UNIVERSITY *of the*
WESTERN CAPE

FACULTY OF COMMUNITY AND HEALTH SCIENCES DEPARTMENT OF SPORT, RECREATION AND EXERCISE SCIENCE

An explorative study of the knowledge and use of Mental Skills Training (MST) by coaches of Western Cape youth provincial sports

Gabi-Lee Van Der Westhuizen

2926130

A thesis submitted in fulfilment of the requirements for the degree of Magister Artium in Sport, Recreation and Exercise Science, in the Department of Sport, Recreation and Exercise Science, University of the Western Cape

Supervisor: Prof B Andrews

December 2022

ABSTRACT

Mental skills training (MST) is an essential tool used to enhance sports performance to its optimal level. It is globally recommended by Sports Scientist, Sports Psychologist, coaches and even athletes. MST improves the mind-set of the athlete to develop the ability to concentrate more, increase motivation, manage anxiety, develop self-confidence and thereby enhance performance in competitive sport. Though MST is highly beneficial, it is also highly underused by coaches, whom widely misjudge poor performance as physical flaws and not a lack of mental skills. Coaches generally lack the knowledge of MST, but perceive its importance for performance rating it as beneficial to athletic growth. Thus, the purpose of this study is to explore the knowledge, use and belief of MST of Western Cape coaches of youth. A qualitative methodological approach was adopted for data collection, employing a qualitative explorative design. Purposive sampling was used to select male and female coaches from specific sports, aged 25-50 years old, coaching provincial youth athletes. Semi-structured interviews were used to probe and open conversations around the perceptions and knowledge of MST. Trustworthiness was used to review information and to assess accuracy of the findings. Interviews were analyzed using Atlas.ti9. Findings indicated that coaches have limited knowledge and use of MST, while they presented belief in the benefits of MST in performance. Coaches presented sufficient knowledge and use from subjective experiences, and lacked the knowledge and belief of its systematic practice. MST requires a periodized program and consistent training. Thus, coaches would only use MST when they felt it was absolutely necessary, rather than implementing its approach with intent to enhance performance. For the highest level of youth provincial sport, coaches believed MST to be useful by highlighting visible changes, but do not see themselves as the leaders of the approach. Findings can be used for employment of national sports federations coaching courses of all levels (beginners to advanced), to enhance the way coaches are trained to perform their duties, promote holistic coaching and athletic growth, and create diligent and knowledgeable coaches within South Africa.

KEYWORDS: Mental Skills Training (MST), Coaches, Youth, Knowledge, Sport Performance

DECLARATION

I hereby declare that *"An investigation of the knowledge and use of Mental Skills Training (MST) by coaches of Western Cape youth provincial sports."* is my own work, that it has not been submitted before for any other degree in any other university, and that the sources I have used have been indicated and acknowledged as complete references.

Gabi-Lee Van Der Westhuizen **December 2022**

Signed _____

DEDICATION

I dedicate this research work to my late father, Steven Van Der Westhuizen, my late step-father Brian Davies, and my late cricket coach Cobus Roodt, whom have all been my motivation through this journey, having left me great lessons and feeling their love and support. To my mother, Roberta Van Der Westhuizen, my sister Maxine Van Reenen and my best friend Andrie Steyn; thank you all for continuing to love and support me through the toughest moments of my life. Your wisdom and guidance have endured me through all types of adversity, teaching me to stick to the best practices of life to reach my goal. Thank you for your unending care and being a great deal of strength.

ACKNOWLEDGEMENTS

I am forever grateful to my Lord and Saviour Jesus Christ, who provides me with daily counsel and strength to endure all adversity, who continues to bless me daily with the opportunity to take up my passion and be of service to the industry. This would not have been possible without him.

I would like to specially thank Prof. Barry Andrews for his endless support, guidance and mentorship on this journey; through the toughest moments of working a full-time job, living my dream of working in High Performance sport and completing my post-graduate studies, your support and patience has been incredible and I cannot thank you enough. Thank you for being my supervisor as well as a friend. I could reach out and express myself, especially when the odds were stacked against me. I applaud you for your grit and determination to see this journey through with me. Your professionalism and integrity are what I aspire towards in service to Sports Science.

The Department of Sport, Recreation and Exercise Science for the opportunity to pursue a Master's degree in the field of Sport, Recreation and Exercise Science as well as the support provided by the academic and administrative staff.

The University of the Western Cape Library, online library services and data base, for making research easier through electronic and remote access.

The Western Province sports unions and their coaches for the willingness to be part of this research study and their desire to learn more about this field.

A big thanks to the Western Province Women's Cricket family, my sports family, for their support during this journey.

Thank you to Maxine Van Reenen and Andrie Steyn for their academic support, knowledge and wisdom as well as their assistance on this journey. Thank you for your mentorship and guidance from an added objective perspective.

To the Bryce family, Errol and Svenska Bryce, who took me in as a young adult at the beginning of this journey, thank you for your unconditional love, support and your prayers over my life and well-being. You have nurtured d the foundations of my spiritual and mental health; you have provided me with care as though I was your own, and I am eternally grateful.

All athletes who have allowed me to work with them in this capacity as a high-performance coach; for allowing me to assist them with their skills, physical and mental conditioning and having the privilege to witness their growth in performance. Working with these athletes has furthered my knowledge and perceptions of the premise of this research. I am appreciative of these experiences.

Finally, I would like to thank my family and friends who have provided me with the inspiration and support to complete this master's dissertation. I am not able to mention every single one of you, but I would like to acknowledge here that when it seemed like a daunting task in the most difficult of times to finish, you have helped me push through it all to reach my goal. Your support has been greatly appreciated, and I extend my thanks and love to you.

TABLE OF CONTENT

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

CSAI-2	Competitive State Anxiety Inventory-2
GST	Goal Setting Theory
EM	Extrinsic Motivation
EPG	Eminent Persons Group
IM	Intrinsic Motivation
IPT	Inter-Provincial Tournament
MS	Mental skills
MST	Mental Skills Training
MSQ	Mental Skills Questionnaire
NSA	Netball South Africa
SA	South Africa
SAHA	South African Hockey Association
SPST	Sport Psychological Skills Training
SSA	Swim South Africa
VMBR	Visuo-Motor Behaviour Rehearsal
WP	Western Province

CHAPTER ONE

INTRODUCTION AND BACKROUND TO THE STUDY

1.1 INTRODUCTION

Coaches and athletes have increasingly begun to perceive that strength, speed, coordination, and other athletic abilities are not in themselves enough to produce a champion, and that the mental aspects of sport are crucial determinants of success and failure (Sharpe et al., 2013). The primary reason for this recent emphasis on the psychological aspects of sport is that, at the highest levels of competition, differences in skill level itself are typically minimal, because their physical preparation has already been exhaustively covered, it is believed that the "edge" in sport lies in the psychological preparation of athletes (Iso-Ahola & Hatfield, 1986 cited in Onestak, 1991).

This chapter introduces the theory of mental skills training (MST) and the skills from Stephen Bull's (1996) Mental Skills Questionnaire (MSQ). It discusses the basic concept of MST and focuses on; its application in sports training and performance, within the coaching of youth sport and within coach's perceptions. In addition, it provides the aim and objectives, problem statement and significance for the study.

To elaborate the concept of MST, in this nature, a similar study was conducted by, Sharpe and Woodcock (2013). In their study, they established the effectiveness of MST in youth rugby, both in its players and in its coaches. The research found that participants perceived an MST program to be an efficient and interactive approach that enhances their understanding of MST, and creates an awareness of its plans to manage performance. (Sharpe et al., 2013).

Looking at the number of studies documented in Mental Skills over the years, it has grown as an important pillar of sport (Vealey, 2007). The evolution of Mental skills in the last 40 years is "impressive"; suggesting that the knowledge base has grown and mental training practice has become more sophisticated. However, "greater sophistication means greater complexity; thus, the challenge remains for sport psychology professionals to continue to creatively grow mental skills training in productive and socially relevant new directions" (Vealey, 2007: 301). Krane and Williams (2006) attempted to identify the mental skills that are connected to peak performance and found that the following proved to be important roles in mental skills (Di Corrado et al., 2014):

1. prospects of success and self-confidence
2. being in control,
3. focusing on the job at hand,
4. observing adverse situations as both demanding and exhilarating,
5. being efficient and as perfect as possible
6. having a positive mind-set and heightened thought processes aligned to performance, and
7. high levels of dedication and responsibility.

Like many goals and objectives within performance sport, the objective of mental skills training is mainly to assist athletes through mental skills growth for the purposes of successful performance and holistic well-being (Vealey, 2007). Vealey (2007), further continued to establish a model of mental skills for athletes and coaches which is an addition of a previous model from Vealey's 1988 study. The model is designed to highlight the multiple types of

mental skills that are important for the success and well-being in athletes and coaches, including foundation, performance, personal development, and team skills (Vealey, 2007).

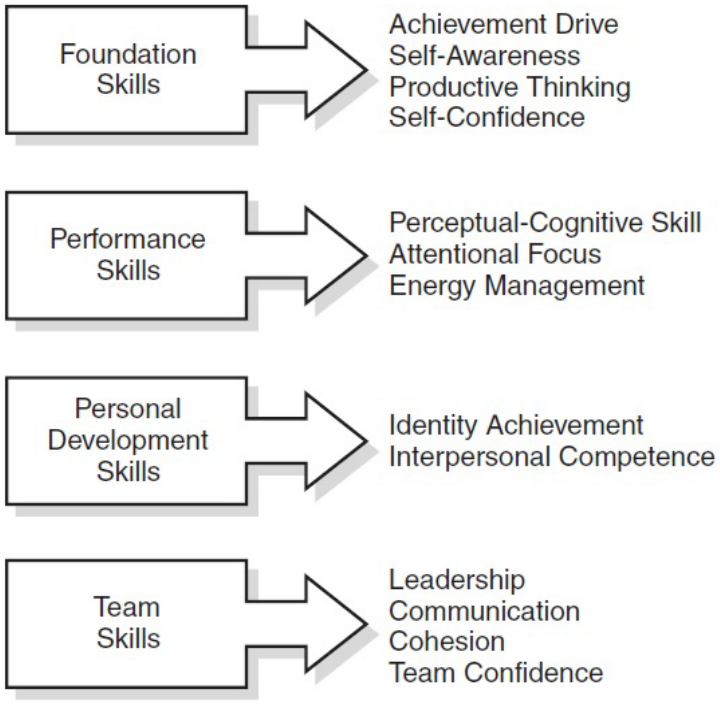


Figure 1.1: Mental skills for athletes and coaches (Vealey, 2007).

While athletes have seemingly benefitted from the systematic practice of MST in the past (Thelwell & Greenlees, 2001), there is little research evidence that exists of any systematic program effectiveness for sports coaches, despite coaches being considered performers too (Frey, 2007; Olusoga et al, 2014). This study was not to highlight the flaws of coaches' ability to understand and implement MST, but to identify their limitations of MST knowledge and establish the level of competencies in knowledge and use of MST for further professional development of coaches. Weinberg and Gould (2007: 516) define Mental Skills Training (MST) as the "systematic and consistent practice of mental skills or psychological skills for the purposes of enhancing performance, increasing enjoyment or achieving greater sport and

physical satisfaction". Mental skills are naturally occurring, daily utilized, improves abilities and techniques (Edwards et al., 2011). In themselves, mental skills are all interrelated and form a unique, multiple, an inseparable whole (Weinberg & Gould, 2007).

1.2 LITERATURE BACKGROUND

1.2.1 Mental Skills Training

Gould and Damarjian, (1998) mentioned that mental skills training involves implementation of methods in order to be cognitively well prepared for competitions so that performance-related skills can be executed more effectively. In this regard, emphasis is often applied to the importance of MST in youth athletes as studies have been well documented and shown the effects of mental skills training in youth sport (Efran et al., 1994; Li-Wei et al., 1992; Wanlin et al., 1997; Gould et al., 1999). Coaches' as well as the athletes' awareness of the importance of MST in sport and the development of MST programs have increased (Hacker, 2000). In a subsequent study aimed to determine the importance of MST in field hockey players, it was found that only 33% of the field hockey players tested have had prior exposure to mental skills (Eloff et al., 2011). In addition, the hockey players generally showed high scores with regard to the importance of MST in enhancing performance (Eloff et al., 2011). Similarly, a study on provincial netball players in South Africa (SA) perceived MST as a very important component for performance, but the participants had limited prior exposure to any form of psychological training in Sports Psychological Skills Training (SPST) and from a sport psychologist (Van Den Heever et al., 2007). Van den Heever et al. (2007), further found that a netball-specific SPST program should be developed by sport psychologists in collaboration with the top netball coaches in SA to then be systematically implemented, especially when looking at the skill levels of the subjects in the study. Only 26.75% of the subjects expressed a

great need for SPST (Van den Heever et al., 2007), which brings about the question, how important is MST in elite level sport, albeit youth sport?

Hardy et al. (2004), believed an MST program should include a selection of psychological skills. To be successful in sport, athletes should be equipped with specific physiological and physical characteristics, depending on the demands of the particular sport (Martin et al., 1999). Combining MST with physical training increases the athlete's ability to cope with the demands of the sport and enhances performance (Fallby et al., 2006). Furthermore, Fallby et al., (2006) examined whether or not a relationship could be detected between the events related to personal control and mental skills. Their findings suggested that individuals who perceive their world of performance, such as physical training, to be controllable, manageable, and meaningful; have more developed mental skills and can then perform better (Fallby et al., 2006). A critical point that needs more attention in the field of sport psychology and those who are mental training consultants, is that the process of mental skills development and training occurs within a social-cultural context (Vealey, 2007). Athletes would then need to build a foundation of mental toughness when their character and skills are being tested through the most adverse moments in their sport, allowing for these professional consultants to bridge the gap between that which is mediocre toward elite performance standards. The role of a coach in this regard becomes important too, as they need to form relationships with their athletes in order to develop mental skills (Gould, et al 1999), especially as sports psychologist and consultants are not an accesible resource to youth teams in SA. It is quite evident throughout the research that this is most prevalent in a younger generation of athletes, who lack the skills to deal with adversity in game changing moments.

1.2.2 Coaches of Youth

Limited research exists to help coaches develop mental skills in their athletes, more so, the topic of the coach as a sport psychologist has been largely ignored in the scientific literature (Gould et al., 1999). There are very few research studies dedicated to finding the effects of MST in coaches, and/or their knowledge and ability to utilise MST in their coaching, both globally and in South Africa. Van den Heever et al. (2007); Eloff et al. (2011); and Edwards et al. (2011), to name a few, have focused their research on the perception and value of MST on elite amateur athletes in SA. The growing interest of coaches and players in MST raised the issue of assessing athletes' mental skills that ultimately resulted in the development of a variety of questionnaires that can be used to establish athletic ability regarding mental skills (Durand-Bush et al., 2001). Particular attention is focused on the coaches' knowledge base of MST implemented in coaching the youth; as sub-elite youth sport is the commencing point of a professional career, much like the athletes that compete in global under-19 world cup and inter-provincial tournaments (IPT) that ultimately feed professional sport. In saying so, a study by Cahill and Pearl (1993) examined the psychological impact of intensive sport participation on young athletes. Their investigation was designed to understand at what age children should be playing sport and what psychological stresses do they face when participating in a high intensity sporting environment (Cahill & Pearl, 1993). As coach's involvement in youth athletic training becomes more apparent and regular, we can assume, aligned with the literature, that there is a necessity for mental skills to be considered as part of training programs in order for these athletes to handle the pressures and stresses that they will experience in any sub-elite level and elite of sport. Although, more sport psychology information and personnel are available more than ever before, it would be unlikely that junior coaches will be able to work with sports psychologist (Gould et al., 1999). Since there is a shortage of sports psychologists

to fulfil this role of a mental skills coach (Grobbelaar, 2007), it is primarily the responsibility of the coaches to introduce and expose players to MST, especially at the junior and sub-elite levels of sport (Gould et al., 1999; Wang et al., 2003).

Much like any other important role of a sport coaching professional, albeit a physiotherapist or strength and conditioning coach, the coach is ultimately the jack of all trades. A study in SA that paid particular attention to the coaches' perspective of MST was conducted by Grobbelaar (2007). He looked to understand South African provincial netball coaches' opinion, abilities and limitations regarding MST. In the study, he found that the majority of Netball coaches considered MST as very important (89.90%), and that of these coaches, only 46.43% actually implemented MST programmes themselves or made use of sports psychologists (Grobbelaar, 2007). From these results, a necessity for further coach education regarding MST programmes and the implementation was highlighted. To substantiate the possibilities for the lack of coach education, the most prolific limiting factor for coaches to use MST was shown to be financial constraints, unavailability of sport psychologists and a lack of knowledge of the coaches (Grobbelaar, 2007). It is evident that there is a need for coaches to be well educated about MST for it to be implemented. Coaches need to work more closely with their athletes to strengthen not only their physical skills, but also their psychological skills that will positively contribute to performance (Harrison, 2013). This was substantiated by the study of Olusoga et al. (2014), who interviewed coaches from one of Great Britain's most successful Olympic teams and in discussing the importance of training and development for coaches on the pathway to elite sport, one coach expressed that "if we really want to lay the foundations for long-term success in sport, then we have to take the education of our coaches more seriously" (Olusoga et al., 2014: 7).

Though there is a limitation to the resources and the education of coaches that may not necessarily reflect as a positive, there are coaches who have the resources, knowledge and skills to implement MST and could possibly choose not to use it. specifically, the 10.10% of coaches that did not regard MST as very important as was highlighted in Grobbelaar's (2007) study. In a related study, Gould et al. (1999), investigated why MST information is not being used by junior tennis coaches, it was aimed to explore coaches' opinions on what would make mental training information more user-friendly and to identify better strategies for conveying this information (Gould et al., 1999). The results showed that there is a need for more MST coach education on the content of MST, with emphasis on the importance of understanding how to teach mental skills, as well as the need for coaches to become more comfortable with this process of using MST (Gould et al, 1999). It is evident that athletes are most likely to receive regular sports psychological information from their coaches (Gould et al, 1999).

The use of MST as an intervention strategy has provided enough evidence to suggest that there is a general improvement in psychological skills, psychological well-being and sporting performance when executing an MST intervention on young athletes (Edwards & Steyn, 2008). Young athletes are capable of reaching their full potential when nurtured with the correct assistance and consistent training opportunities to stay involved in their sport (Sharp et al., 2013). The high expectations of sport on youth athletes and children's sports, are making neurotics of our young because of the persistent pressure to win at all costs (Cahill & Pearl, 1993). Coaching to enhance self-esteem first and to win the contest second, requires teaching values for most coaches and parents (Cahill & Pearl, 1993). In hopes of improving the suggestions toward coach education regarding MST, the results of this research study could potentially highlight improved coach's knowledge and use (or lack thereof) of MST in this generation. The development of sport psychological skills has become of great interest to

players, coaches and administrators and continues to be an important area of research, due to the relationship that exists between these skills and performance (Hodge & McKenzie, 2002; Golby & Sheard, 2004).

It is clear to see that there is an area of concern regarding the input of mental skills empowerment from the coaches. Their knowledge and experience to use these skills are either underrated or non-existent within the coaching space of youth sports. Thus, the proposed study is set out to explore the knowledge, use and belief of MST, which will help to understand whether they can effectively work with their youth athletes or teams in applying any basic MST intervention systematically to their training and whether they believe the tool works.

1.3 STATEMENT OF THE PROBLEM

"Protection and promotion of psychological well-being is of the utmost importance to student-athletes" (Golby & Wood, 2016: 1). The development of MST has become of great interest to all parties involved within sport performance; coaches, players as well as administrators and continues to be an important area of research owing to the unique relationship that exists between skills and performance (Van den Heever et al., 2008). Globally, Sports Scientists have shown that athletes use MST to overcome their competition stress levels and enhance their competitive performance (Gould et al., 1999; Edwards & Steyn, 2008; Sharp et al., 2013), while sports psychology research has observed a significant growth in studies that have explored the effects of mental skills on athletic performance (Thelwell & Greenlees, 2003).

