Riordan, 2018).

2. Marathon running is not considered a full-time sport for athletes in Ireland so the possibility of a sample group who could train to run at an elite level (top 4%, Median, 2017), who were also working in management, was greater than some other elite sports.

3. Marathon running is an individual sport, so it was applicable to the Orlick's (2008) Wheel of Excellence (WoE) model which looks at characteristics that are within an individual's control.

1.4: Boston Qualifying (BQ) Marathon Time:

Psychological factors influence stress in marathon runners and lower performance times are more prone to stress and the poor management of it that those who perform better (Sin, Chow & Cheung, 2015). This infers that those with a higher performance in a marathon are better at the management of stress, a key SP skill. The Boston Qualifying (BQ) time is a time that is graded by gender and age and allows the fastest marathon runners to gain entry to the Boston marathon (Boston Athletic Association, 2017). To put this in context, if you were

a male runner under 35 years in the Dublin 2017 marathon and achieved a BQ time, this would place you in the top 2% overall of over 16,000 finishers (Medium, 2017).

1.5: Rationale for this study:

The literature review focused on the area of transference of SP skills to business in the area of management. The broader psychological context within which SP sits was discussed, as there is considerable crossover between coaching, positive and sport psychologies (Hays, 2012; Furst, 2009; Gordon, 2012). The literature review identified a gap in relation to studies that research the transfer of SP skills to business, with Kellet (1999), Weinberg et al. (2002) and Jones & Spooner (2006) all referenced in the literature as successful pieces of research but all concerned with coaching and organizational sport, as opposed to research of how or whether an individual would transfer and apply these skills in management. Weinberg & McDermott (2002) recommend that the transfer of SP skills to business should look at what the transfer means in real life.

1.6: Selected framework and methodology:

Orlick's (2008) Wheel of Excellence (WoE) is an evidence-based SP framework that builds upon previous research, particularly that of Jones (2002) and Foster (2002), and delivers an assessment of the points of intersection between the sport and business worlds, as well as demonstrating key skills associated with PP (Ievleva & Terry, 2008). Indeed, Ievleva & Terry (2008) propose that the application of these specific skills in the business world can improve performance, with the capacity to stretch an individual's capabilities as opposed to shrink the potential problems (Orlick, 2008).

There are two things worth considering for the purpose of this research; the first is that all of the attributes put forward in this framework are considered to be in an individual's control; focus, commitment, mental readiness, positive images, confidence, distraction control, and ongoing learning (Ievleva & Terry, 2008). The second consideration is in respect of Furst's (2009) research, where he argues that despite there being a process to some of the more common SP attributes, it may be sufficient to have an awareness, as opposed to

professional training or interventions in this area. This was considered important as marathon running is a pastime for most participants and so it was unlikely that they would have availed of SP interventions.

The researcher used a qualitative approach to obtained primary data through the sample of marathon runners who had achieved a BQ time and were in management in their career. The process of obtaining this experiential data was through semi structured interviews with eight participants.

The gap identified in the research is in relation to the application of SP skills in managers in business who may have used these skills in another aspect of their lives where they have achieved PP.

The benefit of this study is that it adds to the research in relation to the applicability of SP skills to determine PP in marathon runners, while also looking at the transferability of these skills into the workplace and the role of management.

1.7 Dissertation Structure:

Chapter 1 gives an introduction to the SP to business link and provides some information on marathon running and the Boston Qualifying time as a means of measuring peak performance. The rational for this research is laid out and the framework and methodology are briefly discussed.

Chapter 2 provides a review of the literature and introduces some of the common themes in the SP to business research. The WoE (Orlick, 2008) characteristics are reviewed in terms of the relevant literature.

Chapter 3 details the primary aim and question of this research and the two sub-objectives of this study.

Chapter 4 details the research methodology that was used to achieve the aim of the study. The rational for the use of a qualitative approach is discussed, semi-structured interviews are supported by previous research, before the findings of a pilot interview are discussed. Finally, a thematic analysis of the data from the semi-structured interviews is utilised in the collection of primary data to answer the research question and objectives.

Chapter 5 will discuss the findings of the information provided by the participants in the study. This section is divided into two parts, each dealing with an objective and each section sub-divided by the characteristics of the chosen framework.

Chapter 6 will discuss the details of the research findings and address areas of intersection and divergence to previous literature on the SP to business link.

Chapters 7, 8 & 9 deliver a conclusion to the study, discuss the limitations of the research and study and provides recommendations for further study.

Chapter 2: Literature Review

2.1 The wider psychological context

While there is a growing evidence base of the how SP enhances performance in athletes (Foster, 2002), the transfer of this field to other performance arenas, such as business is much more recent, going back to the 1990s (Hays, 2012). Fletcher's (2011) research maintains that there are three studies that successfully research transference of psychological skills from sport and business; Kellett (1999), Weinberg et al. (2002) and Jones & Spooner (2006), while McNutt and Wright (1995) could also be added to the list of early research. However, all four pieces of research address the areas of coaching psychology and organizational sport and business, as opposed to looking at the individual athlete. Within the literature, coaching psychology focuses on the sport coach and how they communicate psychological skills and the transferability of the role of the coach to business (Mouton, 2016; Lindvall, 2004), as opposed to how SP applies individual psychological skills to business.

Despite this, there is considerable overlap between various psychology constructs behind consistent performance enhancement (Harmison, 2011). Indeed, the literature highlights clear synergies between coaching, positive and sport psychology in the delivery of performance for an athlete (Hays, 2012; Furst, 2009; Linley & Harrington, 2005; Gordon, 2012).

2.2: Peak Performance (PP)

The essential components of PP show considerable overlap within literature with the skills and attributes of SP; namely concentration, focus, positive thoughts, and confidence (Hallett & Hoffman, 2014; Harminson, 2006; Thornton, Privette & Bundrick, 1999). Woods et al. (2014) go on to state that the psychological disciplines concerned with performance share far more in common when outcomes for each psychological field are compared. This commonality is important to note as some of the literature concerned with the transfer of SP to business crosses over to addressing PP.

2.3: The sport psychology to business link

The sporting context can provide a near laboratory environment where athletes' responses to stress and their management of it have been researched, with this research then potentially applicable to the business environment (Ohuruogo, Jonathan & Ikechukwu, 2016; Blakeslee & Goff, 2007; Jones, 2002). There are four key areas within SP according to Jones (2002); stress management, confidence, motivation and focus, can also be considered key to business performance, particularly in management and executive levels where there is a drive to succeed. This is of particular relevance to this proposal as the four areas are all psychological skills at an individual level and Jones (2002) highlights the potential of SP for managers. An individual's ability, whether in sport or business, to deliver sustained results under pressure and manage stress levels is seen as a critical skill and competence that can be enhanced through psychological training (Hallett et al., 2014; Harmison, 2011; Gordon, 2007).

Foster's (2002) review of the SP literature and its practical application to business settings proposed a framework within which five major skills of SP and mental training are directly applicable to the business environment; mental imagery, performance routines, positive self-talk, activation control strategies (stress management) and focused and sustained attention. Furst (2009) added to this by highlighting that it was the first, third and fourth skills that were most beneficial in the application to a business setting. Foster's (2002) research argues that there is commonality across both fields of sport and business, with Furst (2009) highlighting no perceivable difference between athletes and employees in terms of the strategies, techniques and tools used. As this proposal addresses individuals who are both an employee and athlete, it is important to note that there is a literature to support the assumption that there is commonality across both fields.

Gordon (2007) proposes that the two primary functions of improved performance that bear most relevance to business are goal setting and positive self-talk. This ties in with other literature where it is noted that all of the components within the SP to business frameworks are within a person's control (Hallett et al., 2014; Ievleva et al., 2008). These mental attributes can assist to develop strategies to reduce concerns of issues outside their control; however,

the emphasis in the application of these frameworks is on stretching an individual's capabilities within sport or business, over a focus on shrinking the problems (Ievleva et al., 2008; Terry, 2008). An interesting point to note in relation to the proposed research is that Furst (2009) believes that while sport psychology skills have a particular method and process to them, the results of the research indicate that it may be possible that it is sufficient to have a consciousness about these skills in the business environment and the daily actions and tasks required.

As success within sport is difficult for athletes, long-term development goals, patience and persistence in adversity are all psychological skills that would all be relevant to the business world (Ievleva et al., 2008). Jones, Hanton & Connaughton (2002) argue that mental toughness in itself is one of the most important attributes in enhancing performance. The characteristics of mental toughness are expanded upon within the literature to include self-belief, focus, positive attitude, commitment, motivation and stress management (Gordon, 2007; Jones et al., 2006) and many of these attributes form the basis of Orlick's (2008) Wheel of Excellence. This framework is an evidence based model that delivers an assessment of the points of intersection between the sport/performance and the business worlds (Ievleva et al., 2008).

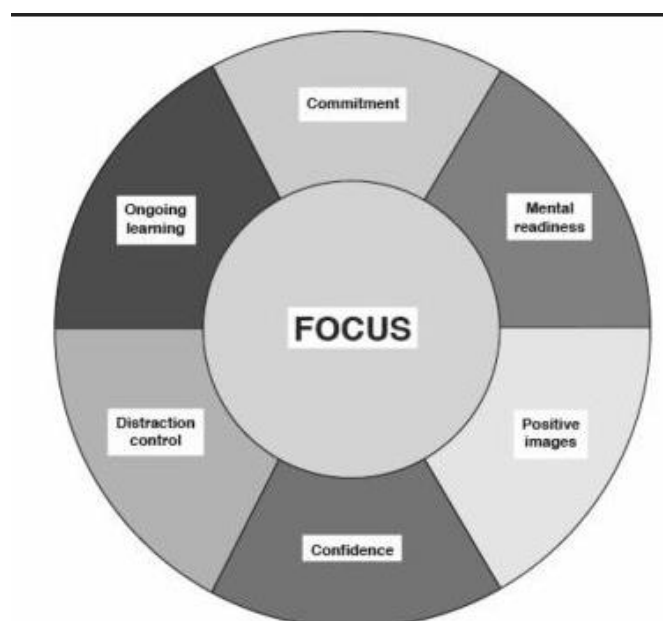**2.4: Orlick's (2008) Wheel of Excellence (WoE)**

Figure 1; Orlick's (2008) Wheel of Excellence.

There are seven key elements in the WoE framework with many of the elements present in the previous frameworks highlighted (Lloyd et al., 2006; Jones, 2002; Foster, 2002). The area of focus is central to the model, with commitment, mental readiness, positive images, confidence, distraction control and ongoing learning completing the framework. Krane & Williams (2006) put forward the idea that these skills can be delivered through education, but also through individual practice of these psychological skills and strategies.

2.4.1: Focus:

Ievleva et al. (2008) argue that equal attention is required to each part of the framework or there will be a decrease in the central skill of focus, while Loehr & Schwartz (2001) warn that anything that interferes with focus can reduce an individual's energy. The centre of PP is described as a person's ability to direct and control their attention and concentration (Hallett & Hoffman, 2014), with Dane (2011) arguing that total focus on the present as a means to maintain optimal performance is a trait that is replicated across diverse performance domains.

The skill of focus encompasses concentration, an ability to decide what is relevant and to remain focused for the entirety of the task, and the ability to respond to changing external conditions and shift focus (Ievleva & Terry, 2008). The opposite of focus, the much praised 'muti-tasking' approach is derided as the enemy of PP (Loehr & Schwartz 200).

The capacity of someone to focus on a task, across the sporting and business domains, is generally magnified if they have a clear mission and purpose (Lloyd & Foster, 2006). However, it is also argued in the literature that too much emotional investment in the outcome or result can hamper peak performance as the increased pressure can lead to increased anxiety and detract from execution of the performance tasks in the present (Brodbeck, 2007; Ievleva et al., 2008; Wells, 2010). This is broken down by Hallett & Hoffman (2014) who argue that it is not the focus on a distant goal that can

cause an issue, rather it is when there is a lack of smaller milestone goals to maintain motivation that can make the final outcome more of a burden and less manageable to achieve.

2.4.2: Commitment:

Commitment, and the determination to perform or succeed, are viewed as contributing to PP, primarily due to how they direct a person's energy towards a goals through regulating their feelings (Moon & Hur, 2011). Determination is enhanced and increased when a person experiences greater autonomy, feels more competent in the performance task, and has a strong relationship to the task (Ryan & Deci, 2000).

There is evidence to suggest that athletes attribute clarity in their long-term, and short-term, goals and objectives as major factors within their success (Lloyd & Foster, 2006), however Loehr & Schwartz (2003) broaden that out to include the physical aspects of nutrition, rest, recovery and exercise increasing a person's physical capacity to maintain commitment towards a task or goal. Indeed Hallett & Hoffman (2014) include these physical aspects as contributing factors to PP.

Hallett & Hoffman (2014) observes that the difference between organizational level goals in a work environment, such as resources, systems and strategic priorities, is contrasted with individual goals of performance and development.

Jones (2002) argues that what separates high achievers is that their goals are "stretch goals", goals that will challenge them, and that they are willing and prepared for the effort and sacrifice required to deliver on these goals. There is also the idea in the literature that for a goal to deliver PP, it must be directed towards learning, improving and developing, so the scope is for constant improvement as opposed to achieving what has already been achieved in the past (Grant & Dweck, 2003; Pintrich, 2000).

2.4.3: Mental Readiness

Gordon (2007) discusses how critical the mind-set of an individual is to ensure performance, particularly that they are only focused on what is within their control. Harmison (2011) contends that athletes can achieve peak performance more often and with greater consistency if they can gain an awareness of the ideal mind-set that is specific to them to perform.

The intense periods of exertion required by an individual to deliver peak performance also require strategies for recovery to avoid overtraining in sport (Orlick, 1998) and burnout in the workplace (Grandey, 2000; Loehr & Schwart, 2001).

The issue of dealing with stress and developing strategies to deal with stress is also an issue that is raised in the literature, as failure to do so can lead to poor performance and burnout (Gordon, 2007; Jones, 2002). While Jones (2002) argues that once individuals have an awareness of stress and the potential negative effects, that the key is then to introduce appropriate coping techniques to deal with stress. The option of removing the cause of stress may not always be an option, so applying self-regulation and mood-management strategies that improve mental and physical health can be key to ensuring an individual has the appropriate mind-set for them to deliver peak performance in the sporting or business context (Ievleva & Terry, 2008).

Finally, Mouton (2016) argues that a greater understanding of mental health is required whereby it is not considered the absence of mental illness but rather optimal human functioning in the case of delivering peak performance in an individual.

2.4.4: Positive Images

Lloyd & Foster (2006), when looking at the area of SP benefits to athletes, report that mental imagery can be used to enhance performance. While this skill is one of the most common psychological tools used by athletes to deliver PP, it is generally applied

through specific psychological interventions as opposed to being developed as a skill through experience (Hallett & Hoffman, 2014). There is also the perspective in the literature that mental imagery has the capacity to develop and build confidence when utilised as an intervention, which in turn can impact positively on performance (Loehr & Schwartz, 2001).

When addressing the area of self-talk, Foster (2002) maintains that as it is a skill that contributes towards performance, it needs to be positive, self-affirming and, perhaps most importantly, it needs to guide successful behaviour. Gordon (2007) goes on to state that effective self-talk can have a positive effect on other aspects, such as mood and self-confidence.

There is also an argument that that identifying what works for athletes through experience and successfully review previous successful performances can have a powerful effect if they can they be replicated in future training (Foster, 2002; Ievleva & Terry, 2008).

2.4.5: Confidence:

SP literature is full of evidence of high self-confidence (Woodman & Hardy, 2003) and it is argued that it is considered vital to deliver consistent excellence, particularly as it allows an individual to persist towards achieving a goal when obstacles arise (Hallett & Hoffman, 2014). This self-confidence can ensure that attention is not focused on self-doubt. However, Ievleva & Terry (2008) believe that self-doubt is a part of the process, particularly in the athletic domain, however, Wells (2010) point out that anxiety or self-doubt in athletes can be overcome if there is a bedrock of self-confidence that can use those 'negative' emotions to facilitate a good performance.

The proposal of the six development steps in relation to an individual's confidence take the person through someone else believing in the individual, to 'maybe you can', acting as if you can, believing you can, knowing you can, and finally, trusting you will (Orlick, 2008). This proposal is important as it informs the theory that confidence is

within the person's control, but that it requires development and can be improved with experience and interventions (Woodman & Hardy, 2003).

2.4.6: Distraction Control

Hallett & Hoffman (2014) pinpoint determination as key to persevering in the face of setbacks, even to the point of regulating a person's mental state to better cope with setbacks. Indeed, in Sin, Chow & Cheung's (2015) research into the relationship between stress levels and performance in marathon runners, they argued that a benefit from regular training, including the requirement to practice positive reappraisal at times of injury or failure, was a positive psychological wellbeing.