MST intervention techniques, apart from having a positive influence on performance, have also subsequently led athletes to have better knowledge and perceptive importance toward MST and its benefits on performance (Sharp et al., 2013). It is evident that MST is highly underused by coaches (Gould et al., 1999), whom widely misjudge athlete's poor performance as physical flaws and not the flaws of their mental skills, mental skills that could aid the ability to perform the physical skills that are so efficiently trained. Thus, the purpose of this study is to explore the knowledge, use and belief of MST of Western Cape coaches of youth. A common myth about the use of MST states that athletes do not have the knowledge to implement MST systematically and that in doing so, there's a perception that there is just no time to implement these techniques during a training session (Weinberg & Gould, 2007). The perceptions would then only change should the coach take a different stance toward athletic performance, realizing the importance of holistic growth and training by implementing an intervention from a different angle. There could be a few more limitations beside that of the myths of MST, such as a budget for a Sport Psychologist's (Johnson & Gilbert, 2004). Coaches spend their time preparing the next best program to enhance their team's performance, which often includes better physical training skills and drills. A dedicated coach would rather take the time to provide guidance by assisting athletes to develop their performance with a basic level of psychological skills (Johnson & Gilbert, 2004). The psychological fitness is as an important aspect of optimal sports performance that should be trained as well, as it works coherently with the physical fitness in a systematic way (Weinberg & Gould, 2007). However, we will often see that athletes fall short of their peak performance due to the inability to be mentally strong during stressful match situations. Coaches do not incorporate MST along with their physical skills training. The result of such failure leads to the consistent inability to reach peak performance and the inconsistency of performing optimally.

1.4 THEORETICAL UNDERPINNING

An in-depth look at the Mental Skills outlined in this study was vitally important, and could only be done by exploring the origins and use through various kinds of situations and sports performance index. We know from the definition of MST that it requires systematic practice and Bull's (1996) Mental Skills Questionnaire is a quantitative test used to measure psychological athletic performance and the systematic application of MST. The questionnaire focuses on seven mental skills, which are understood to be some of the most important and frequent mental skills used in the psychological pillar of sports performance. These seven mental skills components include; *imagery, motivation, anxiety management, relaxation, concentration, goal-setting,* and *self-confidence* (Bull et al., 1996; Olusoga et al., 2014). They are the focus of this study and were extracted from the series of questions that assess a specific mental skill within the test.

Each skill provided a complex background with its own history, and conveniently, all overlap with each other to provide an absolute holistic set of psychological skills that are designed to provide the most efficient and lucrative methods in sport psychology for enhancing performance. Their research gave us the opportunity to discover answers to unanswered questions when the expectations of physical skills fail. Simply put, mental skills training (MST) has developed into a priority that requires the athlete to learn more about their own mental ability to allow a degree of control in coordinating effective physical skills through various psychological states of performance (Martens, 1987; Rushall, 1992). Athletes would review their performance by external factors, building an ego-centred concept of self, further inhibiting their personal growth and performance development (Behncke, 2004).

1.5 RESEARCH QUESTION

Do coaches have the knowledge and belief to use Mental Skills Training in their respective sports?

1.6 AIM

To explore coaches' knowledge, use and beliefs of Mental Skills Training (MST) across Water Polo, Netball and Hockey in the Western Province region.

1.7 OBJECTIVES

1.7.1 Explore coaches' knowledge of MST Water Polo, Netball and Hockey in the Western Province region.

1.7.2 Explore coaches' use of MST in Water Polo, Netball and Hockey in the Western Province region.

1.7.3 Explore coaches' beliefs of using MST Water Polo, Netball and Hockey in the Western Province region.

1.8 SIGNIFICANCE OF THE STUDY:

This study will increase coaches' perceptions of MST and its benefits to player performances across various sporting disciplines. Furthermore, by enhancing their knowledge base to use MST and aid in establishing the importance of mental skills across all sports in an effective manner. The study will encourage mental skills for coaches to be included in respective coaching courses, especially coaching levels training. This would then improve the

coaching standards as coaches will have acquired the foundation of both physical and mental skills of the sport. Lastly, such a study will recognize the importance of coach's influence on player's psychological preparation in training and competitions, which will positively inhibit the potential sport dropouts.

1.9 OVERVIEW OF CHAPTERS

Chapter One outlines the background of the study, providing a brief overview on the role of MST in sport performance as well as a brief outline of the MST, coaches and youth athletes. MST was examined from a global point of view, within South Africa and the rest of the world. The statement of the problem is presented as well as the research question, research aims and objectives, followed by the significance of this study. An overview of chapters in this thesis is presented.

Chapter Two presents a review of literature, defining important concepts to achieve the aim of the study. Thereafter, follows an evaluation of MST and Coaches, as well as descriptions of the knowledge of MST. The literature of MST knowledge includes MST components that highlights the definitions, its application and research dedicated to previous MST work. MST definitions are presented particularly, making reference to relevant research studies that identifies their origins, methods, MST within different sports, within youth sport and within coaching. Lastly, this study's theoretical framework is described. The Competence Model will be used to explain and identify the level of competence through knowledge, use and belief, and identifying the limitations of coaches to further develop their MST perceptions.

Chapter Three describes the research methodology applied in this study. This chapter details the employment of a qualitative design, and presents, theme development, the research framework, data collection and data analyses techniques. In addition, the research setting and sample is described, with a formal meeting conducted with each coach at their convenience. Reflexivity and trustworthiness was described, and the study limitations and delimitations are presented.

Chapter Four states the findings of this study. Findings are categorized into themes with a related subtheme(s), particularly aligned to the MST components. Literature of MST will be used to define each theme, and the interpretations and discussions for each finding that emerged is presented.

Chapter Five delivers the research summary, conclusion and the recommendations for further research. References and appendices follow at the end of this chapter.

CHAPTER TWO

LITERATURE REVIEW

2.1. INTRODUCTION

"Mental skills training for sport is reviewed in relation to general cognitive-somatic techniques; techniques including mental rehearsal, mental imagery and visualization, visuo-motor behaviour rehearsal, cognitive-behaviour therapy, biofeedback, progressive muscle relaxation and meditation (Behncke, 2004: 1)". The psychological factors involved in athletic performance have long been of interest to athletes, coaches, and sport psychologists (Sadeghi, 2010). The mental skills reviewed in this study included the seven concepts from Bull's MSQ (1996); these concepts were extracted from a series of questions that assess a specific mental skill within the test. Keeping in mind that this test was designed for athletic performance and is quantified to determine a level of psychological skill competence. Research on MST has been collected for over five decades, where some of the most notable work used to date extends back to the 1970's, 1980's and the 1990's. Thus, though the study attempts to maintain recent literature of the skills in question, it will need to be understood from its origin and reasons for its methods.

2.2.MST KNOWLEDGE AND COACHING

Though, there is evidence in recent years of studies related to the knowledge of MST of coaches (Feltz et al., 1999; Gould et al., 1999; Grobbelaar, 2007; Weinberg et al., 2011; Kavussanu et al., 2008; Sharp et al., 2013), psychology of coaching has not been researched as extensively as other areas in sport psychology, it has not been completely ignored (Gould et

al., 1999). In addition, there has been insufficient research conducted on coaches' perceptions of mental toughness (Weinberg et al., 2011). Research may have delayed the process of identifying the holistic roles of coaches, however, research does not lack the quality in findings. Coaches play many roles within the lives and careers of athletes, while it is true that they have the capability to influence all aspects of athletic experiences, mainly, athlete's effort, performance, motivation, and overall well-being (Horn, 2008). Ideally, coaches would require some form of knowledge to fulfil their duties that completes their role as a coach. They would require a basic knowledge of the characteristics of a certain sport and a profound amount of knowledge of the athletes' thoughts and behaviours around competition to aid athletic performances (Sadeghi, 2010). It is clear that coaches play a pivotal role in the feeding of knowledge to athletes, though athletes ought to take ownership over their own development instead of relying on the spoon feeding of knowledge by their coaches (Holland et al., 2010). Optimal performance can be achieved, when coaches formulate multiple kinds of mental training for their athletes effort toward a best performance and achieve the winning success (Sadeghi, 2010). MST has its own limitations as well, and can be viewed as roadblocks, that include time constraints, poor athletic participation, assessment of MST success and insufficient examples of coaches implementing mental skills (Gould et al., 1999). Overall, coaches would need to achieve holistic development in respect of MST and its full comprehension should they wish to see their athletes succeed, both physically and mentally.

2.3. THEORETICAL UNDERPINNING: MST COMPONENTS

In the following section, leading from its introduction in Chapter 1, the theory of MST and the seven components from Bull's (1996) Mental Skills Questionnaire will be described

and discussed. The mental skills reviewed in this section includes, *motivation, goal-setting, self-confidence, anxiety management, relaxation, imagery* and *concentration* (Bull et al., 1996; Olusoga et al., 2014) These skills are reviewed in-depth and are detailed for comprehnisive understanding and extensive knowlege insight. The theories are reviewed through decades of literature that allow us to understand their purpose in athletic sport performance.

2.3.1 Motivation

The skill *motivation* will be described and discussed as one of the seven skills extracted from Bull's MST questionnaire. Diving into its very definition, *"motivation* can be defined simply as the direction and intensity of one's effort" (Sage 1977*;* cited in Weinberg & Gould, 2015: 127). *Motivation* alarms vigour, bearing, and perseverance, all of which represent the initiation and purpose of fulfilling a task (Ryan & Deci, 2000). The athlete should be motivated from an intrinsic rather than an extrinsic perspective to obtain goals (Weinberg, 1984; Martens, 1987; Rushall, 1992). Though, one is said to be intrinsically motivated to perform an activity when they receive no apparent rewards except from the activity itself, intrinsic motivation is undermined by the controlling nature of the reward (Deci, 1971). Motivation is an abstract concept, a complex process that impacts individuals to pursue and is only observable from the resultant perspective; more so, motivation is the tendency to carry out a particular set of behaviours and consistently persist in an activity (Wheaton, 1998; Bernal et al., 2012). When these tendencies are seen to be carried out intensively or maintained for a long time, it is gathered that there is a strong level of motivation (Hower, 1986). The term motivation comes from the Latin word "movere" meaning to move, and describes the forces within us that activate us to direct behaviour in a certain way (Terry, 1989). High level competitive athletes distinguish themselves by the motivation in their activities (Mosoi, 2012), moreover, elite

athletes would virtually *see* themselves achieving their goals on a regular basis (Wheaton, 1998).

Researchers have come to identify two classes of motivated behaviour, *Intrinsic Motivation (IM)* and *Extrinsic Motivation (EM)* (Deci, 1971). The emphasis on internal and external forces fits in very well with the presence of the two major types of motivation (Intrinsic-Extrinsic Motivation) that have been heavily researched and explored in publications (Vallerand, 1997; Vallerand, 2007). In addition to *Intrinsic* and *Extrinsic Motivation,* Deci and Ryan (1985) have hypothesized that a third type of Motivation construct, *Amotivation,* is as important to consider in order to fully understand human behaviour (cited in Vallerand et al., 1992). Deci and Ryan (1971) researched the effect of internal motivation by external rewards, and showed that leading individuals to engage in an interesting activity in order to receive monetary reward (out of extrinsic motivation) led to a decrease in subsequent intrinsic motivation in the activity.

Intrinsic motivation (IM) is perceived as the partaking in an event solely for its desirable satisfaction derived from participating in the activity (Deci, 1975). When a person is intrinsically motivated, he or she will perform the behaviour voluntarily, in the absence of material rewards or external constraints (Deci & Ryan, 1985). Furthermore, Deci and Ryan (1985) posit that IM stems from the innate psychological needs of competence and self-determination; therefore, activities that allow individuals to experience feelings of competence and self-determination will be engaged because of IM (Pelletier et al., 1995). Contrary to intrinsic motivation, extrinsic motivation (EM) pertains to a wide variety of behaviours that are engaged in as a means to an end and not for their own sake (Deci, 1975). Extrinsic reasons for

practicing a sport activity involves behaviour that is regulated through expected outcomes not inherent in the activity itself (i.e., rewards, constraints) (Gillet et al., 2010).

Extrinsic motivation is perceived as the partaking of an activity for the purposes of attaining a desirable outcome, like performance, which separates itself from *intrinsic motivation,* that identifies its purpose by its inherent satisfaction of the activity (Gillet et al., 2010). Self-Determination Theory (SDT) suggests that extrinsic motivation can be adjusted as individual's desire. (Ryan & Connell, 1989; Vallerand, 1997). For example, athletes who perform physical fitness tasks because they personally grasp its value for what it means in their chosen career, are extrinsically motivated, (Deci & Ryan, 2000). Amotivation is the third construct of motivation where individuals do not perceive contingencies between outcomes and their own actions (Vallerand et al., 1992).

Amotivation is the opposite of autonomous and controlled motivation and refers to the lack of intentionality ultimately resulting in an absence of motivation; they are neither intrinsically or extrinsically motivated (Vallerand et al., 1997; Deci & Ryan, 2008; Bernal et al., 2012). When a motivated athlete experiences feelings of incompetence and expectancies of uncontrollability, as they perceive their behaviours as caused by forces out of their control, they are relatively without purpose with respect to the activity and therefore have little motivation (intrinsic or extrinsic) to perform it (Vallerand et al., 1997; Vallerand, 2007).
In the context of an academic scale, students would feel deceived and start asking themselves '*why in the world they go to school'*; eventually they may stop participating (Vallerand et al., 1992). Humans are motivationally complex and is therefore not sufficient to talk about motivation in general to describe a person, but rather refer to a collection of motivations that vary in types and levels of generality (*three levels; Global, Contextual, Situational)*

(Vallerand, 1997). Vallerand (1997) continues to describe the many issues, suggesting that motivation is not only an intrapersonal phenomenon, but also a social phenomenon and that motivation leads to important consequences at the three levels of generality, *Global*, *Contextual*, and *Situational*. *Motivation* is closely linked to *Goal-Setting*, as the concept goal-setting is highly regarded as a skill that determines the course of intentional behaviour. In other words, the manner in which we cognitively plan our lives or set goals for progressing toward our objectives appears to play a significant role in behaviour change (Poag & McAuley, 1992). Motivation serves as the 'why' and goal-setting is the guidance that initiates the intentional behaviour of that why. Goal setting helps the individual stay motivated (Weinberg & Gould, 2015).

2.3.2 Goal-Setting

Moving on to *Goal-setting,* linked to the previous skill*,* is one of the most dominant motivational techniques for enhancing performance and productivity in business, education, and sport (Weinberg et al., 1994). Weinberg (1996) reviews a goal as the extent of one's ability on a task performed and achieved through a set duration period, and operate largely through internal comparisons that require subjective standards to evaluate ongoing performances against (cited; Wheaton, 1998: 44). The chief purpose of goals is to direct and motivate. (Weinberg et al., 2001). Researchers, Locke and Latham (1990), have spent decades on the understanding of goal setting and task performance in general and that which is specific to sport performance, designing the Goal Setting Theory (GST). Additionally, goals are often looked at as *Objective* and *Subjective* in sport and exercise (Weinberg & Gould, 2015). *Objective goals* simply include the focus of a particular result within a time frame (Locke &

Latham, 2002); and *Subjective goal* describes the general statement of intent that are not measurable or objective (Weinberg & Gould, 2015).

The use of a goal setting training program, is one approach that had received limited attention in the sport research to enhance performance (Miller & McAuley, 1987). In later years, a more refined approach of setting and reviewing goals was discovered, which forms the way we currently understand goal setting. Thus, goal setting can be described in two characteristics, both are vitally important in ensuring effective competitive goal setting programs (Vidic & Burton, 2010). These characteristics are defined as *Goal Focus*, which includes the process, performance and outcome goals, and *Goal Temporality* which includes periodic scale, like short and/or long-term goals (Vidic & Burton, 2010). Breaking down each characteristic, starting with the *Goal Focus*; outcome goals essentially make up the results, a win or lose, an achievement or reward; performance goals, include standards set or performance levels that individuals wishes to achieve; and lastly, process goals include improving technique, sequence and strategy which would result in better systematic levels and has been recommended for use in more applied environments (Cox, 1994; Kingston & Hardy, 1997; Wheaton, 1998; Burton & Weiss, 2008; Weinberg & Gould, 2015). Athletes who hold outome goals in high regard, have said to produce low self-confidence, high anxiety which will result in poor performance, particularly in top level competition, and ultimately reducing the levels of motivation (Martens, 1987). Findings on goal setting and focus orientation, suggest that elite athletes are more process-orientated than college and high school athletes (Vealey, 1988). Many athletes and coaches at the lower levels of competition refuse to accept that a process focus can enhance performance more than an outcome focus (Wheaton, 1998). Which could explain the need for coaching education on mental skills training to ascertain how and why certain levels are important; particularly when emphasis is placed on the wrong approach

when applying them, it is surely more emperical to focus on controlling the controllables. An evident concept found by Burton and Weiss (2008) who emphasized that the importance of process and performance goals is due to their flexible and controllable nature. This justifies that the results are often given high levels of focus, but it is the controllable goals that need the most attention.

This study will attempt to explore whether coaches are aware of these basic concepts and how the shift in focus on results to processes affects their coaching styles. Explicit performance goals have been reported to consistently affect intensity and duration of behavior (Locke & Bryan, 1966). Focusing on outcome goals just before or during competition, however, often increases anxiety and irrelevant, distracting thoughts (e.g., worrying too much about the score of the game and not attending enough to the task at hand) (Weinberg & Gould, 2015). Furthermore, if an individual obtains a good result, even though they may have performed below personal expectations, they may find satisfaction in his or her performance (Behncke, 2004). If the individual obtains a poor result, despite having performed above personal expectations, they may be very self-critical and produce within themselves a depressed state that may affect future performance (Behncke, 2004). Thus, though outcome goals are critically important for motivation, it is not the centre point of the athlete's intentional behaviour. Sport psychologist do not typically have a problem getting athletes to set goals (Wheaton, 1998), rather have difficulty with the athletes setting the right kind of goals, goals that increase their intention and motivation levels (Weinberg, 1996).

An investigative study, using a qualitative design to assess the perceptions a goal setting process, with results suggesting that coaches applied the skill for athletes as individuals and as a team, short and long-term, setting them in conjunction with the players input (Weinberg et

al., 2001). Even though the coaches would take responsibility to set goals, having greater confidence to achieve self-set goals may well be indicative of a realistic approach to personal goals, a precursor to successful goal achievement (Poag & McAuley, 1992). If goal setting becomes a well-integrated part of the athletes' preparation, they may not only improve performance (Bamett & Stanicek, 1979; Burton, 1983) but also have more confidence (Bandura, 1982; cited in Miller & McAuley, 1987).

Goal setting works as it influences behavior in two ways, directly and indirectly (Wheaton, 1998). In terms of direct influence, Lock and Latham (1990), suggested that goals direct attention to important areas of skill that would be neglected, as well as, they mobilise effort and persistance by providing incentives; they prolong persistance and foster development of new learning strategies (Locke & Latham, 1985, cited by Wheaton, 1998: 46). Indirect influence is seen as a thought process concept, proposing that goals influence performance by affecting an athletes psychological state inclusive of confidence levels, anxiety and satisfaction (Burton 1989; cited by Wheaton, 1998: 46). All dimensions of motivation, attentional focus, effort, the persistence of said effort and the continued development of relevant strategies to attain goals are structured through goal setting (Harris, 1985). Like most mental skills, the one does not work without the other and in attempting to determine the effects of goal-setting, we can understand it through its relationship with, behaviour, motivation, and self-efficacy and performance outcomes to name a few. Special mention at the premise of Locke and Latham's (1990) theory of goal-setting and Bandura's social cognitive framework (1986); both theories which explore the basis of motivation and behaviour (Poag & McAuley, 1992). In fact, Bandura's Self-Efficacy Theory, proposes that goal achievement provided the strongest possible source of efficacy information that is available to athletes (Bandura, 1977, cited in

Wheaton, 1998: 44). The concept of *Self-Efficacy* is also described as confidence (Bandura, 1997 cited in Vealey, 2019: 3).