Mouton (2016) stresses the necessity for athletes to be completely present in the moment, regardless of the external surroundings. This is addressed by Ievleva & Terry (2008) as a crucial skill in maintaining focus during setbacks as it allows the individual to plan and implement a response to the setback, as opposed to focusing on the setback itself, which can lead to increased effort to try harder resulting in a downward spiral. However, the three step approach of accepting what happened, planning an alternative response and implement the response, encompasses the need for reappraisal and to deal with the issues that are there in the present as and when they arise can prevent this downward spiral (Orlick, 2008).

2.4.7: Ongoing Learning

The issue of critical feedback is one that Jones & Spooner (2006) associate with high achievers in sport. Hallett & Hoffman (2014) allude to the potential positive impact of a coach to facilitate ongoing learning as they argue that there is training required to recognise frequent or recurring errors, such as too narrow a focus, and then the individual can implement strategies to address these.

Sin, Chow & Cheung (2015) propose that experienced marathon runners have similar personality traits to the general population but they develop a more positive

psychological outlook due to regular reappraisal as they seek improvement. This ties in with the conclusion that if there is no learning from mistakes that are made, people are sure to repeat them again, and again (Orlick, 2008).

2.5: Other issues of consideration

Ievleva et al. (2008) address a number of points of divergence between the sport and business environments; primarily feedback, goal-setting and training. The timing of feedback on performance is instant in sport but has a time lag in business as results are not instantaneously reported. Goal-setting and rules are declared to be more straightforward in sport and the career-span in sport is much shorter. Finally, the amount of time given over to training as opposed to performing is far greater in the sporting context, as opposed to business managers who must perform for 8, 10, 12 hours per day (Loehr et al., 2001).

2.6: Conclusion of Literature Review

In conclusion, the literature review has highlighted a number of points that are particularly relevant to the research that this paper is proposing. Gordon (2007) listed five possible collaborative research areas, with the area of transferability particularly relevant to this research proposal. The use of Orlick's (2008) WoE appears to be the most appropriate framework to guide the research proposal, despite the fact that it is over 10 years old, as it uses an individual SP approach and applied this to individuals in business (Ievleva et al., 2008).

Furst (2009) proposes that there should be further studies on different groups of people and they should be differentiated mental skills required by team and individual sports, that can then transfer to business. Finally, Weinberg & McDermott (2002) recommended that future research in the area of the transfer of SP skills to business should look at what real transfer between the domains of sport and business means in real life.

Chapter 3. Research Question and Objectives

3.1: Research Question

The primary research question and aim of this study is to examine the experiences of marathon runners who are also in management and evaluate whether or not the use of SP skills crossover from marathon running to management.

Orlicks's (2008) Wheel of Excellence is presented in the literature as;

> *"a vehicle for illustrating how a performance psychology model might be transferred from the sport world and applied to the business world".*
>
> *Ievleva & Terry (2008).*

The wheel, according to Krane & Williams (2006), encompasses characteristics that are within an individual's control and that are associated with peak performance.

This study will examine the experience of managers who run marathons in their spare time and look at their understanding of the SP skills used and developed through running and whether the same skills crossover into their management roles.

3.2: Research objectives:

In order to answer the proposed research question, the following objectives have been included and addressed in the study;

1. To investigate whether marathon runners who have achieved a BQ time apply sport psychology skills within their marathon training.
2. To investigate whether the participants apply sport psychology skills within their work environment and to address areas of intersection and divergence.

Chapter 4: Methodology

4.1: Introduction

While the literature review of the transfer of SP to business was to create a greater understanding of the common themes, these themes were then built upon to ensure that the development of the research question and objectives was grounded in the research.

This section provides an overview of the methods used in obtaining the information and data from BQ marathon runners who are in a management role in their career in order to answer the interview question and achieve the objectives of this research.

The chapter will identify the methodology used to plan, obtain and analyse the data from those interviewed in this research process.

4.2: Philosophical Framing of the Research

The research philosophy provides a framework for the researcher to evaluate different methodologies, however the main research question should determine which approach to adapt (Saunders, Lewis & Thornhill, 2016). This research study was interested in the participant's experience in relation to marathon running and management. Within this study, the role of the research is that of interpreter of the data, which is under the Interpretivism school of thought, as the aim is to view the world through the prism of the experience and beliefs of the participants (Greener & Martelli, 2015). This ability to have several perceptions through the participant's experiences is in contract to the single truth of positivism (Greener et al., 2015).

4.3 Research Methods

4.3.1: Quantitative Methods

A quantitative analysis approach looks at the relationship between dependent and/or independent variables (Saunders et al., 2016). This proposal looked at the possibility of conducting quantitative research as there are clear measurable variables in relation to gender, age, marathon time, employment and management level. A number of confounding variables in relation to running a BQ time in a marathon could also have provided measurable responses to 'What, Who and Where' questions (Williams, 2017; Hyde, 2000); amount of miles peak training per week, amount of hours worked per week, number of years running, lifestyle (nutrition, diet, sleep), height and weight. Indeed, Meredith, Dicks, Noel & Wagstaff (2017) point out that questionnaire mode of quantitative research has remained the dominant measure within sport psychology.

While a quantitative piece of research could potentially demonstrate increasing SP skills in line with a faster marathon time, and then correlate this to an individual's career in management, the sample size may prove prohibitive as it would require a wider range of marathon times for contrast.

4.3.2: Qualitative Methods

The literature related to the proposed research is that as the phenomenon relates to individuals and how they transfer psychological skills from one domain to another, the use of qualitative methods provides a more holistic understanding of behavior, experience and the wider context of the use and usefulness of SP skills (Hill, Witcher, Gotwals & Leyland, 2015; Robinson, 2014; Aoyagi, Poczwardowski, Statler, Sharipo & Cohen 2012; Furst, 2009). Indeed Hill et al (2015) argue that the idiosyncrasies and experience of the individual would be lost if a quantitative approach was applied in this context.

Biddle, Markland, Gilbourne, Chatzisarantis & Sparkes (2001) point out that interviewing should be the cornerstone of data collection for sport psychology research.

4.4: Research Approach

In addressing the research approach and strategy required, a decision had to be made between a deductive and an inductive method. The inductive approach is led by the researcher's interpretation of observations to draw a conclusion, from which the outcome is a theory generated from the findings (Sekaran & Bougie, 2010). As this study is based on the experience of the participants, an inductive method was chosen.

4.5: Selection of qualitative approach

The research method deemed most appropriate in order to answer the research question was a qualitative approach, which is in line with the Interpretivist's framework. The semi-structured interview provides a level of structure to ensure that the information gathered has a quality control aspect, but it also permits the interviewer to delve deeper with additional questions that are based on the information provided. A structured interview would have tied the researcher to those specific questions and would not have allowed for the interview to capture the experience of the interviewee, which is one of the main considerations in adapting a qualitative approach in this aspect (Cote et al., 1993; Dale, 1996). Cote, Salmela, Baria & Russell (1993), in addressing qualitative research within sport psychology, point out that the template used by most researchers for the purpose of validity and reliability are the combination of semi-structured interviews and content analysis.

4.6: Research Sample

Robinson's (2014) 4 point approach to sampling was applied to determine the sample for this research. The 4 points are as follows;

4.6.1: Define the sample universe:

This was addressed in the specific criteria applied in the research of participant inclusion requiring a BQ marathon time and also being in a position of management (currently or in the past). Initially the requirement was considered that a potential participant would need to have achieved the BQ time within the last 5 years, but this exclusion suggested that the possible sport psychology skills from training at that level could be lost, or their application in business and management would fade if a long period of time had elapsed, however there is nothing in the literature to confirm this.

Criteria	Measure
Marathon Running	Must have obtained a BQ marathon time. The 2018 qualifying times (Appendix 1) were provided in the research proposal as a guide.
Business	Must be, or have been, in a management role in their career with at least 2 years experience.

4.6.2: Justification of a sample size:

Kvale (1996) argues against the use of high numbers in qualitative research as the quality of the data may be reduced, while Pistrang & Barker, 2012 suggest sample sizes of five or six. The difficulty in obtaining participants who met the sample universe was also another reason why a larger sample size was not considered. The goal of the research was to gain extensive experiential information from participants so it was considered that the quality of the data provided is what was paramount

over the consideration of a large sample size. A sample of eight participants was proposed.

4.6.3: Select a sampling strategy

The non-probability sampling technique of convenience sampling was selected. This was due to the time constraints on the research and characteristics required of the sample group. Participants were selected because they were accessible to the researcher. Convenience sampling was deemed to be the most appropriate initial measure due to the time constraints on the research. The researcher had access to marathon runners through his own marathon experience. The sample criteria was drawn up and emailed to four marathon runners who me the sample criteria. All four potential interviewees responded but one was unable to participate in the study due to work commitments and annual leave.

4.6.4: Source the sample:

No undue influence was used by the researcher to coerce or encourage any participants to take part in the research. None of the participants were related to the researcher or worked in the same organisation.

While convenience sampling was used to source the first three participants, the remaining five participants were sourced through a snowballing effect; whereby those initial three participants used their networks and contacts in running to request additional participants for the research. The information sheet (appendix 5), along with BQ times was sent to the three original participants and one of those participants sent out the request to an informal training group of 35 members via their weekly email. Five participants then contacted me to confirm that they met the criteria and that they were willing to be interviewed. The anonymised list of participants is contained in Appendix 2.

4.7: Pilot Study

A pilot study was conducted with a peer of the researcher who fit the eligibility from a management perspective, but his marathon time was 5 minutes outside of the proposed BQ grade. The purpose of the pilot interview was to assess the duration of the interview time required and to establish whether the proposed questions (see appendix 3) were able to deliver the required data to answer the research question.

4.7.1: Findings from pilot interview:

- A number of short "warm-up" questions were added at the start of the interview to allow the participant to talk briefly about their marathon times, the number of marathons completed and their current role within their organisation.
- The first question was determined as being too long, with the participant only answering the last part of the question. This question was broadened out to three questions, and the total number of questions went from six to eight.
- The pilot interview took one hour, which upon analysing the data received was deemed to be too long and not an efficient use of time. The interview schedule was amended to 45 minute interviews to increase the efficiency of the time and ensure that the researcher remained on track during this time.
- On the interviewees suggestion, the pilot interview took place outdoors in a public area. While the this had no impact on the focus of the interview, there was a large amount of background noise that made the transcription of the interview difficult in places. All interviews, except the interview with participant D, as part of the research were conducted indoors in a closed office environment, which ensured that the sound quality was greatly increased and aided with the transcription.

4.8: Interview Structure

Interviews took place over the month of July over a three week period in Dublin. All interviews were conducted in person and the format of the interview was semi-structured with the questions providing a guide to the discussion. The use of open-ended questions allowed for follow-up questions to the individual responses. The interview times varied from 38 minutes to 48 minutes. Each interview took place at the participant's place of work. The only exception was participant D, who is retired, and a quite indoor coffee shop was chosen as the most appropriate location for that interview. Interviews were scheduled two weeks in advance and then confirmed by email or text the day before. Once each recording was collected, they were transferred to an online storage device that was password protected and the recordings were deleted from the audio device.

4.9 Ethical Issues

4.9.1: Consent

In relation to the area of consent, it is advisable that participants should be informed of the purpose of the research prior to data collection and also be informed that they are free to withdraw their consent at any stage (Ramcharan and Cutcliffe, 2001). Consent should also be given freely and without any influence by the researcher. A letter outlining the nature and purpose of the proposed research was sent to all potential participants in advance of interviews being scheduled to allow the person enough time to consider the research proposal in advance of consenting to participate (Appendix 5). The issue of consent, confidentiality and anonymity were discussed at the beginning of each interview, before the participant signed the consent letter(Appendix 5), to ensure that the process was open and transparent.

Participants were also informed that they could redact their full consent or any of the information provided within timeframe of two weeks and each participant was given the opportunity to review the interview transcript and redact any information.

4.9.2: Anonymity:

The issue of anonymity was dealt with through replacing the name of the participant with an alphabetical letter and removing any distinguishing references, such as company name, colleagues and family members, running club and location (see Appendix 2).

4.10 Procedure

With the participant's consent, each interview was recorded on an audio device to ensure that the researcher could play back and transcribe the interview for the purpose of data collection. The audio recordings were then permanently deleted once they had been transcribed.

During the course of the interviews, specific company details and names were discussed by each of the participants in relation to their current or past management roles. To comply with the confidentiality agreement with the participant, the transcripts have not been included but redacted versions can be included on request.

4.11: Analysis of the data:

A thematic analysis of the data was carried out of the transcribed data whereby similar meaning units were grouped together by generating initial codes from the data to form themes (Holder & Winter, 2017). Braun & Clarke (2006) propose that the development of themes is usually either data-driven or theory driven, and in this study the data was coded around the specific research question and Orlick's (2008) framework from the literature review. The analysis initially delivered 13 themes and then some of the themes were grouped together in line with the literature; for example, Work-life balance was grouped with Commitment, Running as a Stress Reliever was grouped with Mental Readiness, and Reviewing and Reflecting was grouped with Positive Images.

Chapter 5: Analysis and Findings

5.1 Introduction

The research question and sub-objectives were developed in response to gaps that presented themselves in the literature, particularly in relation to the real-life crossover of SP skills from sport to business. The literature indicated that individuals who achieve peak performance in their given sport use SP skills. Orlick's (2008) WoE was chosen as the most appropriate framework as it is referred to in the literature as an evidence based model of excellence that can illustrate key skills required to deliver peak performance across numerous domains.

Eight people participated in the interview process and they have been labelled alphabetically from A to H (see Appendix 2). The sample group chosen were marathon runners who achieved a BQ time and are employed as managers in their workplace.

The primary research question and aim of this study is to examine the experiences of marathon runners who are also in management and evaluate whether or not the use of SP skills crosses over from marathon running to management. The WoE seven key skills are associated with PP.

The analysis and findings looked to determine if, in the first objective, these skills were demonstrated by the participants in their marathon running, and in the second objective, if the same SP skills were demonstrated in their managerial roles.

5.2: Objective 1

To investigate whether marathon runners who have achieved a BQ time apply sport psychology skills within their marathon training.

5.2.1: Focus

A consistent theme from all participants was that training for a marathon in itself requires a huge amount of focus, but for many of the participants (A, B, C, D, H) to run a BQ time or below took them a number of years to achieve. The shift in focus from those who just ran their first marathon to finish it to (A, B, C, D, H), to then achieve a BQ time, was attributed to the additional training and focus that they put in, with very little comparison between their first and best marathons in relation to the mental and physical toll required. The goal may have changed incrementally over time as performances improved but for all interviewees, the most recent or current goal for all participants was centred around achieving a personal best (PB), or as Participant H described it, a "stretch goal" (H).

> *If you scaled the amount of focus required for a marathon, it's a massive focus (A)*

All of the participants spoke about the extra detail in planning that encompassed their training; the extra focus on sleep (A, D, F, H), eating right (A, D, F, H), forgoing alcohol (A, B, D, E, F, H) and the level of detail recorded (A, D, F, H).

> *So for about 12 or 14 weeks I have this excel spreadsheet and out of 10 I rate my sleep, how I feel before the session, how I felt during the session. And then I write down the stats from the session; distance, heart rate, time and anything else relevant (F)*

Despite this, flexibility was a common theme amongst the participants, particularly in relation to looking after themselves. The level of flexibility varied, with one participant writing a buffer into their programme;

> *The reason that it's a fixed programme and fixed schedule is because I need to work stuff around it and sometimes I need to reorganise training. I also write in a buffer of a week into the training to give me the flexibility I may need. (F).*

While other participants spoke how they were flexible if they felt a niggle (A), needed extra rest to recover by skipping a session (B) or just started a session and decided that their body wasn't up to it (D). These participants stated this was all learnt by prior experience and not necessarily from reading it in a book.

All eight participants spoke about the importance of naming the goal, usually a time, and then focusing on the process to achieve the goal rather than focusing on the outcome.

> *I would name my goal and make no secret about it. If I don't do it, I don't do it, but I've tried. It's just about being realistic (D)*

Participant C seemed to sum up the thoughts of all the participants best when he stated;

> *No matter what, I just prioritised it….you have one goal, it's a big project, it takes up a lot of time, so it'd be a shame not to do it as well as you could (C)*

5.2.2: Commitment:

All eight participants had examples of various sacrifices that they made to reach their marathon goal; from lying on a foam roller in the dark before a run at 5:30am (A), to time sacrificed in bed to get a training run in (F, H), to aqua running in a swimming pool 4 times a week when coming back from injury (A), to running with the work phone when on call (D).