2.3.3 Self-Confidence

In the review of *Self-Confidence*, it was impossible to deny the inclusion of nearly every other mental skill, with a great emphasis and impact of Bandura's (1997) theory of Self-Efficacy. Reasearch studies involving self-confidence utilized the theoretical concept of self-efficacy in different areas of research (Akin, 2007). With a more focused approach to sport, *sport self-confidence,* similarly, was defined as the belief of the athlete in the capability towards achieving success (as opposed to just an individual) (Feltz & Chase, 1998). Looking deeper into the term, many researchers have sought to define it in the context of their studies, but all express the same idea of what it means and all speak the same language. Like Sari et al. (2015), suggests the importance of clarifying self-confidence through its multiple definitive examples if anyone wishes to make use of it.

Reviews of self-confidence literature states that; self-confidence is the assurance of one's worth, and what an individual feels about themselves (Bandura A. , 1997); individuals' belief in ability to control their abilities and their environment while living up to the challenge of the task to be performed (Vealey, & Burton, 1990; Burton, 1998; Woodman & Hardy, 2001); a belief that an athlete can successfully execute a desired behaviour,athletes have the confidence in their own judgement, skills and choices – that they can get the job done (Feltz, 1988); self-confidence has a personality feature of a complete attitude (Pervin & John, 2001); the assurance that an individual can achieve success (Sari et al., 2015). Feltz (1988) further

suggests that "self-confidence," "self-efficacy," "perceived ability," and "perceived competence" have been used to label one's perceived capability to achieve a certain standard of performance. It can be confusing when to suggest the concept with which term to use. Between self-confidence and self-efficacy, the former can be derived as either general or situation specific, and the latter as only situation specific (Sari et al., 2015).

Self-confidence is hypothesized to have a positive linear relationship with performance and is linked in a positive linear fashion (Woodman & Hardy, 2003). There are many studies documenting the relationships that self-confidence has with other important mental skills. A study focused on the motivation and self-confidence relationship, resulting in positive correlations with *Intrinsic* and *Extrinsic Motivation* (Sari et al., 2015). Interestingly though, the majority of self-confidence studies have focused on the significance of competitive state anxiety, inclusive of cognitive and somatic anxiety on self-confidence and the performance it leads to (Vealey, 1988; Martens et al., 1990; Campbell & Jones, 1997; Hassmen et al., 2003; Zeng, 2003; Woodman & Hardy, 2003). Competitive State Anxiety Inventory-2 is a test used to measure cognitive anxiety and self-confidence, which measures somatic anxiety, cognitive anxiety and self-confidence among the players in pre-competitive anxiety (Martens et al., 1990). Results from the above mentioned have been consistent with its objectives and expectations. For example, Besharat and Pourbohlool (2011) revealed that self-confidence had a moderating effect on the association of competitive anxiety with sport performance. It was through the studies by Martens et al. (1990) and Vealey (1986) that clarified anxiety and self-confidence are the two important psychological factors that influence optimal athletic performance in sport competition. Woodman and Hardy (2003), stated the lack of clarity in terms of the impact of cognitive anxiety and self-confidence in competitive sport performance

However, it was found that high levels of self-confidence can decrease the negative association of cognitive and somatic anxiety with sport performance (Besharat & Pourbohlool, 2011).

2.3.4 Anxiety and Worry Management

Over the years, research has worked on covering the effects of anxiety on sports performance across different sports and different age groups. Grossbard et al. (2009), mentions that the focus on anxiety is particularly strong within research, focusing on experimental and factor analytic research involving adolescents and adults that indicate separate cognitive and somatic aspects of anxiety. Anxiety was considered one of the main important psychological factors influencing performance (Raglin & Hanin, 2000) and will be highlighted frequently in this review. Psychologists have yet to conclude which theories best describes the relationship of anxiety and performance as theories have their own weaknesses (Ostrow, 1996). However, though anxiety was identified in deteriorating athletes' performance; theories which described the relationship between anxiety and performance are different with each other (Raglin, 1992; Gould & Krane, 1992; Weinberg & Gould, 2007; Cox, 2007).

Sports psychologists have long believed that high levels of competitive state anxiety during competition are harmful, worsening performance and even leading to dropout (Parnabas, 2015). Sports performance and participation can almost be seen as two different aspects of why one plays sport. Research shows that sport participation of high school and college youth athletes aged 13-24 years old showed to have not added additional stress to activities of everyday life that involves the measurement of competitive performance (Patel et

al., 2010). It is extreme anxiety in athletes that can be detrimental in performance situations, though some level of sport related anxiety is considered healthy (Patel et al., 2010).

State anxiety is characterized by an emotional response that is determined by personal feelings, "a temporal cross-section in the conscious stream-of-life of a person", consisting of responses of *stiffness and rigidness*, *concern, uneasiness, and fear associated with a response in the nervous system* (Spielberger et al., 1970). Additionally, competitive state anxiety can threaten an athlete's well-being as it can increase the cognitive and somatic elements, which has a tendency to deteriorate their performance (Parnabas, 2015). High levels of competitive anxiety are also associated with poor performance and reduced enjoyment of participation in both adults and children (Smith & Smoll, 1991; Scanlan et al., 2005) and usually follows a pattern of subjective feelings of tension and inadequacy, combined with heightened arousal of the autonomic nervous system (McNally, 2002).

Research indicates that children between the ages of 7 and 12 who experience anxiety have a tendency to interpret physical symptoms (e.g., sweating, trembling) as signals of threat or danger, demonstrating the reciprocal relationship between somatic and cognitive components of anxiety (Muris et al., 2002; Muris et al., 2004). Children and adolescents, like adults, are able to discriminate between cognitive and somatic components of anxiety (Reynolds & Richmond, 1985; White & Farrell, 2001; Muris et al., 2002; Turner & Barrett, 2003).

Regarding the *state of anxiety,* there are two influences within a competitive sports setting that initiates an awareness of a threat, namely; (a) "uncertainty about the outcome, "this involves the concern of winning or losing; and (b) "importance of the outcome," involves the satisfaction of an intrinsice and extrinsic reward (Martens et al., 1990; Marchant et al., 1998;

Pineschi & Di Pietro, 2013). Pineschi and Di Pietro (2013) further mentioned that because sport performance is affected by anxiety, the need to study this phenomenon has generated extensive scientific literature.

Cognitive anxiety is characterized by negative expectations and concerns, and worries about performance, inability to concentrate, disrupted attention, and possible consequences of failure (McNally, 2002; Ampofo-Boateng, 2009). It is the extent to which an athlete worries or had negative thoughts which include fear of failure, loss of self-esteem and self-confidence (Parnabas, 2015). These feelings have a tendency to be debilitative of performance (Parnabas et al., 2013).

Somatic anxiety are physiological effects, which consists of an individual's perceptions, are characterized by indications such as sweaty palms, tense muscle, shortness of breath, increased heart rate, butterflies in the stomach, and shakiness (Martens et al., 1990). In essence there are physiological changes in the athletes' including; increased perspiration, difficulty in breathing, increased heartbeat, changes in the brain wave, elevated blood pressure, increased urination, butterflies in the stomach, less saliva in the mouth and muscle tension (Parnabas, 2015). The results from a study using multidimensional theory to measure the relationship between anxiety and performance showed a tendency for performance to decrease when competitive anxiety (cognitive and somatic) increased (Parnabas et al., 2013). Both cognitive anxiety and somatic anxiety can have an impact on poor performance of an athlete in competition, or rather in the early stages in the form of pre-competitive anxiety that then may affect the performance through the competition in its entirety (Parnabas, 2015). In the sport context, we understand that during competition there are factors that pose a risk in performance as per prior conversations around anxiety and its management; *state of anxiety***,** questions

"uncertainty about the outcome," and "importance of the outcome," to the athlete (Martens et al., 1990; Marchant et al., 1998). Stress carries a weight of importance to the academic community and professionals whom are responsible for the conditioning of their sports performers (Jones & Hardy, 1990).

The relationship of anxiety and performance includes; the "multi-dimensional anxiety theory of performance," which supports the negative linear relationship between cognitive state anxiety and performance and an inverted-U relationship between somatic state anxiety and performance (Martens et al., 1990); "catastrophe model of anxiety and performance" which supports the physiological arousal and performance relations, although reliant on the cognitive anxiety level, the relationship has a bell-shaped curve, with an appalling decline in performance (Hardy & Parfitt, 1991; Cox, 2012); "individual zones of optimal functioning (IZOF)," refers to each athlete that occupies an individual zone of anxiety where their ideal performance takes place, this can either take place before, during or after in the phase of precompetitive state anxiety (Weinberg & Gould, 2006; Hanin, 2007).

Despite abundant research investigating the relationship between anxiety and athletic performance, the literature appears to lack information regarding the specific coping strategies naturally used by athletes to manage their anxiety, and how the application of these strategies relates to precompetitive anxiety (Campen & Roberts, 2011). Since how we perceive anxiety affects skills in performance, ideally there should be development of the correct skill through its perceptive modification (Page et al., 1999). As some athletes perceive competitive anxiety as negative and detrimental to performance while it invigorates and excites others (Page et al., 1999). Results evaluating coping strategies revealed that all participants used at least one coping strategy within each of the four coping subtypes (somatic, behavioural, cognitive, and

social), with social and cognitive strategies being the most frequently used (Campen & Roberts, 2011). Sport psychologists, sport counsellors and coaches should use the present findings to recommend coping strategies to university and district level athletes that are appropriate for dealing with their athletes' competitive state anxiety (Parnabas, 2015).

As we reviewed the concept of anxiety and the collective make-up of the psychological trait, we can conclude that; anxiety has a negative impact on performance, the identity of any form of anxiety is required and that a coping mechanism is absolutely necessary. In summary, anxiety is typically characterized by its effects on the performance (Parnabas, 2015). A provisional anxious state has two components that inhibit performance, mainly, a mental (*cognitive*) component involving negative expectations of a desirable outcome or negative self-evaluation (Martens et al., 1990; Pineschi & Di Pietro, 2013); and a physiological (*somatic*) component that initiates an increase in heart rate, shallow breathing, sweaty palms and stomach aches (Le Scanff et al., 1999).

Measures to counter-attack the anxiety and stress experienced in athletic performance have been broadly studied through anxiety management and relaxation psychological skills. The topic of anxiety management mentions the need for systematic coping mechanisms, and in this section focus is placed on relaxtion techniques employed across various avenues of sport, such as, injury rehabilitation, mental rehabilitation and intervention, mental toughness and mental skills. Coaches, and even parents, tend to make use of a common practice of telling a player to "just relax" as the they are about to partake in an important performance (Weinberg & Gould, 2015). Weinberg and Gould (2015) continued to emphasize that this is not easy to do unless one has had training in relaxation skills – evident again that mental skills or rather, psychological skills need to be applied "systematically". Meaning, these skills need to be

periodized as part of a training schedule and practiced according to the current implemented system or environment where it can be consistently adhered to.

Lundqvist (2006) stated the two foremost assumptions within the psychological space, elaborating the manner in which anxiety creates difficulties on concentration patterns': the "perspective of distraction and reduced working memory capacity" which indicates that athletes direct their attention from the most important information about the task to that which gives them anxiety.; and the "perspective of conscious processing" indicates that athletes, in high pressured situations, would attempt to take conscious control of natural actions or skills that they have trained. Furthermore, the increase in fatigue and decrease in motor function, are indications of anxiety that would limit performances (Weinberg & Gould, 2006). In terms of anxiety management, "psychophysiological techniques" such as, reducing muscular tension, and heart rate, proved to be valuable against the effects of state anxiety (Cacioppo et al., 2007). These techniques fall within the category of Relaxation, and can be understood as a method whereby they can voluntarily reduce the physical and psychological effects they experience when anxious.

2.3.5 Relaxation

Relaxation has been viewed more similarly to exercise, diet, or psychopharmacology, defined by what happens in the body (Smith, 2007). We've learnt that "Psychophysiological techniques" are useful for the resolve of anxiety which also forms part of the relaxation component (Cacioppo et al., 2007). Relaxation techniques best practices are those that can alter the physical responses in the body; where individuals are able to reduce their physiological and

psychological responses voluntarily (Pineschi & Di Pietro, 2013). A study by Pineschi and Di Pietro (2013), explores the use of psychophysiological methods to rediscover the purpose of engaging relaxation techniques in mental training of elite athletes. This was to assist athletes with their management of anxiety and the regulation of arousal (Pineschi & Di Pietro, 2013). Research suggests that relaxation techniques are not only used to improve athletic performance, but also to rehabilitate injury, "relaxation skills can clearly help athletes to cope with the stresses associated with injury" (Walsh, 2011). Interestingly, the skill of relaxation may also be used for the purposes of; reducing muscle tension, facilitate a recovery in a moment of intense periods of activity, sleep deprivation, reserve energy stores for important moments and initiate an optimal cool-down (Pineschi & Di Pietro, 2013).

These Relaxtion Techniques can be describe in the following two groups; *muscle-to-mind* and *mind-to-muscle* (Pineschi & Di Pietro, 2013). Muscle-to-mind is described as a technique that focuses on body relaxation by reducing muscle tension or rather reduce physiological arousal, which results in lowering psychological tension, this is known as *Somatic Anxiety Reduction Techniques***;** like Edmund Jacobson's (1938). *Progressive relaxation* that involves tensing and relaxing specific muscles and others such as, *Breath Control* and *Biofeedback* (Pineschi & Di Pietro, 2013; Weinberg & Gould, 2015). Mind-to-muscle, focuses on the mental relaxation that causes body relaxation, this is known as *Cognitive Anxiety Reduction Techniques***;** like *Autogenic Training* developed by Johannes Heinrich Schultz, in 1932, consists of a series of exercises that produce sensations, specifically of warmth and heaviness. (Pineschi & Di Pietro, 2013; Weinberg & Gould, 2015). Other *Cognitive Techniques* which stimulates the mind over the body first are *Relaxation Response* and *Systematic Desentisization* (Weinberg & Gould, 2015).

When reviewing these techniques, we must acknowledge their use and how they work; starting with the *Somatic Techniques;* the *Progressive Relaxation* method occurs gradually, shifting from one muscular group to the next, with the purpose of stiffening and relaxing the muscles that will enhance the athletic awareness of the major discrepancies in the presence and absence of muscular tension (Greenberg, 2008); this method requires the intentional control of tightening and relaxing of specific muscle groups (Pineschi & Di Pietro, 2013). *Breath control* is a physically oriented relaxation technique (Weinberg & Gould, 2015) based on the use of "abdominal (or diaphragmatic) breathing" which is regular, relaxed, and deep (Le Scanff C. , 2003). These breathing types vary from "thoracic (or chest) breathing" and is linked to situations of stress providing symptoms of an irregular, fast, and shallow breathing pattern, borderline hyperventilation. (Davis et al., 2000). *Biofeedback* is another physically oriented technique, that teaches people to control physiological or autonomic responses, specifically, it can help people become more aware of their autonomic nervous system and subsequently control their reactions (Weinberg & Gould, 2015). Moving on to the *Cognitive Techniques, Autogenic Training* is a method that aids the mind toward the application of relaxation. (Pineschi & Di Pietro, 2013). The use of verbal stimulation such as self-talk and suggestive phrases, stimulate the individuals vasomotor and cardiorespiratory changes that are characteristic of rest (Le Scanff C. , 2003). *Relaxation Response* teaches athletes to quiet the mind, concentrate, and reduce muscle tension (Pineschi & Di Pietro, 2013), and *Systematic Desentisization* developed by Wolpe (1958). Their objective was to replace nervous activity such as, anxiety manifested through increased autonomic nervous system, with a competing behaviour (Weinberg & Gould, 2015). Relaxation is an intervention strategy that the sport psychology literature has reported to be effective (Walsh, 2011).

The use of these techniques is all dependent on the necessary prescribed intervention, as one specific relaxation technique might work better for controlling cognitive (mental) anxiety, as opposed to one that might be more effective for coping with somatic (perceived physiological) anxiety (Weinberg & Gould, 2015). Interestingly, the athletes used more physical (e.g., muscle relaxation) than mental relaxation techniques in relation to coping with competitive anxiety and used more mental (e.g., imagery) than physical relaxation techniques in relation to coping with everyday anxiety (Weinberg & Gould, 2015). Though the techniques are available to be applied at any means necessary, it is difficult to induce a state of relaxation in an individual when the environment is not controlled; for example, the presence of other athletes and staff makes relaxation difficult to teach, as well as the back ground noise that is created by others (Walsh, 2011). Essentially, the athlete needs are focused on the now, where they need to pay attention to the responses of their physical and psychological changes being experienced in adverse moments during competition (Pineschi & Di Pietro, 2013). Moreover, the *here-and-now* level of concentration that alienates anxiety as anxious thinking, is impacted by the thought and anxiousness of a desirable outcome (Hazlett-Stevens, 2008). Research has had its concerns with formal and passive methods of relaxation, mainly, exercises that involve a degree of withdrawal such as, yoga and meditation, suggesting that these techniques have been the most popular tools in stress management (Smith, 2007).

Though Weinberg and Gould (2005) suggest to the systematic practice of mental skills in the same respect to that of physical training, progressive relaxation, mental practice, and hypnosis cannot replace the physical training necessary for successful performance in athletic competition (Onestak, 1991). Each of these procedures do have the potential to further enhance the performance of athletes beyond current levels and is particularly beneficial to highly skilled

and experienced athletes whose physical training has already been exhaustively covered (Onestak, 1991).

Li Wei et al. (1992), used relaxation to fulfil the systematic approach in mental imagery by incorporating relaxation techniques prior to starting the mental – imagery training, followed by video sessions. The purpose of a study by Li-Wei et al. (1992), was to expose the potential benefits of imagery training for young children. The results from a study by Li-Wei et al. (1992), specified that children (aged 7-10 years old) using imagery show a significant improvement of their physical skills. A study such as this, joint with that of relaxation, proves to be beneficial to young children. (Li-Wei, et al 1992).

Suinn (1976), developed the technique known as visuo-motor behaviour rehearsal (VMBR) that involves the use of relaxation prior to imagery (including imagery of the skill itself and imagery practice incorporating the context under which the skill will be performed) and because relaxation has been recommended prior to performing imagery to enhance its effectiveness, it is really an imagery intervention. Suinn (1976) was the first psychologist who provided on-site services to the Olympic athletes at the 1976 games (Weinberg, 2008).

The use of relaxation could potentially resolve at risk candidates of disturbances to any mental rehearsal should they have a clinical disorder, particularly those most common to children. Imagery has been ascribed a functional role in motivation (Kavanagh et al., 2005), problem-solving (Schwartz & Black, 1996; Kozhevnikov et al., 2007) and the maintenance and treatment of clinical disorders (Holmes & Mathews, 2010; Hackmann et al., 2011; Andrade et al., 2014). Studies of mental imagery conducted with young athletes showed clear, positive performance effects with matched pairs of 8–11-year-old gymnasts and 10–14-year-old figure skaters (Partington, 1990). The use of mental imagery, and mental training in general, proves

to be beneficial for children; it offers a means of learning skills faster and more easily, as well as an opportunity to learn mental skills at an early age that can give children greater control over their personal destiny (Li-Wei et al., 1992).

2.3.6 Imagery

The mental skill *Imagery* also known as mental practice or rehearsal and is often described as "the symbolic rehearsal of a physical activity in the absence of any gross muscular movements" (Richardson, 1967a: 915). Mental imagery described by a few as “seeing with the mind’s eye, hearing with the mind’s ear” (Kosslyn et al., 2001: 635). It is a skill that permits us to “mentally time travel” by refabricating the past and simulating the future (Schacter et al., 2007; Moulton & Kosslyn, 2009), and plays a key part in our understanding of cognitive function (Andrade et al., 2014). Mental imagery is a mental skill that uses all appropriate senses that creates or re-creates an experience in the mind (Weinberg, 2008). Motor imagery is a cognitive process in which a participant imagines that he/she performs a movement without actually performing the movement and without even tensing the muscles (Mulder, 2007). Many differ from one to the other, but all suggest to the designing of events in the minds of the athlete by what they perceive in reality. It must be noted that, imagery is just one of a few major components of mental practice (Hall, 2001), but the effectiveness of imagery is more difficult to tease out because of the combine effects from studies that used various forms of mental practice (imagery, self-talk, relaxation, mental preparation) (Weinberg, 2008). Additionally, imagery cannot be targeted as causing significant improvements but imagery does appear to be integral to a mental training program (Weinberg, 2008). There is no doubt that motor tasks can benefit from the use of imagery (Hall, 2001).