> *It takes a lot of effort, printing out the plan, referring to it daily, writing down your heart rate, lactate threshold, races, lunches, breakfast, dinner, and broccoli, I never ate so much broccoli. You're trying to get every extra percentage or second or two so that you can get under your time (A).*

Four participants (H, D, E, F) found that the commitment required additional accountability to a coach. This is another example of these participants looking for those extra few percent to make the difference in what they are looking to achieve.

> *If you're only accountable to yourself, you'll make excuses. If you're accountable to a coach, you'll do the training and you'll stick to the structure of the training (H).*

While the previous section mentioned flexibility, consistency was a theme that all participants spoke about.

> *You have to do that number of miles that you need to do to have a shot at 2:30. Consistency was the biggest thing, I don't know if I missed one session (E)*

The greater the level of responsibilities the participants had in their lives (management, young families, older parents) did not correlate with a poor work-life balance, with running as a sport one of the reasons for this due to the ability of the participants to fit their training in with their lives, as opposed to the other way round.

> *It's a lovely sport, it fits in with family life and that means that I can take it fairly seriously (A).*

Despite this, the experience of the participants was that marathon training required an intense commitment that shifted the balance in their life for a period of time, so the maintenance of rest and down-time in between marathon training blocks were crucial for longevity in the sport.

> *I've learned the art of rest, if there's no recovery, the body is not going to get stronger. The faster you get, the more conscious you have to be of these things (D).*

5.2.3 Mental Readiness

All eight participants spoke of a mind-set of constant and incremental improvement. The participants all stated that they named their goal for the purpose of motivating and driving them to succeed;

> *The mental thing, it goes back that I've said it out loud so I've got to do my best to get there. (F)*

Participant B stressed that his mind-set in relation to running needed to tie in with his mind-set in all aspects of his life, and ensure that all aspects of his psyche were aligned.

> *The mental side of training is so important. If you don't at least take note of where you're at emotionally, spiritually, physically and mentally, the impact of home and work life. I wouldn't be able to do it if they weren't all feeling somewhat aligned. (B)*

The common theme between self-regulation and taking time out was the experience the experience of all participants, through using running as their primary means of stress relief in life.

> *Running helps me from a stress point of view. If I'm having a hard day, sometimes when I'm out for a run it just clears my head (H).*

5.2.4 Positive Images

The area of positive images prompted differing responses from the participants with more of a divide in relation to how much they used skills such as imagery, positive self-talk, and reflecting and reviewing previous performances where they believed they had excelled (D, F, G).

I put a note on the whiteboard in the kitchen in work that just said 2:50. That

was the goal. I pictured myself coming back and putting a tick beside it (A)

I've never really done the visualization (F)

Four of the participants (C, D, G & H) described themselves as positive people or that they had a positive outlook. They believed that this helped them in all aspects of their lives, including running, when facing challenges or adversity. The use of specific images as motivation or in preparation was referred to by a number of the participants (A, B, C, E, H) as a tool they used to achieve their goal. This varied from using time as a motivator (A), projecting how they believed they would feel in the race (B), using imagery to prepare for the logistical layout of a race (E), to using imagery to focus on how they would enjoy the post-race celebrations;

5.2.5: Confidence

The level of experience of the participants in relation to their running experience and previous results was the main source of confidence for the participants, with D and K relying on analysis from training and races in previous years training as a tool to measure where they were at and from that they spoke of the confidence they gained, while the successful outcome of training and delivering on a goal was also a source of confidence.

I measure my 5k, 10k, 10 mile and half marathon times. I do a comparative

analysis each year, and that gives me great confidence (D)

The theme of inner confidence was brought up, particularly in relation to running a race. The training completed provided participants (D & E) with the assuredness to know that the pace they were running was right for them, regardless of what was going on around them.

5.2.6: Distraction Control

The primary area of dealing with setbacks in relation to marathon training was in relation to injuries and what was called an occupational hazard of running and training by two of the participants (A, D). All of the participants gave examples of how their response to injuries and setbacks in running that are best described as pragmatic. The initial response was frustration (A, B, E) but that was quickly followed in all 8 participants by an acceptance that there is nothing they can do to change what is done; whether that was stress fractures (A) or injuries that required long periods of time away from running (D & F), or injuries close to race day (E). The response was to address the actions that were within their control and look at what they could do next;

> *What could I do to keep me going? Yoga, stretching or aqua running? So I signed up for aqua running for 3 or 4 mornings a week (A).*

One of the participants spoke about how being injured has a negative impact on his life outside of running;

> *If I'm injured, I'm not a very nice person to be around because it really bothers me and I'll be full of self-doubt or worry about when will I get things back on track (B).*

However, he then addresses his development in this area in recent years, culminating in a similar pragmatic approach.

> *I can deal better now with setbacks when it comes to sport. I've developed over the last 3 or 4 years a little bit more positivity. So fine, you're injured, but what is the next thing you can do? (B)*

5.2.7: Ongoing Learning:

The experience of the participants was that they had learnt from mistakes as they progressed year on year; whether it was the need to improve on additional aspects such as diet and sleep (D & F), or the need to focus more on the mental aspect of training (B) or simply learning through failure (A), all of the participants spoke about how they developed from their experiences in running, both positive and negative.

> *There's only one way to learn about a marathon and that's to do one. You need to learn what gels to take, you need to wear the wrong shorts, you can read all the books but you need to get out there (D)*

5.3: Objective 2:

To investigate whether the participants apply sport psychology skills within their work environment and to address areas of intersection and divergence.

5.3.1: Focus

All of the participants demonstrated clear applications of this attribute in the work place, particularly in areas such as setting long-term goals, naming those goals and flexibility. The focus on specific, measurable and achievable long-term goals of five to fifteen years (D, E, F, H) set out a time-frame that was usually much longer than the stated marathon goals of those participants and achieving the goal was open to the influence of external factors.

> *I always wanted to be the CEO, and particularly of this company, because I grew up here (F).*

> *My target is to make partner next year and that's been a specific goal for the last 5 years. Whether that will happen next year or not relies on what I can achieve, but also things that are external to me (H)*

There was a contrast in how some of those interviewed didn't have very specific long-term career goals (A, B, C, G), however seeking continuous improvement and taking opportunities was named as a long-term outcome, while the short-term outcomes were focused on the process, not the goal.

> *How am I going to get through the next week and month? I find if you stay like that, the long term goal falls in to place. My general goal would be to try and improve things gradually at every opportunity (C).*

Two of the participants (F, G) spoke about how they named the goal and the focus for their team or company, so their managerial goal was tied up in the goal for the company.

> *I set an ambition for the company and you try to get people to buy in to that and explain why there are things we need to do to get in that position. So if you say it out loud, you're going to commit yourself (F).*

The issue of flexibility and the ability to shift focus to change and adapt and respond to the needs of their role in work at short notice was highlighted as an important attribute (C, G, H).

> *In my line of work, you can have a great plan laid out on a Monday morning, and it can be thrown out the window by Monday afternoon (H).*

5.3.2: Commitment:

The willingness to put in the required effort to excel and the level of consistency that it required, while still maintaining a work-life balance were the two main factors that the participants spoke about within their managerial roles, with the emphasis on these attributes developing throughout their career.

You need to believe in yourself and you need to do it. You have to achieve, you know what you have to do. Marathon running is all about consistency. And I've learnt that it's the same in terms of the work environment (G).

Goal-setting on an individual basis was far more challenging for participants (A, E, F, H) than the goal-setting they required in their marathon training.

One of the hardest things was to write a plan for myself. With training, I found a plan, got the book, followed the plan. With work I had to go back to basics, internalize what makes me tick, what makes me happy, when am I most happiest at work. And then from that comes the short term plan, what I need to do now to get to the next step and what attributes I need to work on (A).

A number of participants (B, C, D, F, G) spoke of how their goals were tied in with their requirement for a positive work-life balance. Considering the roles that the participants occupied; CEO, partner, senior managers, the assumption could be made that these roles would have a negative impact on personal and family life with the amount of hours and mental exertion required in their roles. However, the ability to maintain a work-life balance was seen as crucial to the success that they were able to achieve in their careers.

I really, really try and keep it balanced for everything. I'm delivering what I need for my family, while spending the right amount of time with my family. I achieve that because I have a flexible job (H)

At the moment it suits my lifestyle, in terms of work-life balance, it facilitates that (G).

If I'm happy mentally and life has a good balance about it and my family life has a good balance about it, generally I excel (B).

5.3.3 Mental Readiness

The issue of running as a form of stress relief was mentioned in the previous objective in terms of running career, but the same process of running for mental, as well as physical, health was brought up by all of the participants. The idea that running benefitted their work and family lives and added to a wok-life balance was referenced in each interview as an escape from work and family life where they had time to re-assess and re-evaluate.

> *I do need to take some time to go away and think about things myself, going for a run is obviously very good for that (E).*

> *Running helped me throughout my career. I don't know how many times I've been out for a run and come back with part of the solution. It's time on your own, it's the distraction, you're getting away from it (D).*

There common mind-set that was discussed was the competitive aspect that all participants transferred from their running career. However, there was an acceptance by the participants (A, D, E, H) that you were required to be competitive if you wished to progress but you had to maintain a focus on the process over the end goal due to the wide range of external factors within the workplace.

> *We all shake hands at the start of a race and get on brilliantly, but once the gun goes, it's dog eat dog, we're all fighting for a medal. It's the same with promotion, you go for it and if it comes to you, it comes to you (D).*

5.3.4: Positive Images:

The participants all had at least 10 years managerial experience to draw on, and there were primary use of positive images was through the review of previous performance-related tasks where they believed that they had excelled.

For an interview, I look back through the diaries and look at everything I've been involved in and build up the examples (A)

Whenever you have an achievement in work, write it down somewhere. And when you think things are going bad, take it out and look at it (B)

While positive imagery wasn't used by any of the participants, there was a reframing of language at certain points by some of the participants (B, C, D, H) to ensure that they were speaking in a positive, as opposed to a negative, light.

I don't call them areas of weakness, I call them areas of development and areas of learning (B)

5.3.5: Confidence

This was an area in which the growth over years of experience and positive feedback had developed inner confidence and self-belief that the participants now reference at the current stage of their careers. However, as opposed to running where all the participants spoke about their assuredness and inner belief in their own abilities, the level of confidence that participants expressed in relation to work was on a longer spectrum, from the "fake it until you make it", to high levels of self-belief.

I always say I'm a complete polar opposite in my mindset when I'm training and racing than when I'm at work. I come across as very positive and confident (at work), I wouldn't have progressed otherwise, but it takes an awful lot of energy for me to reflect that externally (B).

I go about my work in an understated way. I'm good at time management and organising myself. I have self-confidence and confidence in my own ability and what I can do (A).

There is an interesting contrast between those participants (B, E, F) that have looked to develop their confidence in order to progress;

As you make the transition from senior manager to director to partner, you really have to step up in terms of that confidence and projecting yourself (E).

This contrasts with some of the participants (A, G, H) who believed that they had a natural confidence and self-belief that has always been there and that has grown as their experience has.

It's probably a self-belief that I've always had, but it's only when you reflect on it and realize the decisions you've made that others wouldn't have made that it actually has delivered results (G)

Finally, the experience whereby running has increased their confidence in management was highlighted by a number of the participants (A, B, H).

I think that being successful relatively in running has actually helped my career. Even having an interest in running and progression and "you can achieve that and that's how you go about it (A).

I've been more successful since started running than I was before. I wouldn't say it's all running, but it's certainly a big part of it (H).

5.3.6: Distraction Control:

The attribute of remaining calm and focusing on what was within their control and on the next steps were universal in the interviews. There was an acknowledgment that as managers, how they react can influence how their team, colleagues and company react to given situations (A, B, F, G).

I'm quite calm in work. I don't tend to stress much about deadlines. I've a fairly good sense of what I can achieve within a period of time (A)

I think people would probably say that I'm probably relatively calm when things go wrong because you can't do anything about it. It's usually a case of 'how do we recover our position' and 'what did we do wrong that brought us into this position' (F).

The process that followed the initial reaction to setbacks was described as philosophical (C, F, G, H) and is very pragmatic. There is an acceptance that things go wrong, and when they do it is all about what can be done to correct the setback.

I take setbacks philosophically and I'd be very focused on what do I have to do to cure this. I switch to the positive. What I have to do? I'm going to prioritize that (C).

The way I deal with setbacks is that there's not much I can do about it, it's in the past. So I need to look at what I can do in the future, learn from it and move on (H).

What is it, what has gone wrong and what are the implications of what's gone wrong? It's spotting the signs early to go and put in remedial action. Also accepting when you have a failure that you just park it, learn from it and move on (G).

Participant B pointed out that in his experience he was pragmatic in dealing with injuries in running, but that didn't cross over into management and he attributed that to a different mind-set that he has in work.

I never prepare for a marathon or a race by thinking about what might go wrong. I always think about what should go right and it generally materializes.

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But I don't apply the same thinking in work. I feel I have to be prepared for what never may happen (B).

The mental ability to maintain focus on the process rather than worry about the bigger picture was noted as of particular help at times in work when there were a lot of tasks and responsibilities on the participant's shoulders (A, E, G, H).

You just keep your head in gear and focus on the next checkpoint. It's the same in work. If I was concerned about the massive to do list and all the various things that I'm doing, I would be overwhelmed (H).

5.3.7: Ongoing Learning:

The fact that the sample group are all at a management level already indicates that there is ongoing learning within their career and a willingness to learn from and through their experiences, both positive and negative. However, a number of participants acknowledged that it wasn't always so for them, and that even the process of learning and progressing is something that they had to work on.

I was the polar opposite of being consistent and hard working in school because I didn't have much interest (E)

When I was younger, I wasn't as ruthlessly organised. I was more spontaneous, but that isn't that effective when you have a lot of responsibilities (C)

Most of the participants searched out feedback on their performance in management (A, B, E, F, H), and the belief was that to progress and excel there had to be constant improvement gained through maturity and experience.

I would be a big believer in incremental improvements. Incremental improvements over decades give you a good result (E).

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Finally, an interesting perspective in the development of all the participant's learning was the need to prioritise what is important and to deliver on that.

I've learned not to sweat the small stuff (B).

5.4: Summary of Findings

The descriptive manner in which the findings from this study were analysed enabled the research to provide a deep level of understanding of the participant's experience of marathon training, racing and managing. The seven themes were broken down by domain; sport and business, and this enabled the researcher to highlight the similar application of the WoE as a SP skills framework in these areas of the participant's lives. Overall, it is clear from the findings that the participant's used all of the sport psychology skills in their training and management and there is a clear crossover between the domains. As both the marathon times achieved and the positions of employment that the participant's attained are both examples of PP, the analysis confirms the practical application of a SP framework in the business world, with the resultant PP.

Chapter 6: Discussion

6.1: Introduction

This research also looked to address gaps in the literature, such as the broadening out of further studies to look at the application of SP skills to other sports and to other domains, such as business (Furst, 2009). There is also the recommendation that future research in this areas should look at what real transfer between the domains of sport and business means in real life (Gordon, 2007). In applying the WoE, Ievleva & Terry (2008) argue that equal attention must be paid to each part of the framework within the wheel or it can lead to individuals becoming side-tracked or losing focus.

The following section looks at the areas of intersection and divergence with the literature in the crossover from marathon running to management.

6.2: Focus

People are people, the focus may change but it's the same person (G)

What was universal in the research that corresponded with the literature was the belief that although goals were necessary, it was the process, the manageable chunks, or the incremental steps that all of the participants focused their attention on. This crossover from running to management, whereby the goal is time-based and named out loud, was evident in the data and supported Brodbeck (2007) and Wells (2010) proposal that too much investment in the outcome can lead to increased pressure and anxiety. Participant A gave an example of how that manifests when he gave an example of how he focused too much on a running outcome (sub 3 hours), which led to an increase in pressure on himself.

While in the case of running, it was generally accepted amongst the participants that the outcome would look after itself once the process of training was followed, in relation to the work environment, a similar process was followed of smaller milestones and motivation to

add up to the final goal or outcome, supporting Hallett & Hoffman's (2014) argument that it is the lack of these small milestones that makes the outcome less likely to achieve.

6.3: Commitment

There was a divergence in the domain of career personal goals and how they were represented as opposed to marathon goals. There are a lot of external factors that can impact on long-term career goals and most of the participants (A, D, F, G & H) spoke about how they are prepared to take opportunities as and when they arise but that sometimes those opportunities are out of their control, for example, when participant F was returning from London, the role that he wanted wasn't available so he made the decision to move company. The argument that all aspects of Orlick's (2008) Wheel being within a person's control are stretched in this regard.