Mental practice can be different from imagery in that mental practice usually focuses on thinking about the upcoming performances while imagery focuses on the picturing or seeing yourself perform (Weinberg, 2008). To further simplify it, an athlete thinking or rehearsing an upcoming performance i.e. match tactics against an opponent versus actually imagining themselves performing certain skills and strategies against an opponent. Feltz and Landers (1983) and Hinshaw (1991) found that mental practice was more effective than no practice for improving subsequent performance of a motor skill (Weinberg, 2008). Vandell et al., (1943) showed that groups of subjects who mentally trained basketball free throws demonstrated an improved skilfulness that was similar to those who physically practiced the task. Weinberg (2008) explains mental imagery through baseball; a baseball batter sees the released ball from the pitcher (visual sense), feel his muscles in his upper arm as he gets ready to swing (kinaesthetic) and then hear the 'crack of the ball' (auditory sense) when he makes contact with the ball (Weinberg, 2008). Essentially, the athlete can practice physical skills without actually performing them in practice or competition (Weinberg, 2008). To completely describe how this can vary from different athletes or sports, Epstein (1980) suggests the imager's perspective, whether internal or external, is a factor which may influence the impact of mental rehearsal. We can assume in the same respect that perception may impact the design of the images as well, if as mentioned before - imagery is only a component of mental rehearsal.

Every athlete may then perceive a set of skills, pressure, competition or an opponent relevant to their sport differently and experience only a form of mental rehearsal or imaginal practice based on their perceptions. The most common aspect of imagery use that has been considered is the imagery perspective that athletes adopt, either external or internal (Hall, 2001). In a study aimed to confirm the hypothesis of a translation of sensory imagery into real perception and, ultimately, of a true involuntary response, Santarcangelo et al., (2010)

concluded that imagery of a sensory context can elicit involuntary behaviour congruent with the corresponding real stimulation/perception. Although visual imagery has been most intensively investigated, imagery can occur in any of the sensory modalities (Weinberg, 2008).

The difference between internal and external, Epstein (1980) states, the external imagery is predominantly a visual element and is characterized by a third-person perspective; internal imagery is potentially kinaesthetic and is distinguished by a first person, phenomenological perspective. During kinaesthetic motor imagery the subject has the feeling that he/she actually performs the movement with all the sensory functions (first person perspective) (Stinear et al., 2006). An exploratory study by Mahoney and Avener (1977) found that more gymnasts who were successful primarily relied on internal imagery while the gymnasts who were less successful depended more on external imagery (Mahoney & Avener, 1977). Furthermore, the successful execution of a gymnastics physical skill was related to the gymnasts kinaesthetic (internal) imagery skill, rather than the visual (external) imagery (Start & Richardson, 1964). It was also revealed that the susceptibility to use external imagery relates negatively to motor performance (Mahoney & Avener, 1977).

Epstein (1980) assessed the response of internal and external imagery or mental rehearsal, where the results indicated a small negative response in the relation between impulsive external imagery and performance, although there was no significance to the mental rehearsal factor (Epstein, 1980). Epstein (1980) speculated in an attempt to understand why external imagery is associated with lower performances than internal imagery. It was suggested that external imagery may not provide the imager with the necessary kinaesthetic cues and rather focus the imager's awareness on irrelevant cues or distractions of a skill (Epstein, 1980). Additionally, only external imagery allows the imager to assume the role of a critical evaluative

observer as it may be associated with self-consciousness and nervousness that ultimately distracts the athlete during performance (Epstein, 1980).

It was proposed that kinaesthetic feedback accompanies imagery, and ultimately, these covert responses lead to improved overt motor performance; motor imagery is the mental execution of a movement without any overt movement or without any peripheral (muscle) activation (Corbin, 1972). Motor imagery is a useful tool for neuromuscular rehabilitation; however, it is no substitute for physical exercise and it should be seen as a complementary but relevant technique to improve motor learning (Mulder, 2007). Another issue relevant to motor performance and mental rehearsal perspective is whether or not internal and external mental rehearsal differentially affect motor behaviour which immediately follows (Epstein, 1980). Most importantly, a coach's role in giving the correct feedback regarding skill plays a huge role in ensuring the idealist perception of the athlete's ability. Skill level is known to influence the impact of mental rehearsal (Corbin, 1972). Factors affecting imagery effectiveness include imagery perspective, type of task versus negative imagery, and timing of imagery (Weinberg, 2008).

Many coaches and athletes feel that imagery is critical to the success of any mental training and this has been included in many programs which have exhibited improvements in performance (Weinberg, 2008). High-performance athletes in various regions of the world who have made extensive use of mental imagery training have found it effective in improving the quality and/or consistency of their performances (Ding, 1986; Li et al., 1986; Orlick, 1990; Orlick & Partington, 1986; Yang & Ding, 1986; Orlick & Partington, 1988; Li-Wei et al., 1992). Although not all elite athletes report using mental rehearsal and not all investigators have found significant mental rehearsal effects, literature reviews by both Richardson (1967)

and Corbin (1972) concluded that this cognitive exercise may indeed benefit the acquisition and maintenance of skilled motor behaviour (Epstein, 1980). The many parameters that mediate the efficacy of mental rehearsal, however, has yet to be identified (Epstein, 1980). Though the imager may experience many distractions and lose concentration within their rehearsal, disturbances in imagery are associated with a number of clinical disorders including social phobia, post-traumatic stress disorder, unipolar and bipolar depression, and addiction (Andrade et al., 2014). Children in particular who suffer from such disorders who require Mental-Imagery Training will most likely find it difficult to utilise the skill.

2.3.7 Concentration

The seven and final mental skill reviewed in this section is concentration. Concentration requires sustaining attention over a period of time, while maintaining awareness of environmental and situational elements (Harris & Harris, 1984; Weinberg & Gould, 2007). An element that is crucial for anyone to perform at their best, it takes complete focus, of one's attention on a particular task, and to be able to shift focus to suitably appropriate cues within a specific task, rather than being distracted by irrelevant stimuli (Wilson et al., 2006). It specifically requires maintaining focus on one task at hand and over a period of time (Weinberg, 2013); being totally in the here and now--in the present (Wilson et al., 2006). Concentration is a critical determining factor of performance that it is visibly obvious through errors caused by inappropriate focus of concentration, more so in sport than in any other place (Nideffer & Bond, n.d). Most importantly, concentration would be determined by the way it is used and what critical cues affect it, whether relevant or irrelevant attentional cues/distractions) (Howland, 2006). Abernethy (2001: 76) states that "attention is clearly a

broad and multifaceted psychological construct that impacts on sports performance and learning in a large number of quite diverse ways".

"We know that we can choose between attending to the external environment or to the internal environment" (Eysenck, 1993). In musical excellence, Williamson (2004) characterizes concentration as a mode of practice or use which can differ and vary in duration and intensity. The model of how to direct focus of attention before, during and after performance (Nideffer, 1976a), identifies that concentration shifts along two key dimensions namely; direction which refers to the internal or external, and width which is the broad and narrow dimension. Evidence for the validity of the dimensions of width and direction of one's focus of attention comes from both experiential/observational sources, and empirical data (Nideffer, 1976a).

Nideffer (1976a) explains these dimensions as follows; *Broad External*: use a broad-external focus when you need to be environmentally aware and ready to react automatically and/or instinctively to something going on around you and focus to gather external information which you then consciously analyse. *Broad Internal*: You use a broad-internal focus of concentration to analyse, strategize, and plan. This is accomplished by taking information from the environment and comparing it to information you have stored in long term memory, to then develop a plan or strategy that will help you sometime in the future. *Narrow External*: to actually perform some physical (e.g., hit a ball), or interpersonal (ask a question or confront an issue) task. *Narrow Internal*: You use a narrow-internal focus of concentration to systematically rehearse information (e.g., a dive, a putt), or to assess and manipulate your own internal state in some systematic way (e.g., to mentally check your breathing rate, systematically reduce muscle tension, etc.).

It may seem as though external and internal stimuli perceive to be different, they are always overlapping and have an impact on each other; nearly all outside experience will activate thoughts and feelings resulting in a change in bodily function (Wilson et al., 2006). Cox (1994), stated that concentration is one of the most important skills in sport psychology for overall performance, as athletes will need to master them before their overall performance drops. In fact, Wilson, Peper and Schmid (2006) suggests that failure to improve or use concentration skills, will result to the downfall of many athletes. The theory of attentional style and personal style is argued to be a well-developed theoretical framework about concentration that examines the relationship among cognitive processes, emotional arousal and the performance (Nideffer, 1976a). Furthermore, Nideffer (1976a) argues that his theory of attentional and personal style is a well-developed theoretical framework for examining the relationship among cognitive processes, emotional arousal, and performance.

The Average person is capable of momentarily shutting out distractions and of focusing concentration (Nideffer, 2006). Often, this means manipulating the environment to reduce distraction, and/or using others to help the athlete control concentration, arousal and/or motivation (Nideffer, 2006). Should athletes lose the ability to concentrate at high levels, they could apply verbal and kinaesthetic cues to initiate their concentration again (Schmid, 1982). These cues are designed to assist athletes with their concentration, to align their focus on the task at hand and eliminating distractions (Schmid, 1982).

Ghesquiere and Ayllon (1980) have shown effectiveness in key focus for feedback techniques in tennis. Junior tennis players who use external attention, level–narrow, more likely that the flexible attention to fail (Gould et al., 1999). Concentrated attention on the tennis court can be determined by the athlete's involvement in the activity (Mosoi, 2012). Krane and

Williams (2006) also found that those who felt self-doubt, lacked concentration, were distracted, or overly or under aroused, tended be those who performed the worst. Concentration is still influenced by player's anxiety and self-confident (Ziya et al., 2007). Concentration can be improved by removing any form of doubt and anxiety that impacts the physical responses. Wilson et al., 2006). Athletes may have exceptional skills and even concentration skills but if they are not focusing on the relevant cues, the skills are not beneficial (Wilson et al., 2006). In addition, athletes must acquire the ability to know when to switch from one attentional style to another in a very short time period (Wilson et al., 2006).

Many athletes report that they commonly lose concentration after making a mistake and one way to deal with this problem is to train athletes to transform failure into success (Wilson et al., 2006). This cognitive habit by which athletes mentally rehearse successful performance after failure, as soon as possible after making an error (Wilson et al., 2006). Selective attention problems in sport appear to be more visual according to many of the researchers and their writings on the topic (Howland, 2006). Attention as a limited capacity or resource was proven by Janelle et al. (1999). A study on distraction and attentional narrowing tasks in a dual-task auto racing simulation, confirmed the notion that distraction and attentional narrowing occurred concurrently, leading to inefficient visual search patterns and decrements in performance on central and peripheral tasks (Howland, 2006). A component of mental toughness known as attention control, defines the player's focus and concentration basically due to the process of cognitive activities (Galloti, 1994). There is a positive relationship between concentration and self-confidence where concentration decrease, player's self-confidence also decreases and vice versa (Omar-Faueez et al., 2012). Therefore, players should focus and give full commitment to the game played as fitness and environmental factors

contributed to player's focus control especially during long period of game (Omar-Faueez et al., 2012).

2.4.MST AND COMPETENCE MODEL

The necessity for competence is defined as having the knowledge and skill to do an activity successfully (Hook & Newland, 2018). The research approach for the current study, was to identify the level of competence in terms of coaches' knowledge and use of these concepts. The seven mental skills focused in Bull's MSQ (1996) test were questioned in a semi-structured interview and allowed the scope for professional and personal experiences and views to be explored. A thematic approach and a framework of *competence* were used to analyse the data from these coaches, labelling their understanding and skills as efficient or not. The lens would provide the necessary understanding of the position of knowledge, use and belief of the coaches and in what areas they lack competence. In the instance of MST, it is important to establish the way forward to enhance the skills of athletes by addressing the knowledge of the coaches. There is a need to develop a sport-oriented framework that is adapted and logically formulated from general psychological theories and related literature to study sport. Specific issues in education such as the self-efficacy of coaches.

2.5. CHAPTER CONCLUSION

The literature that supports the theories of MST and the very specific skills used in this study, allow for complete and comprehensive understanding. The literature provides knowledge and perspective in isolation and within the context of its use in sport. The chapter

focused on the definitions of each of the seven mental skills that are being explored in the study. The seven mental skills that were reviewed in this chapter are; motivation, goal-setting, self-confidence, anxiety and worry management, relaxation, imagery and concentration. Furthermore, the chapter highlighted the theoretical framework in the form of the Competence Model and briefly introduced the relationship of MST knowledge and coaching. Moving forward with the analysis and discussion of the findings in this study, the literature highlights how we should proceed with the dissecting of information that has been collected. The literature is specific, however, owing to its aged nature, there is room to allow for how these concepts are understood now. Each mental skill is very specific and details the essence of what make its unique, there definition essentially gives guidance to the subject experiences to anyone attempting to learn about it.

CHAPTER THREE

METHODOLOGY

3.1 INTRODUCTION

In this chapter, the research approach and theoretical framework will be discussed. The research design, data collection methods, analysis, trustworthiness and ethical considerations are also presented in this chapter. A qualitative research approach was considered to be the most suitable method as it allowed for participants' knowledge and perceptions about the topic to be explored.

3.2 RESEARCH DESIGN

The study used an explorative qualitative research design. A qualitative approach allows the researcher to make knowledge claims based primarily on constructivist perspectives or participatory perspectives and gathers open-ended, developing data with the main purpose of creating themes from the data (Creswell, 2003). One of the chief reasons for conducting a qualitative study is that the study is exploratory, meaning that not much has been written about the topic or the population being studied, and the researcher seeks to listen to participants and build an understanding based on what is heard (Creswell, 2009). An exploratory research design is conducted to gain new insights, discover new ideas and obtain increased knowledge of a phenomenon (Burns & Grove, 2001). The researcher uses it to explore a topic when the variables and theory base are unknown (Creswell, 2009).

Additionally, the qualitative approach incorporates; a literary form of writing, computer text analysis programs, and a scope to be original with the idea to work within a researcher-designed framework that creates (Creswell, 2003: 22-23). The qualitative design enables the

participant's responses to affect how and which question the researcher asks next, probing the subject to give more in-depth and definitive responses around the topic.

3.3 POPULATION AND SAMPLING

A target population is said to include all elements that meet the particular criterion specified for a research investigation (Mohsin, 2016). The population of coaches in the Western Province region amounts to the number of teams competing in the annual Inter-provincial tournaments; these teams have a range of under 14 to under 18 age groups, and each age group comprises at least one team with a maximum of two teams. Netball, Water Polo, Hockey sports were used specifically as they are the most popular team sports

The aim of using qualitative research methodology is to primarily understand the subjective reality of those participating in the research study (Elmusharaf, 2016). Purposive sampling methods were used to select coaches for the research study as the coaches' inclusion was deliberate to determine the significant information that cannot be achieved from other choices (Taherdoost, 2018). Simply said, purposive sampling is typically used where the researcher is including not everyone available, but rather those who are available and who meet the criteria (Mohsin, 2016). The process of purposive sampling was fulfilled by applying a *homogenous sampling* strategy, which is exclusive to individuals that are similar in components required for the completion of the research (Mohsin, 2016). Those participants were included in the sample by the researcher as it was believed that they merit inclusion (Taherdoost H. , 2016).

3.4 PROFILING OF PARTICIPANTS

Taking a closer look at the participants, it is important to note their demographic compositions. All coaches met the criteria in terms of coaching qualifications and experience, with a broad complex number of teams and players that have been coached by them and for at least three years. Participants demographic includes four males and two females all ranging from the ages of 33-50 years of age, the average age of these subjects was 40 years old, with the youngest being 33 years old and the oldest being 50 years old. Participants demographic composition presented only two of the Eminent Persons Group (EPG) mainly, of the Caucasian and Coloured race and showed a one-sided group of coaches, mainly within the ethnic and gender types, as caucasian male coaches lead the group across the three sports. Coloured coaches were the minority as well as female coaches. All Coaches represent Western Province within their respective sports, ranging from age groups of under 14, under 16 and under 18 teams. One Hockey coach and two Water Polo coaches have represented at a national level as well as on a Provincial level. All coaches have a level one coaching qualification from their respective sports unions i.e., South African Hockey Association, Swim South Africa, and Netball South Africa. All coaches carry a coaching qualification backs up their appointments as provincial youth coaches. It is fruitful to see that the associations that employ coaches to take up the role as the top youth provincial team coaches, have the necessary qualifications to work at that level.

All coaches in this study, have coached provincial Western Province teams and have at least coached a high school first team within their respective sports. This is not too surprising in the context of the provincial level at which they are coaching, they are at least in the position of being challenged at the highest level of school competitive sport. This would sit well in their favour as they would carry enough experience with having worked with youth competitive

athletes whom make up the provincial teams. Furthermore, all coaches have coached a team at an Inter-Provincial Tournament, which is the highest level for youth sport in South Africa; all South African youth representatives are selected at these tournaments. Experience can only be achieved over time, with all coaches showing more than a decade of youth sports coaching experience. In chapter 4, the researcher will discuss the differences in age, coaching experience and the number of tournaments coaches coach in comparison to their knowledge and use of MST.

3.6.1 Sampling criteria

A researcher would not be able to collect all data from all cases in a population, thus it is necessary to select a sample (Taherdoost, 2018). Selecting participants that can deliver information that is required to answer the questions is the most important consideration in qualitative research (Maxwell, 1996: 97).

The research study inclusion criteria used for participant selection were;

- Female and male coaches
- Only head coaches
- Coaches who coach both girl's and boy's teams within their sport
- Coaches between the twenty-five (25) years and fifty (50) years of age
- Coaches with a level 1 or higher coaching qualification from the national sports union of their respective sport (e.g., South African Cricket – CSA Coaching Level 1, 2, or 3).

- Coaches with three or more years of experience in coaching youth provincial sports.
- Only English-speaking coaches will be used.

Participants were excluded from participating in the study for the following reasons:

- Assistant coaches, conditioning and fitness coaches, and technical coaches.

3.6.2 Participant Selection

A purposive sampling of six coaches from Cape Town, Western Cape, representing a range of Western Province sports unions, were asked by the researcher, to volunteer to participate in the research study. These coaches were contacted, through their respective unions, specifically the; Western Province (WP) youth sport unions of Hockey, Netball, and Water Polo. Participants were selected from a population of coaches employed by the Western Province school sports unions, from the 2017 and 2018 coaching seasons; three hockey coaches, two Water polo coaches and one Netball coach were included in the study. All of these coaches had coached Western Province Teams at a minimum U18 Inter-Provincial Tournament (IPT) level, the highest domestic level of youth sport in South Africa (SA). All coaches met the criteria of having at least a level 1 coaching qualification within their sport; hockey coaches would have qualifications from the South African Hockey association (SAHA), Water Polo coaches would have a Swimming South Africa (SSA) qualification, and Netball coaches would have qualifications from Netball South Africa (NSA). Coaches were informed of the benefits of volunteering in the study as a means of improving their coaching performances and offering their skills on a research basis to the sports science institution.

Table 3.1: Total Number of Participants in the study

WESTERN PROVINCE SPORTS COACHES OF YOUTH	
Western Province Hockey	3
Western Province Netball	1
Western Province Water Polo	2
TOTAL COACHES	**6**

3.5 RESEARCH FRAMEWORK

This research study used a conceptual model of competence to investigate MST of youth coaches, exploring their knowledge, skills and beliefs. A qualitative design employed a theoretical lens, which researchers use to view their studies (Creswell, 2009). A study by Leat (1993) describes a conceptual view of competence. Competence results from the dynamic interaction of behaviour, knowing and feeling, and it cannot be adequately understood without reference to all three (Leat, 1993). Though, this lens is not by any means a tool for assessment, but rather that of professional development; it is used to identify areas to that lack consistency of its implementation and the need to improve (Leat, 1993). To determine the outcomes of this analysis, the study needed to determine the existence of knowledge, use and belief by using the conceptual model as a lens to classify the level of competence the coaches would qualify based on their responses about mental skills training. There are three possible outcomes of the level of competence, which will highlight where they as coaches need to improve. The model is

represented as a Venn diagram (Leat, 1993), modified with the terms from the current study exploring coaching MST, in Figure 3.1.