Of the 8 participants, there is an interesting breakdown of their application of long-term goals for their management career.
- A, B, C, and G did not have specific long-term goals but did have short-term personal development goals that they were working through.
- D (now retired), E, F and H all had very specific long-term goals that they were either working towards or had achieved recently. In the case of participants E and H, their long-term goals provided clarity to the short-term and annual goals that they set for themselves.

Despite the differing approach in this regard, it ties in with what Ievleva & Terry (2008) describe as divergence between the transferability of sport psychology from sport to business; the process of goal-setting is considered far more straight-forward in the sporting domain. There is also the consideration that career goals and personal development in management can span decades, while marathon goals are usually seasonal or annual. Participant A explained how one of the hardest things he had to do for work was to develop a personal development plan for himself, as opposed to training for a marathon where he chose a time that would deliver a PB, but was still a stretch. However, the consensus was still

a universal commitment to the required effort and sacrifices required to achieve both career and marathon goals.

The area of Work-Life Balance is one that Ievleva & Terry (2008) argue is essential to maintain commitment over a long period of time. There needs to be down-time and recovery, and again this was commented on by all eight participants. They all recognised the intensity required in the 12, 14 or 16 week build up to completing a marathon, and they all spoke about their need for a time to run with no focus after the marathon; no excel sheets, no early starts, no long runs, no eating right, and in some cases no running at all.

The crossover to the work environment was clearly demonstrated, as despite the participant's management roles, a priority was a good balance with work that leaves time for family, friends and running to ensure that they didn't burn out. Flexibility in current role (B, C, G, H) also lent itself to a good balance, particularly for those with young families (A, B, C, G, H). This supports Ryan & Deci's (2000) assertion that greater autonomy leads to greater competence, which leads to peak performance.

6.4: Mental Readiness

The literature discusses areas such as self-regulation, mood management and taking time out in relation to ensuring the best mind-set for the task ahead (Ievleva & Terry, 2008). All of the participants spoke of the mental health benefits of running and how they used running as a stress reliever, particularly when dealing with stressful situations in their work environment.

While most of the participants aligned themselves to a competitive mind-set, this was still layered with the knowledge that they could only control so much and, as mentioned in the section on focus, their competitiveness had to be balanced with a focus on the process and not the outcome. Finally, all of the participants had strategies in place to ensure that they recovered from intense periods of exertion in running and management to avoid overtraining and burnout (Orlick, 1998; Grandey, 2000; Loehr & Schwart, 2001). In running this required periods of rest and time away in between marathon training loads, and in relation to management the periods of rest usually involved the cross-over of going for a run to de-stress.

6.5: Positive Images

This attribute was broken down into two aspects; positive images and positive self-talk, and mentally reviewing previous peak performance. The first aspects are generally associated with sport psychology interventions (Hallett & Hoffmann, 2014; Lloyd & Foster, 2006), however four participants (A, B, E, H) used visualisation techniques in advance of a marathon. Two of the participants (A, B) referenced various marathon books that they have read and while some marathon books devote whole chapters to mental training (Nokes, 2003), even those that have little in terms of mental training devote some space to visualization for race day (Fordyce, 2002; Pfitzinger & Douglas, 2009), the presumption being that participants were exposed to the techniques through books and conversations with other runners.

Hallett & Hoffman (2014) describe mental imagery as a powerful tool for athletes, and in theory this should be replicated in management however this aspect did not transfer over into their managerial career. The literature points out the difference between training to perform in sport, as opposed to regularly performing with little training in business (Ievleva & Terry, 2008). It may follow that there simply aren't regular opportunities for the participants to use this skill in the workplace.

In the second aspect of reviewing previous peak performance, there is significant evidence of crossover between the domains running and management. All of the participants spoke about how they reviewed and drew on their previous running experiences. All of the participants had at least 10 years of managerial experience which provided them with a significant reservoir of previous performance from which they could draw on. From participant A reviewing his diaries over the previous years to build up a bank of examples for a promotion opportunity, or participant B writing down achievements for reflection at a later date, there is a clear crossover in the research as the participants use that experience to assist them to deliver PP.

6.6: Confidence

The area of confidence in relation to running seemed to elicit a universal response from all of the participants; providing they didn't get injured they knew what they needed to do to deliver the performance that they wanted, and they believed that they would deliver on their training. The experience from the participants supported Hallett & Hoffmann's (2014) theory that confidence is a key characteristic to deliver peak performance

In the working environment, the issue of confidence was more on the spectrum that Orlick (2008) describes, from 'someone else believing in you' through 6 steps to 'trusting you can'. Participant B's experience stood out as he spoke about how he trusted that he could deliver in marathon running and never questioned it, but in a work situation he struggled with self-doubt. However, even the progress that B went on to discuss in this area supports Wells (2010) assertion that self-doubt can be overcome once there is a bedrock of confidence. Participant B's experience was mirrored by two other participants (E, F), who spoke about how they consciously worked on how they project themselves in relation to how confident they appear over a number of years. This correlates with McNatt's (2001) analysis that interventions, mentoring and experience can all increase a person's confidence.

6.7: Distraction Control

The area of Distraction Control was similar across all participants and tied in with the pragmatic approach that Olick (2008) discuss' with proposing 3 steps;

1.   Accept what has happened
2.   Plan an alternative response
3.   Implement the response

While the participants deemed injuries the most frustrating part of running, there was a general acceptance that injuries happen and it is the steps you take to recover from injury that is the most important once an injury occurs. The responses involved talking to coaches (E), getting expert opinions (A, D, E, F) and following through with the required treatment to get back running as soon as possible (A, D, E, F), even if that meant taking a complete break from running to allow the body to recover (D, F). Hallett & Hoffman's (2014) assertion that

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determination was the key to persevering in the face of setbacks was evident as each of the participants spoke about setbacks they have dealt with in their running career.

There was a clear crossover again in the area of what is termed Distraction Control and the participants spoke about their experience of dealing with setbacks in work. A very similar pragmatic approach in business, as in running, followed the 3 step approach. Three participants (A, F, G) all described themselves as calm in how they respond to setbacks in work. There was also an overlap in the area of Ongoing Learning as the research highlighted a fourth step in responding to setbacks of reflection. Participant G spoke about reflecting on setbacks to ensure that they did not happen again and so that he could recognise the signs at an earlier stage in the future.

6.8: Ongoing Learning

There was an acknowledgment that critical feedback is crucial across both domains (Jones & Spooner, 2006). In sport, some of the participant's (B, D, E, F) had a coach that they turned to for feedback, however it was more tied in with Sin, Chow & Cheung's (2015) assertion that in marathon running the individual has to constantly reappraise to seek improvement. It was this belief where the way to progress and excel was through constant improvement gained through maturity and experience that crossed over to the business environment. Although some of the participant's spoke of seeking out critical feedback on their management performance and looking at gaps in their skills, it was the process of constant improvement through experience that came through more in the data.

Chapter 7: Conclusion

The aim of the study was to address the transfer of sport psychology skills from sport to business through qualitative research into the experience of the participant's, who were marathon runners and also in management.

The research demonstrates that the sport psychology skills applied by marathon runners to deliver peak performance, are transferable to the business environment and are applied by managers to deliver peak performance in their careers.

The following points stood out in relation to the crossover of SP skills in the participant's lives;

- There is a divergence in the data in relation to goal setting as the process of goal setting is considered more straight forward in sport. The research highlighted two factors in this regard; the time frame involved in a career goals can be 5, 10, 15 years, while in the sporting domain it is a lot shorter (annual marathon goals).

- There was also the issue that in a business setting, achieving personal goals was not always within the control of the individual. This divergence stretches one of the key aspects of Orlick's (2008); that all of the key skills are within an individual's control.

- The process was determined to be the most important focus in achieving goals in both domains, as opposed to a focus on the final outcome or result.

- All participants were self-assured and self-confident in relation to their running ability, times and goals, however this contrasted with their management roles where their confidence was on various stages in Orlick's (2008) six step process. A number of the participants (A, B, E, F) spoke about how they have worked on and developed their confidence in management as they needed to project a confident outlook.

- A good work-life balance was seen essential to maintaining peak performance across both domains. This was seen as a key attribute by all of the participant's, despite their

senior managerial roles. A key segment of the participant's work-life balance was their ability to use running to deal with stress in work.

-   Finally, the area of positive images and positive self-talk were not utilised to the extent that the literature suggested. Gordon (2007) argued that positive images and self-talk (along with goal-setting) were the main SP skills that transferred over from sport to business. Instead, the participant's all referenced mentally reviewing previous PP in both running and management, as opposed to four participant's using positive images and self-talk in their marathon training and only one person crossing over this skill to their management role.