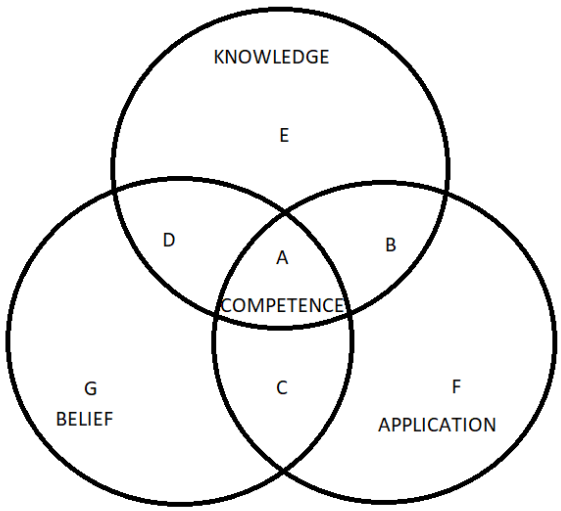


Figure 3.1: Adapted illustration of the conceptual model of competence by Leat (1993)

The model terms were modified to fit the objectives of the study and the dimensional zones are presented below;

A. Knowledge/Use, no belief: this creates stress and they do not believe that MST works if any obstacle will bring about stress.

B. Use/Belief, no knowledge: lack of awareness, specific relationships between coach and players i.e., might only be able to convey or teach MST to a certain type of player or a certain type of personality.

C. Knowledge/Belief, no use: there will be a fair amount of overconfidence and a lack of appropriate execution to merit the descriptions of competence.

D. Knowledge ONLY

E. Use ONLY

F. Belief ONLY

3.6 DATA COLLECTION

The study used a semi-structured interview as a method of gathering data. Edwards and Holland (2013) stated that semi-structured interviews contain open-ended questions that are flexible and allow the researcher the freedom to probe for further clarification of concepts. In this study, the employment of the semi-structured interview allowed for continued probing of questions to further explore the professional and personal experiences as well as the unique coaching styles of the coaches.

The semi-structured interview is a popular data collection method in qualitative research that has proved to be versatile and flexible and the quality of the interview guide has a fundament influence on the results of the study (Kallio et al., 2016). A semi-structured interview involves the researcher and respondent engaging in a formal interview whereby the interviewer uses an interview guide, usually a list of questions in a specific order, that needs to be covered through the duration of the conversation (Cohen & Crabtree, 2006). According to Barriball and While (1994), the semi-structured interview is appropriate for the exploration of the perceptions and opinions of respondents regarding complex, as well as any sensitive issues, further enabling probing for more information and clarification of answers.

3.6.1 Interview guideline (Bull's MSQ 1996)

In this study, the interview guideline is based on the seven mental skills taken from the sections of Bull's Mental Skills Questionnaire (1996), which gave the researcher a framework of questions that needed to be answered for the duration of the interview. The mental skills focus of this study was adapted from the study that evaluated the coaches coaching under pressure, measuring their levels and abilities to perform as coaches in highly stressful situations

(Olusoga et al., 2014). Olusoga et al., (2014) modified Bull's Mental Skills (1996) questionnaire to suit the coach more than the athlete; this provided clarity that coaches are expected to have the skills to perform as well as the knowledge and skills to apply MST in their teams, both in training and competitively. A series of questions focusing on the definition of MST and the seven mental skills is designed to acquire the level of knowledge; followed by a series of questions focusing on the use of these skills by the coaches in their coaching. Lastly, the guide ends the interview with whether coaches believe in the process and work of MST. A few examples of these questions being asked are like:

"Define Mental Skills and mental skills training"

"Explain your understanding of these mental skills if using it in your specialized sport"

"Explain how you use them in your training and how you use mental skills training as a tool for improving your team's performance"

Through the adoption of a semi-structured interview, probing is an invaluable tool for ensuring the reliability of the data and enables the interviewer to explore and clarify inconsistencies within respondents' responses (Barriball & While, 1994). The intention to probe the coaches was to draw discussion points regarding the most common Mental Skills used in youth sports teams and rather not as a measurement for the quantitative significance of the coach's personal Mental Skills ability. The original and adapted versions of Bull's MSQ (1996) is presented in Appendix E and Appendix F, respectively.

3.6.2 Interviews with participants

Participants were contacted before the interviews with the researcher, and an appropriate setting was established that was convenient for both the participant and the researcher. Data collection took place over one and a half years. Originally, seven participants were recruited for the study, however, one coach was later unavailable. Six participants (n=6) were interviewed in the study.

The researcher conducted one semi-structured interview with each of the participants individually. Interviews were scheduled at a time and place that was convenient for the participants, and the duration of each interview was approximately 50 minutes to one hour. All interviews were recorded using a smartphone voice recorder application and then transcribed verbatim. The semi-structured interview guide is presented in Appendix D.

3.7 DATA ANALYSIS

After the completion of the data collection and transcription of interviews, a thematic analysis applying an inductive approach was used. A basic qualitative approach includes the researcher collecting qualitative data, analysing it for themes or perspectives and reporting the themes (Creswell, 2009).

The initiation of the data analysis process began with the coding of interviews. A PC software program from Germany, ATLAS.ti 9 (version 9.1.7.0, 2022), was used to code and interpret the data. Essentially, ATLAS.ti enables a researcher to organize; texts, graphics, audio and visual data files, along with coding, code networks and findings (Creswell, 2009: 188). The software is an example of CAQDAS (Computer Assisted Qualitative Data Analysis

Software), globally used by researchers and experts from different professions of knowledge, like education, engineering, criminology, management, anthropology, and healthcare professionals like psychologists, and offers features to integrate the most significant information for the shaping of one's research (Soratto et al., 2020). In itself, ATLAS.ti has tools that allow data analysis to be performed by the researcher, who is enrolled as the critical thinker in the analysis process (Soratto et al., 2020).

Additionally, ATLAS.ti can be used with different theoretical approaches and multiple data analysis processes. One, in particular, is Laurence Bardin's (2011) approach for data analysis called the content analysis approach, a useful tool to use in qualitative research (Soratto et al., 2020). The content analysis approach is extensively used in qualitative research and has several techniques, one of which is thematic analysis (Soratto et al., 2020). The most relevant description of thematic analysis was led by Boyatzis (1998) as a method applied to identify, analyse and report patterns or themes within the data and is noted as a foundational method for qualitative analysis as it provides the core skills and flexibility useful for conducting many other forms of qualitative analysis (Braun & Clarke, 2006). To develop the thematic concepts for this research study, three phases are applied when using ATLAS.ti: "pre-analysis, material exploration and treatment of results, inference and interpretation (Soratto et al., 2020), all of which were followed in the build-up to the complete thematic analysis of the data. This process is followed in conjunction with the process by Braun and Clarke's (2006) step-by-step approach later described in this chapter.

Phases of thematic content analysis	Steps in ATLAS.ti
First phase: Pre-analysis.	Creating the project. Adding documents. Grouping documents into document groups. Writing first memos on the overall project aim including research questions.
Second phase: Material exploration.	Reading the data, selecting data segments and creating quotations. Creating and applying codes. Writing memos and comments. Grouping codes and memos
Third phase: Interpretation.	Exploring the coded data using various analysis tools. Linking quotations, codes, and memos on the conceptual level. Continuing memo writing. Generating network views. Extracting reports.

Figure 3.2: Applying the various stages of content analysis in ATLAS.ti by Soratto et al., (2020)

In this study, the analysis process coded and followed two specific themes, mainly *"lack of"* and *"sufficient"*, across all three objectives of the research study. These themes were identified to clarify the scale of the coaches' knowledge, use and belief of mental skills training before applying the lens of the modified competence model. Cross analysis of all interviews was completed which led to creating further categories and moving deeper into understanding the data (Creswell, 2009). ATLAS.ti features allow the researcher to cross-tabulate codes by documents or document groups (Soratto et al., 2020). Braun and Clarke's (2006) phased step-by-step approach as defined below, guided the researcher through the process of completing the thematic analysis of this study:

Phase 1: Familiarizing oneself with the data – all transcriptions were received by the researcher. The researcher then followed the process of "Immersion" which involves the repeated reading of data in an active way (Braun & Clarke, 2006). This also includes creating memos or marking ideas for coding.

Phase 2: Generating initial codes - after data has been read and familiarized by the researcher, a list of initial codes will be generated. Coding is part of the analysis process (Miles & Huberman, 1994) and involves the researcher organizing the data into meaningful groups (Tuckett, 2005). This step requires a systematic approach through the entire data set, with full focus and equal attention to each data item.

Phase 3: Searching for themes – the phase begins with data initially coded and collated, re-focusing the analysis at the broader level of themes. The researcher then sorts the different codes into potential themes and considers how different codes may combine to form an overarching theme.

Phase 4: Reviewing themes – the researcher will formulate a set of candidate themes and refine them. The researcher will then determine that some candidate themes are not themes.

Phase 5: Defining and naming themes – at this stage, the researcher would have a satisfactory thematic map of data. The researcher finalizes the refinement of the thematic map by naming and further refining the themes that will be presented for the analysis. This process of "define and refine" aids in identifying what each theme means.

Phase 6: Producing the report – the final stage of the thematic analysis involves the write-up of a report. The researcher is tasked with completing the final analysis of the collated

data and narrates the results back to the research question, aims and objectives to compile a report.

3.8 TRUSTWORTHINESS

Qualitative researchers express trustworthiness by simply asking the question of whether the findings can be trusted or not (Korstjens & Moser, 2018). Qualitative research has been seen as a "soft" science and is criticized for lacking scientific rigour compared to quantitative research, which in contrast, uses experimental, objective methods (Mays & Pope, 1995). Furthermore, quantitative research perspectives utilize rigour and validity, while qualitative research critiques its research findings through trustworthiness and credibility (Cope, 2014). Specific strategies are used throughout the qualitative research process to increase the worth of qualitative projects and establish trustworthiness using the following methods; *credibility, transferability, dependability, conformability and reflexivity* (Krefting, 1991). The strategy of *Saturation* is included in the process of trustworthiness to further verify the authenticity of the data findings. A further detailed outlook at the implementations below:

3.9.1 Credibility

Credibility is known for the confidence in the truth of the research findings (Cope, 2014; Korstjens & Moser, 2018), heightened by the researcher reciting his or her experiences and verifying the research findings with the participants (Cope, 2014). Credibility, termed by Lincoln and Guba (1985), argued that internal validity, like in quantitative research, is based on the assumption that there is a single concrete reality to be measured (Krefting, 1991).

Strategies to ensure credibility include; *prolonged engagement, persistent observation, triangulation* and *member check* which are to be determined when a research study is designed as not all components are suitable (Korstjens & Moser, 2018). In this research study, credibility

was achieved by the researcher making notes post-interviews on the observations and additional comments about the investigative process, i.e., the interviews. The researcher highlights the confidence and insecurities toward answering questions, topics that intrigued the coach and those which they lacked having a conversation about, and the time taken to engage in the moments of being challenged through both the participant's knowledge and use of MST. These comments can be found in Appendix G of all six coaches. *Investigator triangulation* was utilized and is concerned with using two or more researchers to make coding, analysis and interpretation decisions (Korstjens & Moser, 2018). Ultimately, the credibility of qualitative research depends on the ability and effort of the researcher (Cypress, 2017). A secondary researcher, assisted with the coding and the searching of themes to formulate the best possible approach for the use of the theoretical lens. The secondary researcher also maintained the standard of approach to confirm unbiased opinion by reviewing the coding and findings of the primary researcher's analysis. Final checks were performed by reviewing the findings in terms of the literature to ensure zero partiality.

3.9.2 Saturation

Researchers using saturation need to maintain consistency in their use and in how they report it was achieved (Walker, 2012). It is imperative that they specify the following criteria; a) was saturation achieved during sampling and/or analysis, and b) how did they determine when saturation was achieved, giving insight as to how saturation was obtained (Walker, 2012). In this instance, saturation was achieved in the current research study through the analysis process, research findings and conclusion. In terms of the analysis process delivering saturation, the information presented in the findings became continuous and repetitive. Previous studies reported that saturation was achieved once the information became repetitive

(Harrison & Becker, 2007; Henry et al., 2008; Garavalia et al., 2009; Walker, 2012). As for the latter, the research conclusion highlights the subjective viewpoints of the participants to be the basis of their knowledge, again this was shown to be repetitive. Saturation is a method that aims to reach a point where seeing more data will not lead to the finding of more information linked to the research questions (Lowe et al., 2018). Saturation is most commonly applied to purposive samples in qualitative research (Hennink & Kaiser, 2020) to collect cases with rich information that support the purpose of the study (Sandelowski, 2000). The study employed a purposive sampling for these reasons, to ensure the quality and achieve related based information from the participants.

3.9 REFLEXIVITY

Reflexivity is an integral part of ensuring the transparency and quality of qualitative research (Korstjens & Moser, 2018) and is the key strategy used to understand researcher bias (Cypress, 2017). The concept of reflexivity adheres to a process of critical self-reflection about oneself as a researcher and their own biases, preferences, preconceptions, and the research relationship which accounts for; the relationship to the respondent, and how the relationship affects the participant's answers to the questions (Korstjens & Moser, 2018). In other words, reflexivity is an assessment of the influence of the researcher's background, perceptions and interests on the qualitative research process that includes the researcher's personal history (Krefting, 1991). A reflexivity diary is a primary tool used to achieve the examining of one's conceptual lens, assumptions, and values, and how these affect research decisions in all phases of qualitative studies (Korstjens & Moser, 2018). Researchers become more self-aware and monitor and attempt to control their biases (Cypress, 2017).

As the researcher of this study, I was able to identify and acknowledge that my perceptions and preconceived thoughts, beliefs and biases regarding the research topic in discussion, might have sway the research findings of this study. In terms of the research participants, I was known to them before the study had commenced because we work and relate to the coaching profession. Not only could familiarise myself with them, I could bond with their experiences and understand their limitations. These coaches come from diverse backgrounds, those who relate to me in gender and ethnicity, perhaps related more than those not of the same demographic categories. None of the coaches were similar in age, nor had a Sport Science background, which allowed me to initiate the testing from a fresh perspective.

Throughout the research study, particularly the interview process and analysis, I was continually aware of my existing knowledge of the topic and my preconceived assumptions of the participants. During the interviews, I managed the conversation by probing to stimulate flow and maintain the frequency of the participant's responses. However, this fell to my detriment where at times I would speak over the participants as means of "overly probing" to maintain conversation. To restrict the reach for partiality, I made research notes post each interview to maintain the objectiveness of each participants' response and avoid leaning on my assumptions and feelings that could influence the analysis and conclusion of the study. Participants were assured of confidentiality and trust in the information sharing and the completion of their personal information process of the interviews. Participants were encouraged to sharing their experiences without any impact on my behalf.

All testing was conducted at the convenience of the participants and ran smoothly, apart from one. I was rushed with one of the coaches, owing to their poor planning and communication of time, but the interview was completed despite the challenge. The process of

the data collection ran smoothly as each interview was recorded on two electronic devices, namely Android and Apple. The conversations with the participants were comfortable as all were able to communicate in English, with related coaching terms relatively easy to comprehend from both the researcher and the participants.

The researcher followed the process of maintaining a reflexivity diary to document all personal views of post-interview thoughts and assumptions, the analysis process and interpretation of the results of this study and that may lead to potential inconsistencies in future interviews. Furthermore, any comments referring to the study are aligned with the codes and themes to avoid drifting from the goal to determine coach's level of competence and the need for professional and personal development. It was important for the researcher to remain impartial after every reflection. Reflection was consistently applied after the coding and thematic analysis process, to remain unbiased and sound with the literature of MST.

3.10 ETHICS CONSIDERATIONS

An approval to conduct the study was obtained from the University of the Western Cape Biomedical Research Ethics Committee (BMREC) and the Faculty of Community and Health Sciences Higher Degrees Committee before the commencement of the research Appendix A. Upon this approval, participants were contacted and invited to be part of the study. The purpose of the research study was thoroughly explained to the participants and key informants were issued to them in an information letter in Appendix A to ensure that the individuals fully comprehend the concept of the research study. Signed voluntary consent by the participants and key informants was obtained before any data collection Appendix B.

All information obtained was kept confidential by making use of a private assessment room, and by using pseudonyms instead of the participant's name. All information obtained in this research was not to be used for any other purpose except research, and if published, the participant's anonymity and the name of the clinic will be maintained. All information regarding this research was stored on the researcher's computer in a password-protected file with access available to the researcher and supervisor only. All participant information will be destroyed after five years of completion of the study.

The researcher covered all the costs of the research process, and under no circumstances were the participant liable for any costs. The participant had the option of withdrawing from the study at any point for any reason with no negative repercussions.

3.11 RESEARCH SETTING

The research investigation took place within the Western Cape, more specifically in Cape Town, focusing on coaches of various youth sports disciplines within the Western Province youth provincial level. Coaches were contacted via telephone and a mobile messaging app (WhatsApp) and were asked for voluntary participation in the study. An enclosed secure area, to meet, in and around the Cape Town Southern Suburbs that was convenient for the coaches, was used to ensure confidentiality and privacy during both phases of data collection. The researcher conducted all the semi-structured interviews with the coaches.

3.12 CHAPTER CONCLUSION

The chapter has detailed the research design that was used as well as the method of sampling and profiling of the participants. Furthermore, the chapter highlights the research

framework in more detail, explaining the lens used in the study that will assist in the understanding of the research findings. In addition, the data collection and data analysis was emphasised; where the data collection included the manner in which data was retrieved through the use of a semi-structure interview (SSI) and focusing only on the seven mental skills from Bull's (1996) Mental Skills Questionnaire. Data analysis was conducted through the application ATLAS.ti, where participant's interviews were coded through a 7-step process. Trustworthiness and reflexivity were explained and achieved in the research study, while research ethics was detailed and adhered to throughout. The research setting was described to assist in the comfortability and convenience of the participants.

CHAPTER FOUR

RESEARCH FINDINGS

4.1 INTRODUCTION

This chapter details and analyses the research findings of the study which were gathered through the processes outlined in chapter three. The research findings are partly presented in the form of direct excerpts from the semi-structured interviews (SSI) that were conducted. A discussion proceeds the analysis of each coaches' exploration of the three objectives, namely, Knowledge, Use and Beliefs to determine the value of MST in the coaching of youth athletes. The researcher used a thematic analysis, based on a Competence framework that was discussed in both Chapters Two and Three, which will further reach toward understanding the depth of knowledge and skills applied in terms of mental skills and mental skills training. Besides this introduction, and the conclusion, the researcher divided the chapter into the following main sections: profile of the participants; demographic characteristics of the participants, the process of theme development and analysis breakdown, and classification of the research findings through the three objectives;

Objective One: Knowledge,

Objective Two: Use, and

Objective Three: Belief.

A sequential presentation of the aforementioned components of this chapter follows next.

4.2 CODING AND THEME DEVELOPMENT

During the analysis process of the research study, using ATLAS.ti the development of codes, code groups and themes were completed for the purposes of interpreting the findings. These themes presented were further placed into sub-categories in order to reach the objective of exploring each subject's knowledge, use and beliefs of MST.

Table.4.1: Thematic Development of codes and sub-categories

Themes	Code	Sub- Categories
4.4 Knowledge	Lack of knowledge Sufficient knowledge Misunderstanding/confusion of knowledge	Mental skills definition
		Anxiety & Worry Management
		Concentration
		Imagery
		Mental Preparation
		Motivation
		Relaxation
		Self-Confidence
4.5 Use	Lack of use Sufficient use	Anxiety & Worry Management
		Concentration
		Imagery
		Mental Preparation
		Motivation
		Relaxation
		Self-Confidence

4.6 Belief	Full belief	MST works
	No belief	MST does not work
	MST Myth	

In Figure 4.1, the illustration shows the differences in ages compared to the amount of experience and the number of tournaments that the coaches have and been a part of. The average age of the participants is 40 years old, with the average number of tournaments being 11 tournaments within an average of 14 years of coaching experience. The most interesting and notable numbers are that some coaches who present an 'older' age, may not necessarily have the most amount of experience in coaching or have coached many competitive provincial tournaments. In the exploration of the objectives, the findings have varied with the knowledge and use of MST across all coaches; those who presented with the soundest amount of knowledge and use, has had no significance on the number of provincial tournaments coached, the findings show coaches can have knowledge, but not necessarily attend many tournaments. On the contrary, those who have lacked a basic amount of knowledge and use have been on less tournaments than the average number, which highlights that tournaments do carry a certain level of experience in the understanding of MST, but is not limited to.

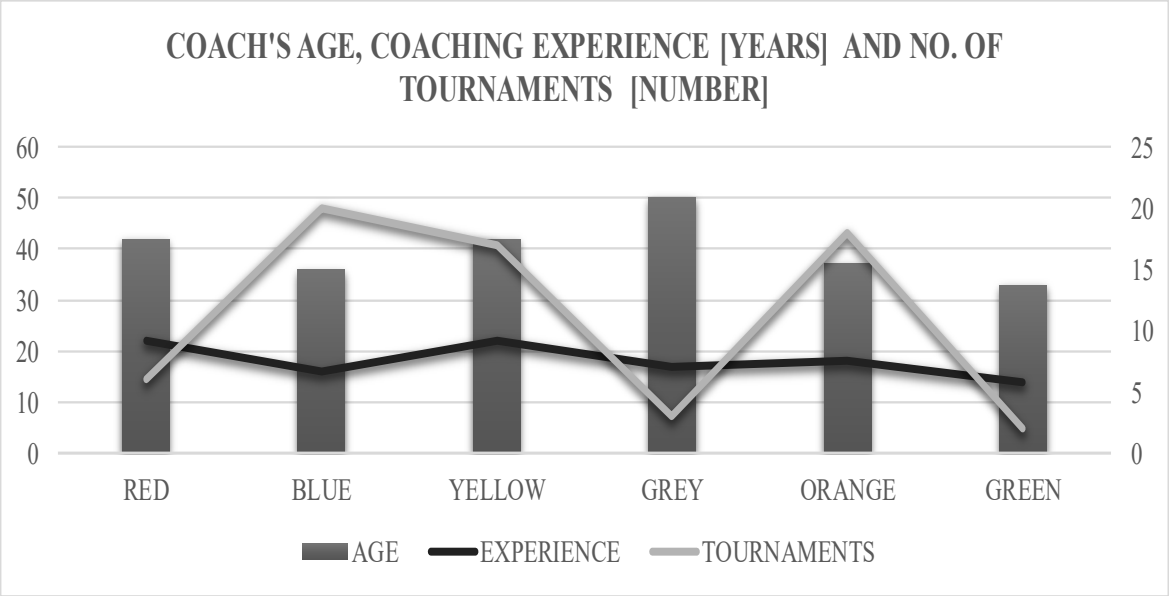


Figure 4. 1: Coaches age versus coaching experience in years, versus total no. of provincial youth tournaments coaches

4.3 COMPETENCE MODEL – THEORETICAL FRAMEWORK

As mentioned in Chapter Three, the Competence model, presented in the form of a Venn diagram, is the conceptualization of the knowledge, behaviour and feeling of the individual (Leat, 1993). Though these components respond differently as coaches learn, they are somewhat independent as well as what they are related to each other (Leat, 1993). Table 4.5 is a presentation of the identification of its components; this assisted in the, understanding of the coaches' level of competence and the determining factor of their level of knowledge, use and belief of MST. To measure these levels, the relationship coefficient used in Atlas.ti was used to interpret the shift in the model. It can then be assumed that the closer the number is to 1 the stronger the relationship, the further from 1 would represent a weaker relationship.

Table 4.2: Table of Leat's (1993) Competence Model of dimensional levels.

COMPETENCE MODEL MEASUREMENT FOR PROFESSIONAL DEVELOPMENT

Zones	Knowledge	Use	Belief
A	x	x	x
B	x	x	
C		x	x
D	x		x
E	x		
F		x	
G			x

In summary, should coaches present a strong relationship of knowledge, use and belief, they would be identified in zone A, as *Competent* (Leat, 1993). Furthermore, any identification within zones B, C and D is an indication that coaches held at least two of the three components within the model. Table 4.6 presents the relationship co-efficient of the knowledge, use and belief in relation to each other based on all findings from the research study. Based on these findings and in terms of applying the competence model to draw conclusions of the findings; coaches presented a majority in knowledge and belief and use and belief.

Leat (1993) emphasizes that the understanding of the relation of each component and its level within the diagram is to identify the need for further development – in other words, once it can be determined what the coach lacks, an intervention for learning can be applied to improve that area of their competence. The findings in Table 4.6 clearly identifies the greater relationship between knowledge and belief (zone D) with a coefficient relationship of 0.35 and use and belief (zone C) with a coefficient relationship of 0.25. There is a weaker relationship between knowledge and use (zone B) with a coefficient value of 0.07.

4.4 OBJECTIVE 1: KNOWLEDGE

In the research objectives, the first objective was to explore the knowledge of the sampled Provincial sport youth coaches. The findings were achieved by questioning all coach's viewpoints of MST and the seven components of MST extracted from Bulls Mental Skills Questionnaire (1996). Each coach had an opportunity to answer as best as possible what they think and believed to be the best and most fitting description of MST and each mental skill; the knowledge was explored by enquiring how it can be best defined. This was then interpreted and coded, as explained in Chapter 3, in accordance with the definitions described within the literature. Anything not aligned to the basic concept of the mental skill was coded as a lack of knowledge; anything that was aligned with the basic concept of the mental skill was coded sufficient knowledge. The following exploration of knowledge is analysed by these two codes, sufficient knowledge and a lack of knowledge and described in the sub-categories of the components that make up MST. The results and discussion of knowledge in the context of MST can be viewed below;

4.5.1 Mental Skills training

Coaches had an opportunity to describe their views on MST. Coaches with sufficient knowledge of MS and MST typically mentioned that it involves the preparation and readiness for performance. Quotes are aligned with (Sharpe et al 2013: 1) "Mental skills represent a regulatory capability to maintain, for example, a state of optimal concentration or optimal emotional control". More findings on coaches' definitions of MST follow;

"It's basically taking the psychology and the mental amplitude and your EQ in terms of trying to understand an athlete and how to utilize that aspect of an individual to get the best performance from them at the big stages."- Coach Orange

"The ability, myself or a player, or a coach to be able to prepare themselves on a mental and emotional level to have tools and techniques to be able to deal with pressure on tour, or pressure in training, and to be able to prepare themselves to play games, to practice properly, and to receive information." - Coach Red

"Mental skills would be pretty much the ability to control the controllable and the uncontrollable which can and can't be controlled, but the principles of it, and the elements that goes with it." - Coach Blue

"Mental skills training would be the application of the skills. But also it can't just be a once off thing. It's going to be a continuous …" - Coach Blue

Very important to note that only one of all the coaches mentioned that MST is a systematic practice and if there is a desire for it to work and to achieve, it needs to be trained as consistently as any other physical skill. They went on to further note that, when we use professionals, we do not proceed to use them consistently either.

"We fall short, sometimes I think, for example we do one session with someone that's qualified and then that's it, we know that survival needs to be followed religiously." - Coach Blue

Furthermore, there is an understanding that MST is a group of skills that is taught like physical skills. Coach Orange was the most knowledgeable of all coaches, lacking nothing in

terms of defining and understanding the concept of MS, the components that make up Mental Skills or Mental skills training in itself. Some coaches go on to mention how they learned the importance of MST and the role of a professional that has the knowledge and skills to teach and implement the systematic practice of MST. It is evident that in Western Province Hockey, there is an invested insterest in the psychological pillar of sports performance as these coaches share a common understanding of MST and in a shared sporting interest.

"A lot of components that you essentially gotta breakdown when you working with individuals." - Coach Orange

"I find the application of the mental training is where the professional needs to be involved." - Coach Blue

"I've realised that if I'm unable to do something, I'll rather get a professional in." - Coach Blue

"I can imagine now how a professional who's studied this kind of stuff can possibly access more from the girls than I can, I don't always have the time to invest this much energy, okay on a provincial tour they're my sole focus when I'm there." - Coach Red

Coaches who had lacked knowledge in the instance of defining MST at the outset, still managed to mention later on in the interview that MST is a long-term process saying,

"... it doesn't happen overnight." - Coach Green

Coaches who were not able to define MST, gave a general "thumb-sucking like" answer based on their instinctive coaching experiences. In all instances, two of these three coaches had the highest number of coded quotations for lack of knowledge. These coaches made no mention of the repetitive practice of a psychological skill to achieve a desired outcome or to improve any technical ability. Futhermore, in most of the other Mental Skills definitions, they struggled to give a convincing definition for the Mental Skills in question.

"I think there's a couple of definitions, so how to make you tougher, how to make you more aware of situations, how to deal with situations." - Coach Green

"Mental skills training is making, for me, for children I specifically focus on mental strength training, to believe in themselves, to make sure they are aware of what they are capable of doing." - Coach Yellow.

Coach Grey was the most underperforming of all coaches, with a total of twentyfive (25) quotations that described knowledge, sixteen (16) of them were coded as a lack of knowledge and nine (9) coded as sufficient knowledge and was the only coach to have a score where the lack of knowledge number of codes exceeded the number of sufficient knowledge codes. Subsequently, Coach Grey had most often not defined terms correctly. There is confidence that coaches experiences are different from what the literature suggests, there is a belief that it works with limited knowledge. The findings on Coach Grey presented a consistent theme, whom would often describe personal experiences to coach their teams and players, by familiarising themselves with what their players are experiencing and relaying the necessary advice as they observe it. Coach Grey had justified their lack of knowledge of MST by mentioning their upbringing, suggesting that the experiences of dealing and overcoming difficult circumstances have resulted in some form of mental skills. Similarly, Coach Blue also

felt that if they carried a certain amount of confidence in their ability, they would expect their players to trust them with confidence in what they say and do too.

"My perception of mental training is in preparation with how will you, with youth, I always say that the mind is the battlefield, if you are not up here (points to the head), sharp enough or strong enough it can even if you physically strong and you not strong mentally it can break you down." - Coach Grey

"Maybe my things is gonna differ from what the book is saying because this is my experience with mental even through I've attended uhm workshops about uhm mental challenges." - Coach Grey

"We coming from different backgrounds and if you come to if you come to court. uhm what will you instil in that person to transform that challenge, that mental challenge and I believe yes if we, if we uhm if we as coaches are not too harsh but be hard. You can there's a fine difference between hard and being harsh." - Coach Grey

"We can win that player by completely transform that players uhm mind." - Coach Grey

"I think the players feed off the coach 100%, and if I'm 100% confident in what I'm doing the skill set or technique, whatever it may be come across a lot better, and more powerful, I think the players there in that regard which doesn't happen enough." - Coach Blue

Coaches rely heavily on their experience to detail the concepts of MST. Not that these experiences are considered null and void, however, there is no evidence to suggest that there is

an acquired knowledge of Mental skills and Menatl Skills Training, mentioning any kind of benefits, the enhancement of performance and emotional control.

4.5.2 Anxiety and Worry management

Many of the coaches lacked the complete understanding of anxiety and worry management. No mention of the physical effects of state anxiety, nor the description of its effect on performance. The findings on this field presented more lack of knowledge than sufficient. Coaches presented their description by mentioning the importance of another mental skill to express what they were trying to convey and understand themselves. Other findings of coaches' responses were related to external factors. They expressed that the causes of anxiety were as a result of environmental factors, social media, parents, officials, personal factors and outcomes, to mention a few. Majorly, coaches presented concentration as an important skill when attempting to handle anxiety;

"Concentrate, breathe in, breathe out, I was always told so like when a tennis player hits a ball and you hear the grunt, it's just the air coming out they stiffen up, they breathe in and then they hit and that's now because they pull their core together, same with a drag flicker so as you're about to release the ball you're as compact as can be as you releasing you then let the air, let the air out which is really key." - Coach Green

"If someone has got a little bit of stress, if you don't allow them to focus, then the stress is going to grow you have to take away their ability to worry about extra factors so you have to bring them back into the moment." - Coach Yellow

"Anxiety managements, stress management is what is happening around, outside of your sports environment, so for me that would be the focused on how the child is aware of their stress management, in terms of how do we manage their paces, what is happening at home, what is happening in the school." - Coach Yellow

The fear of failure was a very interesting cause of anxiety that the coaches mentioned. Expressing that the fear of failure would cause their players to underperform was quite a common theme in the finding. Underperforming in the sense of making a mistake, missing a chance, losing a result, all contribute to the factors of fear of failure. Again, at the outset the findings did not present any relation of anxiety to performance, and the effect anxiety would have on performance. Furthermore, findings suggest that distractions are the largest cause of anxiety, with factors such as parental pressures and social media being some of the most mentioned factors that play on the youth's anxiety levels. It was found that any form of distraction in any regard in fact, has a heavy impact on the cause of anxiety, even winning.

"One external factor that is a major issue in coaching school or sport, the parents see or compare the kids." - Coach Yellow

"Social media and everything is, things happen you know, girls are breaking up with their boyfriends; parents are going through a divorce; they had other focuses, so stress management time came into it, they had matric exams." Coach Yellow

"Stop worrying about everybody else, they stop worrying about whether, actually is going to stop the ball." - Coach Red

"The biggest cause of anxiety, especially school players, is probably the fear of failure, failing, and then the consequences of failing. Missing a goal, or not making

a save, or having a bad game, and then the implications about that, what it means to them." - Coach Red

"I think there's a lot of external factors that relate to young players or youth having anxiety and worry about results. That comes from coaches, coaches are only worried about results, their school systems, club systems, provincial systems." - Coach Orange

4.5.3 Concentration

Concentration is possibly the easiest component of Mental Skills to describe and discuss as no sports coach can address their team without mentioning that they need to focus. The findings suggest that coaches had expressed the need to focus on multiple components of play, focus on what players are doing in the moment and what is happening around them, but most importantly, that they don't get distracted. Though we found previously, that distractions or a lack of focus could also lead to the rise in anxiety levels, it is clear that levels of concentration need to be trained. Findings were accurate in the systematic practice of this skill, suggesting that it needs repetition and under pressure to able to use it in the most necessary of times.

"It's the ability to focus under pressure." - Coach Orange

"A real high-level athlete by their ability to concentrate, they able to get learning and unpack that problem that they dealing with and essentially move forward, break down the problem, move forward, and then find a result." - Coach Orange

"Concentration for me is rubix cube. It's a multi-layered problem and you're breaking it down to get everything to work together." - Coach Orange

"I think concentration also needs to be practised, it's not something you can say now you must concentrate." - Coach Blue

"Concentration is mainly being able to concentrate in small bits of time, on a specific skill, on something, you have different levels of concentration throughout the game and different stress areas." - Coach Red

Coaches description highlights their experience, the undiresome need to constantly reiterate to their players to stay focused and concentrate; clearly, learning has happened, understanding that concentration is not a quick fix and an easily applied mental skill – we understand that instinctively, it is without question that Concentration needs to be applied repetitively, in trainings and in competitions. Additional findings within the knowledge of concentration suggested that the tool is most effective when under fatigue and for as long as possible. Concentration was also described as a tool where players are expected to shift their focus, like the flip of a switch, teams are instructed to learn to move the focus from an involved moment to an uninvolved, but just as an important moment. Interestingly, is that one coach suggested that it is not a matter of switching focus, but shifting it.

"It is a hard thing to concentrate especially when you get tired on court, that is where it kicks in the most then they can't concentrate." - Coach Grey

"Easiest way to really get them...well to test their concentration is training them under fatigue." - Coach Green

"Concentration is ja, you got your focus, maximum focus for as long as possible." - Coach Green

"Knowing when to switch on, switch off uhm you know I think it's also hockey is a very interesting sport where you can't really switch off, where you can't relax that much because the game is so fast so." - Coach Green

"Different phases in the game here, or phases within a game where you can switch on and switch off and switch off safely, and then practice." - Coach Red

"Concentration, rather than switch on/switch off, dial down you never completely off you can learn to dial up in a certain area of concentration, when you really need to be focused up the intense level or to get back to field to help cover defence." - Coach Red

4.5.4 Imagery

The findings around the concept Imagery were relatively easy to explain as most, if not all coaches had the exact same definition for the concept. Coaches described Imagery as a movie or a picture of their tactical game plans or technical skills being executed by athletes in their matches or during competitions. They expressed their teams would implement a session before their matches to visualize what they want to execute and achieve. From a different perspective, the findings also suggest that coaches described imagery as a tool used for match preparations, getting their players into gear and ready for strategic game plans and set plays. Coaches have mostly described imagery as:

"It is a picture of how we are going to achieve our results through that game." - Coach Yellow

"Being able to form a mental picture in your head about what it is that you want to achieve, particularly when it comes to a skill, so you picture yourself doing that skill." - Coach Red

"You're gonna visualize the opponent you know, the strength and the weaknesses and how we can apply whatever was coached to them because we work with strategies so we always have plans in place." - Coach Grey

Additionally, coaches also state how their athletes would use this tool as seeing themselves as winners of a match or competition, seeing their opponent, seeing themselves win, seeing the outcome of the tournament, but most importantly, coaches highlight their athletes seeing themselves perform their skills and processes. A major find here is that coaches highlight that their imagery sessions is about things that can be controlled instead of things that cannot. We can assume that the coaches' response forms an indication of the important information relayed to their athletes in terms of what to visualize.

"The movie that you play, the visual aspect, the dreamer part of you. So, it is seeing yourself winning the tournament, imagery is about you going through the process." - Coach Orange

"Having a moment to yourself and visualizing if you playing a hockey match… what you going to be doing, if you are gonna be a forward and you want to visualize how you going to score the goal in that moment in time." - Coach Green

"Imagery would be visualizing what you are about to go into, so whatever match, or whatever preparation, practice, whatever skill set, technique, that kind of thing." Coach Blue

"You can picture yourself performing the skills successfully, picturing yourself or imagining yourself winning something, what it feels like, so that the tactile and the sensory kind of ability to picture something in your head of being successful." - Coach Red

4.5.5 Mental Preparation

The findings of Mental Preparation reflect that coaches understood that it is a form of Goal Setting, they highlighted the very essence of the concept and mentioned that it is used to achieve a desired outcome. Goal setting is achieved through a team session, physically writing them down and making suggestions toward the team and individual goals. Coaches highlight that they make time for these sessions to set goals and their responses indicate that through experience, the best opportunity to utilise this skill is at the beginning of the season. However, it would be interesting to see if coaches apply this skill regularly and not just once a season. The findings suggest there is a theme of responsibility over performance in the description from coaches, they suggest that setting goals allows them to look at their players and hold them accountable for their standards and performances. Coaches also suggest that the tool initiates the foundations of a team culture and the buy-in from all athletes within the team. Coaches would use this goal setting to initiate a values-based system to promote the team culture environment.

"Physically writing down stuff. I think it's your agreement to yourself...uhm...so it's your checklist, would essentially be goal setting." - Coach Orange

"Being able to spend some time to set goals for a game, for a practice or for a season, or your life, to be able to prepare your brain, to prepare your mental state to be ready to take part in a competition, and to achieve success." - Coach Red

"We set individual goals, as well as a team goal per tournament processing what we are going to practice in that game, in preparation for the next game, and then hoping that we are going to achieve the finals." - Coach Yellow

"Also defines your principles they believe in, in terms of what they want to achieve." - Coach Green

4.5.6 Motivation

Motivation is the most closely linked mental skill with all other mental skills. Without motivation, there is not much reason to do anything. The findings suggest that motivation was described as the concept of the "why". It gives rise to the reasons why athletes are there and why they play the sport, and what is it going to take to have them perform to their best. More so, the findings for the knowledge of motivation are that coaches have described it to be an achievement of many things, many kinds of goals. Again, lacking the true description of the skill, by highlighting that there is an external and internal reason for wanting to pursue a desired outcome. Coaches did not mention the specifics of what makes motivation exactly what it is.