It is clear that all of the participants utilised all of the characteristics named in Orlick's (2008) Wheel of Excellence to achieve peak performance in their marathons. This is despite no formal interventions within this area. Given that all of the participants delivered what could be considered peak performance when achieving a BQ in the marathon, this adds weight to the claim in the literature that Orlick's (2008) Wheel of Excellence is a model for peak performance in the marathon running and business, and demonstrates the real life crossover of SP skills.

Chapter 8: Limitations

While the researcher was very grateful to all of their participants for their time in participating in the study, through the use of convenience and snowballing sampling seven of the eight participants all worked in the financial sector. The remaining participant retired from public service within the last year. A potential limitation in relation to this is in the areas of work-life balance; were the participants able to maintain this balance due to their managerial roles within a given sector or due to the implementation of SP skills in the workplace.

The issue of causation was also not addressed and while this study was based on the transfer of SP skills from sport to business, there is also the possibility that many of those skills were developed in the workplace and then transferred to marathon running training. This could tie in to the consideration that the researcher has a similar profile to the participants and so there is the potential for bias in addressing how the SP skills demonstrated in marathon training crossover to management and deliver peak performance.

Finally, on reflection the questions spent more time than was necessary dealing with the sporting aspect of the participant's lives and while this didn't affect the data, it did mean that the researcher needed to spend more time on asking probing questions about management than should have been necessary.

Chapter 9: Recommendations for Further Study:

The aspect of positive images and positive self-talk needs to be explored further in relation to the crossover from sport to business. There was very little evidence of the crossover in this regard, with the participants choosing to reflect on previous peak performance in both domains in their use of this psychological skill. This goes back to the nature of marathon running, where none of the participants had SP interventions or sessions with a sport psychologist. Future research could address the experience of a similar sample group of athletes who have exhibited peak performance in their sport and are also managers, but have also worked with a sport psychologist. This potential research would provide additional real life experience of the transfer of positive images as a sport psychology skill to the business environment.

Future research may also benefit from a comparison of managers who have demonstrated peak performance in the workplace, but not in sport or another domain in their life, to contrast their application of skills such as focus and confidence in the workplace. The research could look to demonstrate whether or not there was similar application of the same SP skills in management through applying Orlick's (2008) framework in individuals who only look to perform to their peak in their managerial and business environment.

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Appendices

Appendix 1: Boston qualifying times 2018

Boston Athletic Association (2017) *2018 Boston Marathon Qualifier Acceptances* [Online]

Available at: https://www.boston.com/sports/boston-marathon/2018/04/09/boston-marathon-qualifying-times

[Accessed 14th August 2018].

Age	Male	Female
18 - 34	3:01:37	3:31:37
35 – 39	3:06:37	3:36:37
40 – 44	3:11:37	3:41:37
45 – 49	3:21:37	3:51:37
50 – 54	3:26:37	3:56:37
55 – 59	3:36:37	4:06:37
60 – 64	3:51:37	4:21:37
65 – 69	4:06:37	4:36:37
70 – 74	4:21:37	4:51:37
75 – 79	4:36:37	5:06:37
80+	4:51:37	5:21:37

Appendix 2: Participants of the study:

Participant	Gender	Age Bracket	PB & Marathons Completed	Management Position & Experience
A	Male	35 - 39	2:59 3 marathons	Grade 1 manager in the Irish banking sector.
B	Male	35 - 39	2:49 4 marathons	European sector manager global financial solutions company.
C	Male	55 - 59	3:27 2 marathons	Former partner with a Global Financial accountancy firm.
D	Male	50 – 54	2:39 84 marathons	Senior Manager in the Public Service. Retired last year.
E	Male	40 - 44	2:28 2 marathons	Senior manager in Strategy & Operations in the Financial Sector.
F	Male	45 - 49	2:33 4 marathons	CEO of the Irish division of a multinational financial service.
G	Male	45 - 49	2:59 12 marathons	Senior manager within Change Project Management in the Public Service.
H	Male	35 - 39	2:58 29 marathons.	Senior manager with a Global financial accountancy firm.

Appendix 3: Pilot Interview Questions

1. How important is goal-setting in your training and your career? What sort of goals have you set in running and management? What were the main attributes that you felt delivered on these goals?

2. What mental or psychological skills did you use in training for a marathon?

3. How do these psychological skills transfer into your business / management career?

4. What sort of focus and commitment is required to run a BQ marathon? Can you also tell me if you apply a similar focus in your work life?

5. How have you mentally dealt with setbacks in running and management?

6. Are there additional areas of your life where you have strived to be a "high achiever" and have you always been this focused?

Appendix 4: Interview Questions:

1. How important is goal-setting in your marathon training and what sort of marathon goals have you set yourself?

2. What were the main attributes that you felt delivered on these goals?

3. How does goal setting play a role in your career and your work life? What sort of long-term goals do you have for yourself in your career and do you have a plan to progress them?

4. What mental or psychological skills did you use in preparation and training for a marathon?

5. Do these psychological skills transfer into your business / management career and have you examples of the cross-over?

6. What sort of focus and commitment is required to run a BQ marathon? How do you apply a similar focus and commitment in your work life?

7. How have you mentally dealt with setbacks in running and management? Are there examples of processes or a certain mindset that helps you to deal with stress?

8. Are there additional areas of your life where you have strived to be a "high achiever" and have you always been this focused?

Appendix 5: Information Sheet

A research proposal to study the transfer of sport psychology skills to business in marathon runners with a Boston Qualifying time who are employed in a management role in business.

Researcher: Simon Monds

College: National University of Ireland

Course: MSc. In Management (Level 9 QQI)

The rationale for the project is that sport psychology skills are transferable into the business environment and that amateur marathon runners with a Boston Qualifying marathon time who are employed in a management role in business have exhibited peak performance across both domains

This research proposal is looking to address the rationale that sport psychology skills, considered to be the mental attributes that enhance performance in the sporting context, are transferable into the business environment. Marathon running is primarily an amateur, mass-participation sport and those that complete marathons are likely to do so as a hobby and to have to balance this with their work, family, personal and social lives.

The psychological mindset and mental attributes required in training for a marathon are frequently reported on, while at the same time there is growing research of the transferability of sport psychology skills from a sporting domain to the business environment.

Aims
- To investigate the application by marathon runners of sports psychology skills learned in training and applied in their managerial roles.
- To provide further evidence of the sport psychology skills to business link.
- To apply Orlick's (2008) Wheel of Excellence as the framework within which the sport psychology to business link can be addressed.

- Orlick proposes seven critical elements in the pursuit of personal excellence: focus, commitment, mental readiness, positive images, confidence, distraction control, and ongoing learning.

Ethical Considerations

Target Group and Methodology

The target group are amateur marathon runners with a Boston Qualifying marathon time who are employed in a management role in business. The methodology employed will be semi-structured interviews.

Confidentiality and Anonymity

All respondents will be anonymized and any personal information will remain confidential. Any information pertaining to organisations or places of work will also be anonymized. The following information from each respondent will be recorded.

- Gender
- Age
- Fastest marathon and age at time of recording it
- Number of marathons completed
- Management / leadership positions in business

Protocol

The following protocols pertain to all participants

- You do not have to answer any questions that you do not want to.
- You can choose to leave whenever you want
- You can terminate the observation at any time
- You can retract your statement at any time.

Non-coercion / Indecement

No coercion or inducement will be applied to promote participation. However, a copy of the final results will be made available to all participants.

Time commitment

The duration of the interview will be approximately 45 minutes.

Audio recording

The interviews will be recorded on audio files and then transcribed. The audio files will be

deleted once the transcription is completed. The transcriptions are required to be held until

the results of the research have been finalized.

Appendix 6: Consent Form

This research is approved by the National College of Ireland.

I have been informed of the purpose of my participation in this study and the length of time of required for the interview.

I understand that I can refuse to answer any question and can withdraw from the interview at any stage.

I understand that the interview is to be recorded, but will not be shared with any 3rd parties, kept in secured place and will be permanently deleted once the research is completed.

I understand that I can contact the researcher within two weeks of the interview to obtain a transcript of the interview.

I understand that I can redact comments from the transcript within the timeframe of one week from receiving a transcript.

I have read and fully understand the purpose of this research and consent to participant.

Please sign below:

I CONSENT/AGREE to participate in this research project: _____

Date: _____