Coaches, were majorly misunderstood with the true concept by missing the point of motivation as a skill on its own, they often brought in other mental skills, particularly goal setting and concentration. Motivation is linked to other skills more than the rest, but it is a skill that has its definition that needs to be comprehended and understood for what it is exactly, Motivation has two important components which are highly important for the awareness of athletes, however the coaches only ever describe it as an extrinsic value and aligned to other mental skills.

"Unfortunately for many athletes, motivation is only for winning." - Coach Orange

"The motivation is your drive. It's the reason why they play the game, but more so the reason why you want to win your motivation is your why." - Coach Red

"You have to try and find the common motivation for them, what is it, that's where you go back to your team goals." - Coach Blue

"It is about finding what they wanna achieve and "I think motivation is something that needs to exist every day" - Coach Orange

"It's about being able to identify what you want to achieve, so it's part of your goal setting the reasons for those goals… that is the kind of thing that drives you to achieve your goals." - Coach Red

"It could be as simple as winning a tournament, it could be as simple as a handshake, a congratulation. It could be as simple as...thanking, everyone, for being down at the session and training hard." - Coach Orange

"Whatever your team goal is, whether it's to win IPT, whether it's to have a great tournament, whether it's to make a national team, that will motivate you for the task, so whatever you need to be motivated then, whether it be a technique in terms of a quote." - Coach Blue

Findings also suggest that coaches determined that they are more motivated to achieve, intrinsically or extrinsically, than their athletes. This makes sense as coaches mention how much they desire for their athletes; they want them to achieve and them to do well. Interestingly, it was also found that they project this feeling on to their athletes which have shown to result in anxiety and pressure. Furthermore, coaches described their frustrations toward the skill not used enough or systematically and across the board of other sports and in general daily living. Notably the fact that motivation is all just about winning, the extrinsic value of motivation. Coaches whom have not been able to correctly define the skill of motivation, have described the skill as a means of keeping their athletes motivated from within their own ability. Findings have suggested that coaches also like to take the responsibility to motivate players by validating their already identified beliefs and abilities. It would be beneficial for these coaches to rather teach players what motivation is and assist them with finding reasons to be motivated, than to spoon feed motivation to them in order to regain self-confidence.

"I think a big problem of coaches is that we often find that they are more motivated than their players they get frustrated and react poorly to situations you as a coach, you need to essentially allow them to live their journey." - Coach Orange

"I need them to believe how important it is for them to want to achieve, you guide them more and you give them a little bit more, because you want them to believe" - Coach Yellow

"It's to give them a lot of what they have inside of them, their ability, their gift uhm so to keep them believing you have to keep on you know not saying nice words. I'm going to tell you what you need but I'll also tell you that strength, that strong points that you have." - Coach Grey

"Here is potential that they can do something you know you motivate people by telling them what they want to hear, how good they actually are. As long as they know that, well, it gives them just a little bit of something." - Coach Yellow

4.5.7 Relaxation

Findings were clear that no coach had the sufficient knowledge of Relaxation, as coaches were unable to define Relaxation as a tool that requires voluntary control of bodily responses to stress and pressure. Coaches relied heavily on their tournament experience to describe Relaxation as best as possible, as they mentioned that Relaxation is a tool used for post-matches or competition, in a recovery session – which is not entirely inaccurate, but there are more levels to its definition and purpose. The coaches describe their understanding of relaxation through its application, saying that most Relaxation techniques are completed through a scheduled session post matches in the form of a aqua session or satic stretching. Coach Orange was clear in his analysis that elite sport needs to have planning and consistent

training, they refered to Relaxation as a component that needs training specifically in order to achieve an outcome.

"If you wanna win tournaments, then you need to periodise your training and make sure your athletes have relaxation and you need to also explain to them the importance of relaxation you get the new concept that is now coming around which is now your active recovery." Coach Orange

"Relaxation uhm ja, I think that's more for some would say for after a match."- Coach Green

"Relaxation is something that would essentially happen when you have a break it's that utilising that time to recover when you on the bench. – Coach Orange

"After a match just go into a pool and just...everything that just happened now don't play it, don't play it in your head. It's done, it's finished, it can't be reversed…after a while we thinking of what's the next game you warming down, two-minute static stretches, you go into a pool and you just unwind." - Coach Grey

"Relaxations, is being in different environments, so pre-tournaments relaxation is just taking yourself. I allow my players to go into their own zone, and go and relax." - Coach yellow

"They also need to, after the game, switch off from the game. There is your switch off time there you have to switch off and relax. But the literal sense of relaxation for me is before and after the game. There should be a turn off period." Coach Red

To further probe the topic, the word *"Composure"* was thrown into the conversation to stimulate a deeper thought process of the term Relaxation. This prompted coaches to dive deeper in to their knowledge and went on to say that composure is a skill in which athletes can or need to learn, to remain "*calm"* in high pressured situations, to trust the game plans and their abilities to carry out the task in order to win. It is evident in the findings that coaches lack the knowledge of the true meaning of Relaxation, as they prefered to describe a state of relaxation and emotional control as composure, rather than the skill to be able to relax under pressure. Yes indeed, the word "*Composure*" is described as a state of calm and control of oneself by Oxford Dictionary (2022), but it is the skill Relaxation that is needed to be trained. Much like motivation, where coaches take up the responsibility to motivate their players instead of teaching them how to develop the skill, findings suggest that they would do the same when it comes to relaxation. Coaches would be oblidged to take control to keep their team calm and composed in high pressure moments. If they would learn to train the skill of relaxation through MST, it would highly beneficial in match situations to initiate the skill with them, rather than take ownership of it. Furthermore, this would leave more time in interval breaks to focus on tactical plays, instead of using that time to manage emotions and stress.

"I think composure is more it's calm but you also at a high sense of concentration. I would say composure sets in when things are radical or hectic, scruffy out there I think experience gives you composure." - Coach Green

"That state of mind where decision making isn't a, 20, 30, 40, 50 voices in your head, it's being clear of what your decision is and be able to make it in a composed state, under a relaxed state." - Coach Blue

"I've got composure here they have got to learn to relax before a game then during the game time, and it goes with self-confidence, if you have the confidence, and the trust in your ability, then you have composure in the game." - Coach Red

"I think composure comes with the knowledge that you have skills and so you can relax a little bit, when you are building up to specific sections of play. - Coach Red

"In order for you to be the best, you have to find that state of composure and relaxation." - Coach Blue

"Your concentration may be a little high, your relaxation level and composure is within peak from a literal sense of relaxation… more time on relaxation the composure comes in, they have trust in their abilities." - Coach Red

"It starts with the coach first. So, I need to keep composed all the time and that is me that I keep composed all the time, even though my team is behind." - Coach Grey

4.5.8 Self-Confidence

The findings presented that coaches found it generally easier to define self-confidence, coaches pointed out that this is all about complete self-belief. Findings suggest that coaches were accurate in describing self-confidence as the belief in one's own abilities to achieve a

desired outcome, as well as the complete trust in the decision making. Self-confidence is described by coaches as a fearless skill, a skill most desired by coaches for their athletes.

"I think being self-confident is having the belief in your ability but also being humble in victory, being ready for any situation that you faced with, uhm not taking a step back and not living in fear." - Coach Orange

"Self-confidence is the belief that you will make the right decision, and even if you don't make the right decision, you should be able to learn from your mistakes. Complete trust in one's own ability is the fact the you trust your decision-making ability. You trust yourself to do the right thing, at the right time." - Coach Red

"Is belief in your abilities to perform at the highest levels, and what you are capable of in yourself, making sure that you are able to achieve whatever it is that you believe that you can achieve." - Coach Yellow.

Making mistakes and losing self-confidence, what happens to players when they lose belief in themselves? Well, coaches are trying to pick them up, but athletes are not aware of their capabilities to and what self-confidence is. Athletes may not be self-confident, as they do not know their true potential, what true confidence entails and how to retain what makes them confident, even when they make mistakes. The ideals of a self-confident player was frequently described in this process. Findings from coaches also described that self-confidence allows for athletes to be consistent in their performances, coaches are aware that the athletes who naturally ooze self-confidence do not need much coachng, but those coaches enjoy working with those types of athletes as they compliment the ideals of coaching. Consistent athletes with high self-confidence, standards do not drop. They are expected to maintain their ability and skill, even

under pressure. Coaches identify that anxiety will test their self-confidence and it is important to manage the way they deal with it. Anxiety is identified as the inhibitor of self-confidence; coaches identify that as soon as the athlete experience self-doubt, the anxiety levels outweigh the self-confidence levels massivley.

"If each individual isn't self-confident, they go back themselves and make mistakes. In a team environment you have to have that ability to believe that you are the one that can perform under pressure at that moment, and if you don't believe that, those moments can let you down and your team down." - Coach Yellow

"If you've got a group of self-confident group of players or confident group of players they'll trust each other as well, and then a team game that's also one of the most important things." - Coach Red

"Self-confidence, and then also it's understanding yourself. I think if you know who you are as an athlete then you gonna have self-confidence in what you able to give, consistency also comes into that. If you are consistent in your performance where you can have self-confidence." - Coach Orange

"If someone has got a little bit of stress, if you don't allow them to focus, then the stress is going to grow, and you have to take away their ability to worry about extra factors so you have to bring them back into the moment." -Coach Yellow

4.5 OBJECTIVE 2: USE

The findings for the use of MST are relevant to each coach that feels the need for it within their sport. Coaches have shown to identify how they use MST as an intervention for

their team's performance either in two ways; one is the reactive approach, where coaches apply MST as they see the need for it and is the complete opposite of what MST is designed for. And two, the proactive approach where coaches identify through learning experiences (team failures and successes) to include MST in their coaching and training through a periodized and systematic approach to overcome the limitations of their team's performances, taking one step closer to the team's optimal performances. The exploration of the use of MST amongst these coaches were achieved when coaches were questioned which skills they use and how they use it. Not all skills were identified by them in their trainings or matches, moreover, coaches implemented MST seldom and only as they perceived the need for it. Findings have suggested consistent reactive behaviour from the coaches, which suggests a complete lack of use. Interestingly, coaches have implemented the skill accurately in a training or match situation, despite doings so reactively. Findings have noted that coaches continue to take ownership of the mental strength and abilities of their players by spoon feeding them the validation of their ability or to correct their thinking, coaches rarely encourage their athletes to take responsibility over their thinking and mental skill confidence. Findings for skills that were identified to be used can be seen below.

4.6.1 Anxiety and Worry management

Findings in the Anxiety and Worry Management skill have suggested that coaches identify immediately the athlete's stresses as they commence playing or training. Either the athlete will approach them with an issue, or they will identify it through their behaviour and conversations, the stress can be seen. Coaches have mentioned that they intervene this limitation by attempting to remove the stress through reassurance and emotional management.

Coaches have shown to rely on their adult instincts and experiences to assist them to overcome their stresses. This process is to prevent and restrict the room for fear of failure.

"If you can remove the fear or failure from an equation, and generally you are able to manage that anxiety and worry, you are able to find out what the girls fear the most, or find out what players worry about the most…Give them the tools and techniques" - Coach Red

"If anxiety kicks in and this person tells you out of experience, I can't shoot, I need to step in there and give her that kind of, as I said to you not belief but reassurance." - Coach Grey

"When you hear it, when you see it, you got to take it all away, you have to make sure when they come to you, they are enjoying it, make sure that the kids are not overstressed with their other environments." - Coach Yellow

"It's about trying to mentally get them prepared and explain to them that the day is over, school is over. All you want is an hour from them, we can't physically change the mind-sets, if they can't and you see it in their game it's about pulling them off and having a chat with them and just reassuring them that you know you here to play. This is where you enjoy yourself and you don't have to worry. This is where you relax. Get that frustration out of you." - Coach Green

Findings suggest coaches respond to stress and anxiety by placing them in a calm environment to allow them to relax and respond to their preparation and training for their next upcoming match or competition. Coaches want their players to feel cared for and reassured of their feelings and skills, allowing them respond positively knowing that their stress is real and

consistent with a life experience. Coaches suggest that they are responsible for assisting the athletes with dealing with the stress. One coach responded with a management technique in their training session to teach their athletes how to respond without reacting with a frantic approach to stress, staying calm and communicating as if there is nothing to correct. This was applied through an additional mental skill and is clear to see that it was a learnt experience as it was planned and applied periodically. On the contrary, other coaches will use themselves to highlight the techniques of dealing with anxiety, by informing the athletes to see their coaches are artists of the skill, to see how they deal with their own anxieties.

"Look at me I will do with all my players, look at me just embrace and enjoy. It's fine to have anxieties it's fine to have the butterflies." - Coach Grey

"I basically take my players away from their environment, we go to a quiet space and I try to listen rather than ask questions, I hear what the players say about people, and that is where I do a lot of stress management." - Coach Yellow

"I'm always asking the question how you doing? What you feeling? It's being able to actually use that anxiety and worry management being able to go, okay well is this helping you? How you feeling about, you know so I know we stressed and I know that you're struggling with your skills and that it's not new, you upset about the last goal." - Coach Red

"I look at stress management first. I think something might be stressful on the field, whether it be a high press, I'll ask the players how do you feel in a high post? And if they say they feel under a lot of stress then I'll re-enact that situation with the players and I'll put them in that situation in that scenario." - Coach Blue

"I would go on the reverse where we'd say, complete state of calm, no one is shouting, no one is screaming, no one is doing anything, let's see what works for us and how to get out of the situations, but way before that I would go into a board talk, visualize everything." - Coach Blue

4.6.2 Concentration

Again, concentration a skill that often is thrown in the faces of athletes to just apply without any constructive training to improve the skill, coaches have provided many examples of their interventions for this skill, reactively and through planned sessions. The findings regarding coach use of concentration, much like their knowledge, apply the skill under fatigue and in moments to create a loading period of the skill, where athletes are required to initiate the skill before actually needing to use it. Coaches showed how incapable they are with managing and implementing a basis of concentration skills, and controlling the team dynamic when it comes to applying high systematic concentration levels, and consistently. Findings are related to coaches who have expressed their difficulties of applying concentration in their trainings and matches, particularly in preparations, their athletes are incapable of apply a non-negotiable amount of attention. Coaches neither know how to refrain from spoon-feeding their athletes the energy to acquire a certain level of concentration. It would help the coaches if they knew what concentration truly meant for them to fully implement the skill and achieve the outcomes, they so desire from their training sessions and matches. In other words, concentration cannot be performed unless it is purposefully and consciously trained all the time.

"Our warmups are always hectic so the heart rate is up. I'm always testing the boundaries of concentration and then we go into something, whenever we do stick and ball warm-up, you can see at the start it's really good but as it goes on miss trap, skew push and then I say guys come in. We really got to make sure that we watch the ball a little bit closer, maximizing the amount of time we can concentrate for." - Coach Green

"Concentration, I will pair up two players to really run hard shoulder to shoulder and the third thrower will throw a ball between the two workers that's working to like really get that ball and just feel the intensity and feel the competitiveness between the two." - Coach Grey

"I suppose the ability to concentrate on a team talk so that, and the ability to comprehend and I think that we struggled a lot with that." - Coach Red

"The tactical preparation is about focusing, about being able to, the word is 'the comprehension of the game plan ', the understanding of what we want to achieve. So, it is not even necessarily mental preparation, it is being able to take the game plan and put it into physical plan." - Coach Red

4.6.3 Imagery

Coaches expressed visualization and the use of imagery as a tool to set a game plan, they quite confidently expressed the manner in which they plan their matches through the utilization of Imagery was; the visualizing their opponent, their own skills, the game plans, the exection of the skills and their emotional state under pressure and character. They describe that there is a clear instruction that their aim for the visualization sessions is to prepare themselves

for the opposition. Coaches use multiple techniques to bring about the best course of achieving a clinical and effective visualization session; they instructional platforms to initiate the loading of the skill.

"Something that's not practiced with us, suddenly preparing for a match, the day before players would start visualizing what needs to happen on the field it's very powerful, because very seldom you think of the negatives with visualization. You hitting a ball into the goal, you see it go into the goal, you don't see yourself missing it." - Coach Blue

"Visualize, what you want to achieve and I think with kids and their imagination I think they can see the goal, they can see them scoring that goal or making that tackle so I think for...for school kids really, really important." - Coach Green

"Actual imagery, I create a platform where you can see by drawing and movement and then I will ask each individual to tell me what they think should happen in that moment. On the visualisation side, I make them sit down and relax and calm, and I make each individual focus on what their job is I say you are in a moment right now; you are in front of the goals, okay I want you to visualise if someone is coming on the outside, what would you do? there is no right or wrong in that moment, they visualise the moment of the game." - Coach Yellow

As mentioned before, the use of imagery has a dedicated time for this to take place. Findings suggest that coaches have purposefully picked when to apply imgaery in their team sessions, and would most often happen in the build-up to a match as opposed to the necessary systematic periodized training approach. Coaches different styles of visualization include using

techniques to limit vision and completely rely on the imagination and preloaded image of the skill for the purposes of controllinh the thought processes and decision making. This has shown to present calming skills as coaches rely on their athletes to take their time throught the training.

"Ten minutes, it is part of our warm-up. While we are stretching, we sit down and we have the calming side as well." - Coach Yellow

"It's just visualize, you know, a moment before the game." - Coach Green

"I try and keep the balance between off field and on field, so if we have three hours of training on field, we would have three hours of training off field, whether it be visualisation, or whether it be sitting goals, whether it be that kind of thing." - Coach Blue

"I will do drag flicking. It's massive and working with the guys did a lot of visualization in terms of taking your time, visualizing where you want to score the goal not even looking, so even with a blindfold you already know." - Coach Green

"With no ball, no ball means no mistakes, no ball means serious concentration and visualization in terms of what is happening, and then re-enact what could potentially be happening in a match." - Coach Blue

4.6.4 Mental Preparation

Mental Preparation is all about planning. Coaches know that any team desiring success needs to have a plan, a tactical plan, a plan for technical skills, conditioning, and some kind of team building and goal setting. In the previous objective, coaches highlighted that mental

preparation was all about the planning and goal setting. The manner in which they do it, is described below. Findings suggest that coaches have utilized presentations and team talks to initiate a goal setting task. Their athletes are required to set team and individual goals, all of which are aimed at success. Not much evidence to suggest the components of goal setting, despite the timeline i.e., short- and long-term goals. There was no evidence for the initiation of setting performance and process goals, only outcome goals.

"Goal setting, always a power point presentation with both juniors and men's, a proper big presentation and what we want to do and then as we go on mid-season, these are the goals we set, do we want to change them? Do we want to keep them?" - Coach Green

"I focus on preparation of ourselves, make sure that every player in my team is aware of what their role is in the team, and what their job is, to make sure that they are focused in terms of what role they are playing in the team at a specific time, so we set individual goals, as well as a team goal per tournament and those will start with the basics of taking each game individually, processing what we are going to practice in that game, in preparation for the next game." - Coach Yellow

"In the training sessions we use a lot of goal setting for the mental preparation, we tell them the aim of the practice we have to achieve by the end of the rule, so the skills we are going to focus on, we will let them know what the goal is, the goal we are setting, what the plan is, so that they know mentally what they need to come out of the whole thing with." - Coach Red

Coaches again choose when and how frequently they wish to do these sessions for the improvement of the team. Some coaches even felt they do not do it enough or early enough for the team to set goals and have a target to aim for during the season. Coaches that wish to hold their players accountable, have expressed the investment in the writing and completion of their personal goals. In addition, findings show that coaches continue to express how they want to achieve the goals that have been set and the reassessment of the goals if they are not achieved. The persistence is evident, as coaches have expressed their desire for their team and athletes to improve.

"I do it twice a season so at the beginning where they set their goals and then obviously do a summary of how we doing in terms of getting to those goals." - Coach Green

"Mental preparation for me is, we are going to talk about twenty minutes, that is broken down, far backwards." - Coach Yellow

"I need to do better with the mental preparation and I need to start doing it with them as early as possible." - Coach Red

"Progressive, so time dependent. So, I try fit in a certain amount of sessions in a season so it might be. So, two hours." - Coach Orange

"Sometimes it might be two in a week and then we don't do anything for two weeks, it depends how they reacting to the pressurized situations." - Coach Orange

"As a team they need to provide me with their goals, as individuals they need to provide me with their goals. I then do an assessment and one on one feedback with them; I do team feedback. Then essentially from that, then we start looking if there's

any gaps, I feel that all of these are important to the common mental psyche of an athlete." - Coach Orange

"We did a goal setting session before we spoke about what they wanted to achieve and they voiced their goals to the team so they held a little bit accountability for what they want." - Coach Red

"I really enjoy reading it because it's nice to hear from the boys and you haven't been attending those sessions and don't make it then I just get the paper out and say, look these are the goals you set." - Coach Green

"At the end post-season we then see whether we've achieved our goals. And for me the goal setting is individualistic and also team." - Coach Green

4.6.5 Motivation

An easier task of inspiring athletes, findings suggest that coaches achieve the implementation of this skill by having their athletes write their motivation down, making it real. Coaches use motivational quotes and texts to reach out to their athletes. Some evidence suggesting the effectiveness of the technique, as the skill of motivation requires one to address both the extrinsic and intrinsic sides of the skill to be fully achieved and practiced. Findings have also shown that coaches have created a motivating environment.

"Motivation I use different techniques; I use quotes I use, environments where the kids are, what they want to be when they grow up one day, so I use different techniques in terms of getting them to achieve at guys' level." - Coach Yellow

"I personally put a lot of quotes in my WhatsApp group to players to look at, I ask them to put quotes in the group, we will go through quotes, for example and they'll extract it and explain their quotes to the team, and then we will…" - Coach Blue

"When it's in writing, then it's a story that I get to keep and I've got to try and keep you on that path." - Coach green

"Today, which in the four best quotes out of the sixteen we'll use today for EP and then we'll put that aside, right which is the four best quotes against some of our and then pull it out and we'll take it to the dugout with our team and put it up on the side of the dugout and they can keep looking at it." - Coach Blue

Coaches have expressed to use their training sessions to help motivate their athletes, intrinsically. A refreshing point of view as coaches look to apply a give-and-take approach to stimulate players to feel motivated. Coaches have highlighted their responsibility to initiate conversations that will uplift and keep their players motivated, they have given minimal context to what they would say, however there is evidence that this is a technique used to achieve motivation. Coaches have suggested to talk about emotions when it comes to getting their players motivated, attacking their feelings and changing their doubtful perceptions into confident ones.

"I definitely tug at the heart string and I'll mention things like the province badge and how much it means to represent your province or your country, how many players are behind you supporting you, for me the biggest motivation is the external, the third person, you, me, the coach, the player, and then it is…your girlfriend, your boyfriend, your mom, your dad." - Coach Blue

"Trying the lift up energy levels, especially after school time, so the higher the reward, we would prefer to be rewarded with fun, with jokes, with … maybe a few extra water breaks, or whatever, and then when we feel like we haven't advanced, we are not getting anywhere because the energy levels are low the response to skills are low, nobody looks to be trying, or having the confidence." - Coach Red

4.6.6 Relaxation

Relaxation is closely linked to the anxiety and worry management, where techniques are similar, however it is merely just the identification in the moment the separates the one from the other. For example, anxiety and worry management is a skill of identification and the understanding of the emotional response to stress and how it impacts the physical and psychological well-being of the athlete. Where relaxation is the skill of changing a stressful response to a calm one. In the instance of coach's use of relaxation, it was found to be heavily linked with the setting and environment in which the coaches apply the skill. Evidence suggests it all has to do with the where and how it is applied. We established that coaches use relaxation majorly for post-match or post competition settings, to allow for muscle relaxation and subsequently let the psychological effects take its course as they unwind.

"I allow my players to go into their own zone, and go and relax. Some like to run around, and that is their relaxation, some like to sit and focus, and do stretching, yoga. I bring yoga into my training as well, for relaxation purpose." - Coach Yellow

"Play music and they have a dance before every game, I think that is an enjoyment factor, I think if you are enjoying yourself, you play well as well, so I think creating the enjoyment around sport is important." - Coach Yellow

"When you're off the bus, from that stage up until you start warming up, you listen to whatever music you listen to, so you get into your zone." - Coach Blue

Coaches have shown to be tactical in their approach with regard to the implementation of the skill, they would use interval breaks, post-match situations and sometimes would intentionally remove an athlete from the environment to apply the mental skill in order manage the athlete and their stress levels or lack of composure. The need for an ideal environment proves to be the main theme in the approach, to ensure balance and protect the athlete from feeling overly focused on when being managed. Additionally, coaches would use imagery and concentration to achieve the implementation of relaxation.

"Relaxation from the intensity of what you doing but you can still be active and maybe go do something that is different but is enjoyable which still keeps you well rounded as a person, so relaxation is important for the balance of the athlete." - Coach Orange

"Calm down, go back to our basics and get them to visualize the moment when they took that last shot and they could convert the opportunity, and I use techniques that we are allowed to use in water polo, I could time-out that we can have a team talk quickly, so to get them back to where I need them to be. Often in water polo I take a player out to have a quick chat to them, put them back in to give them that 'believe it'." - Coach Yellow

"So, relaxation but with concentration, knowing when to switch on, switch off."

- Coach Green

4.6.7 Self-Confidence

The findings for the use of Self-confidnence showed the least amount of use as coaches expressed hardly any MST or interventions of the skill. Coaches found diffcutly in addressing their athletes self-confidence, displaying a lack of methods to teach them how to enhance and miantain the strength of the mental skill. Moreover, coaches could only identify whether they had the skill or not, what makes an athlete self-confident and the personality traits of athletes that differentiate the understanding of their ability to be confident. There is evidence to suggest that coaches react to this skill by applying their own personal experiences of what confidence is. They approach the intervention by looking at themselves and then projecting their thoughts and empathizing the feeling of insecurity in attempt to aid in the improvement of their self-confidence. Furthermore, athlete's personalities have shown to be a major lead in the understanding of self-confidence and coaches expressed how to trigger athlete's to achieve optimal self-confidence. They develop around their strengths and their weaknesses, albeit that they are completely arrogant or completely insecure.

"If I find this player is not confident or it's because she does not believe in herself and it's a concern because like I said I can't give my beliefs to you so, how do I deal with this, so constantly motivate the person." - Coach Grey

"When we looking at confidence, it's a building block and everyone's got different understandings of it. I think it is understanding personalities and how to utilise

that to balance individuals. So, an individual's complement one another." Coach orange

"When I coach, I do a lot of pairing, either pairing a strong personality with a personality that likes to be led and likes to work with that person. If you've got two very strong personalities together, they often fighting for the same goal so there's a conflict. They gonna take that option that everyone else is too scared to score, so that's how you educate them to use that ability to a positive aspect." - Coach Orange

"Sometimes every team needs that arrogant individual because they the ones who are often the game winners." - Coach Orange

Self-confidence was expressed to be beneficial in the context of a safe space, an environment that is not negative and hostile, a space that allows athletes to be positive and reflect on their mistakes positively and with support.

"Our main concept is to try and promote self-confidence, and place confidence in themselves…the practices, the mental preparation would be in a safe environment, so practice games, practices, all in a safe environment continues to be stressed that pre-season tournaments, mid-season tournaments." - Coach Red

"If you continuously have negative affirmations, negative commentary in a game, they struggle to pull themselves up, so there is no confidence, there is a lack of confidence, so you don't achieve your goal, so your mental preparation's every time will be almost impossible because you trying to get girls to think positively when in actual fact, they're in a negative state of mind cause they're afraid to make mistakes." - Coach Red

"I wait for that moment where they have done something good to bring them out, have a chat and say exactly what you did now, want to take them to another environment, so it is managing the process and understanding each individual. You know you are dealing with thirteen different personalities every time, so you have to make sure that you understand each one." - *Coach Yellow*

4.6 OBJECTIVE 3: BELIEF

The exploration of belief was achived massively, as every question was answered with the concept of recall. All coaches responded favourably to the question of whether they have belief in MST. Findings of the belief suggests all coaches recalled from their experiences to highlight their answers and give the most fitting response. The researcher needed to identify the difference between a coach having belief and a coach having no belief by paying attention to their recall and whether it made perfect sense. In the instance of no belief, it was clear to see that their experience did not have the same assurances. For example, coaches who would recall their experiences gave examples by highlighting what works and what does not work. The second approach to maintain this consistency of identfication was to be aware of the reasons coaches attached to their experiences; the understanding of what they can't do in a sitatuaion versus what they should do in a sitaution. It was imperative to identify consistently their experience and analyze their explanation of what does and does not work, thus accepting that they believe in the experience they confidently respond to. Anything that does not reach the criteria was considered a lack of belief and was seen to be confusing and leaves for openness. If coaches understood their limitations in their beliefs of MST, they would be able to reflect immeidately on what inhibits progression and improvement season after season. The following

findings pertains to the coaches who presented moments of full belief od the systematic practice of MST:

"Let me put it this way, unconsciously, if I go back 20 years, of course I used mental strengths, I just didn't know. I would change the way I coached, so when I first started coaching, we would lose, because we were new, and then all of a sudden we would start winning and I, because of the way I changed and I made players say, stop worrying about the opposition, let's worry about ourselves first, so in essence that is mental training." - Coach Yellow

"I used it a lot, but I didn't realise that I was using it. Now when you ask me, I don't use it as a tool, it is part of my coaching, it is part of who I am, it is not like I have to sit and go, Oh I have to do my mental processes before we go. So, I look at every element, I look at my team right now and I go, cool – do we need to visualise" - Coach Yellow

"Coaches go look I can do that, without realising that there's far more to mental skill preparation or mental skill application even than we are able to do that's why I believe mental skills are hugely important and being able to at least do the basics, every coach, every successful coach should be able to if they want to be a success." - Coach Red

"And I think over my years now I've realised that if I'm unable to do something, I'll rather get a professional in." - Coach Blue

Even though coaches had presented some findings wit no bleief, it is aligned to the myths of MST. Coded as part of the use objective, it was shifted to the beliefs as it is directly

involved in the reasosn why coaches and athletes do not apply MST at all and for whatever reason. The following findings pertains to the coaches who presented moments of no belief and MST myths:

"I'd be frantic, I'd be hard, I would put the fear of God in them basically say if you mess up this is the result, the punishment is going to be." - Coach Blue

"No, no I don't use it for my seniors. Not at all." - Coach Green

"Honestly, I won't say never means never, maybe once I've said to them imagine it you know but it hasn't been like, I don't say okay this season this is the procedure, I go, okay guys we're gonna have a session where visualization is a specific session that we're going to have." - Coach Green

"It's a catch 22, as coaches we want to stay in our comfort zone or do we want to starve our self? So, I'm very kind of borderline what I'm going to coach because I know it, or what I'm going to coach because it looks cool. My team knows I'm confident, they confident." - Coach Blue

"So, everyone in the team wasn't happy, because we hadn't achieved what we should have achieved, we came from third to thirteenth, it was not good enough and it was because of the influences in the team that had happened, and also a managing process which starts with me, and I decided to change that." - Coach Yellow

Further findings suggest that coaches took a moment during the interview to reflect on themselves and the importance of a conversation as such, where they begin to understand that MST is highly valuable and benefitting to performance. Coaches who have noted in the

interview that they are also educators, were receptive to the idea of MST and how it can change the way they think about their teams performances.

"I think and lot of people, and me included, don't understand the importance of or what is mental skills. They get it, they get the visualization, I don't think we necessarily understand how it is useful, so conversation like this makes me understand that I've got quite a few mental skills." - Coach Red

"I believe mental skills are hugely important and being able to at least do the basics, every coach, every successful coach should be able to if they want to be a success." - Coach Red

"I believe goals change every single year" - Coach Green

"It's also teaching them how to deal with each other, is quite a big thing. These are skills that aren't necessarily taught at school, they not being taught at home, so you need to take the time to do it." - Coach Orange

"I realized that it's so much more than just being able to be a one off lesson and going who will they set their stuff out in a treasure box, this is what they want to keep, this is what they want to chuck away, this is what they want to work on, it's got to be almost like two or three sessions where they can, or that what's they spend the time doing, and it's about finding the time for those mental skills in a busy school day." - Coach Red

"I don't always have the time to invest this much energy, okay on a provincial tour they're my sole focus when I'm there…" - Coach Red

"No, no I think the kids get it but I don't think the seniors get it. I think the seniors they find it too childish." - Coach Green

"Fortunately for me, I don't do it all the time, because some kids got jealous, so I do it with the team that wants to, we have a focus before every tournament, what are we going to be, where are we going to warm up, why are we going to do it, and then we do it. And that is us, and that is every individual team." - Coach Yellow

4.7 RESEARCHER NOTES

Field notes are defined as a method of data collection which provides an opportunity to record what the researcher sees and hears through the process of interviewing including thoughts about the dynamics of the encounter and generation of ideas to inform future field work (Arthur & Nazroo, 2003). Based off of the consistent reflection of the study, I found that my views toward the findings and my preconceived assumptions were significantly similar. I believed that coaches needed a heling to respond to the interview and recalled countless moments from experiences. Though I remained impartial, it was important to not become repetitive and avoid reaching saturation at an early stage of the study. The use of my reflexivity diary aided in the subjective capturing of my feelings and thoughts about the interviews to maintain impartiality and analyse the data with an objective eye. A method used to initiate the process and identification of interesting data and theme development (Ritchie & Lewis, 2009). My field notes were written in the form of rough notes and were typed up as soon as the interviews were completed. Again, this information was stored

securely, in a locked drawer and drawn upon to inform the development of initial themes and reflect on my feelings at the time of the interview.

4.8 CHAPTER CONCLUSION

The aim of chapter 4 was to deliver the research findings and achieved that by separating the objectives of the research study. The aimed to explore the knowledge, use and belief and analysed the findings by achieving each objective. The chapter focus was to highlight each coach's responses to each mental skill through knowledge first, then their use, reviewing their responses and emphasizing the major findings. Thereafter, the research findings of the coach's beliefs of MST were detailed. Finally, the researcher notes were described to emphasise partiality and unbiased views towards the responses from the participants.

CHAPTER FIVE

DISCUSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter presents the summary of the research, discussions of the findings, study conclusions and recommendations based on the data analysed in the previous chapter. The study aimed at exploring coaches of youth sports' knowledge, use and belief of MST. Limitations have been identified and further explained in the chapter as well, this is to improve future research in the same context.

5.2 SUMMARY OF THE RESEARCH

The focus of this study was to explore the competencies of knowledge, use and belief of MST in coaches of provincial youth sports. The industry of South African youth sport, particularly on a provincial level, has grown into a performance-based level, a stepping stone toward national honours. MST is one pillar of performance that often does not receive enough attention and needs exposure, hence why this study took place. The three objectives of the study of MST are:

1. Explore the knowledge of MST of coaches
2. Explore the use of MST of coaches
3. Explore the belief of coaches

The literature of all MST components taken from Bull's (1999) MST questionnaire, was studied to understand what the basic concepts are of these skills. To achieve the objectives

of this study, each mental skill was studied through the literature and defined accordingly. In terms of technical ability, the study attempted to identify if and how the coaches would use MST and if they believed in its process. Furthermore, the interpretation of the findings was completed through the lens of the Competence Model by Leat (1993), a tool that is used to identify areas of development. The findings were then presented and discussed in Chapter 4 in terms of their conclusive responses to MST.

5.3 RESEARCH DISCUSSIONS

With the literature on MST covered in Chapter Two, studies surrounding the effectiveness of MST in youth sports, the importance of MST in sport and youth sports, and the practice of MST in youth sports, have all been tried and tested (Gould et al., 1999; Weinberg et al., 2011; Sharp et al., 2013;Golby & Wood, 2016). Moreover, MST was thoroughly discussed as a sports performance tool and the benefits of its work in enhancing youth athletes, coaches and athletes' perspectives and the limitations of MST in sports performance (Thelwell & Greenlees, 2003; Johnson & Gilbert, 2004).

According to the opinions and findings of this research study, the exploration of the respondent's knowledge, use and belief of MST in youth sports was found to be limited. The basis of the coaches' responses was identified as subjective, with the conclusion that coaches would be successful in the knowledge and implementation of MST should it be exposed to them through an objective learning environment. It was previously found that coaches mental skills training knowledge did not come from books or formal courses despite them having sufficient knowledge on sports psychology (Gould et al., 1999).

This section aims to highlight the interpretation of the coaches' responses to MST by; understanding what they are saying about MST, how they have attempted to use MST, how MST is used versus the knowledge of the coaches, coaches' knowledge versus their belief of MST, their knowledge versus their use, and finally, their belief and confidence of MST in general.

5.3.1 Systematic practice, experience and knowledge

In terms of knowledge surrounding the concept of MST, the main findings of this research revealed that respondents have a sufficient amount of knowledge of Mental Skills and Mental Skills Training (MST), but lack the main concept which is that MST is a systematic practice, MST improves performance in sport, but needs to be implemented through consistent systematic practice (Weinberg & Gould, 2015). Similarly to Weinberg's (2011) study on the coaches' views on mental toughness, the themes generated around coaches' perceptions of mental toughness overlapped with existing literature, which suggested a good knowledge base between athletes and coaches regarding mental toughness (Weinberg et al., 2011). Findings suggest that coaches were mostly consistent in recalling their experiences to highlight their understanding of MST. What was interesting is that all coaches had a different perspective unique to their own experience of what MST is. Whether these excerpts are valid is an avenue worth evaluating. Coaches believed that their experiences weighted a level of knowledge aligned with the level of expert opinions and essentially with what the literature has to say. Coaches with more experience would essentially present different views and knowledge of mental skills training than less experienced coaches (Gould et al., 1999). Coaches revealed that their perspective of the concept had grown as they became more familiar with the concept like

the way coaches improved the quality of their responses the more the interview continued, they found their rhythm of response. We can assume that, as coaches had their own experiences through sport as players and as coaches, they needed to; overcome adversity with a level of mental toughness, they needed to do so regularly through a level of training and they had to learn to deal with their emotions while experiencing it. This would allow coaches to confidently convey this acquired knowledge of that experience to their athletes. In essence, coaches would have developed their mental skills and mental qualities, albeit in some form of concentration or emotional control, regularly using mental skills over some time in their coaching (Sharp et al., 2013), whether they are aware of it or not. It is important to note that there are distinct differences between mental skills and mental qualities (Holland et al., 2010). We understand mental skills are tools (confidence, concentration etc.) which benefits performance (Weinberg & Gould, 2015), while athletes verified that mental qualities are indeed psychological features that enable optimal performance (e.g., self-assurance, perseverance, attentional focus) (Holland et al., 2010). Unless these coaches have had training by a professional in the instance of a workshop, teaching them the importance and training methods of MST, it is evident that their knowledge comes from their own learned experiences. Furthermore, coaches also perceived that MST is all about confidence and that the more confident they are in what they are preaching, the more confident their athletes will be. Regardless of the type of sport and coaches' perspectives, confidence remains an attribute of mental toughness (Weinberg et al., 2011). Coaches who perceive they are confident in what they say and do, would resemble that they have acquired a set of mental skills and an understanding of them. Based on the findings, we can assume that their understanding of MST is subjective; their use of MST and the identification of its necessity to use it will show to be less consistent. The study has established a limitation in the results, between the knowledge and the use of MST. Based on the coefficient

table, there is a weak relationship between knowledge and use. Leat (1993) clearly states the model requires that one component cannot exist without the other for there to be an existence of a level of competence and a dimensional shift across the zones. The weakness in the relationship indicates that coaches lack the belief that MST works (Leat, 1993). This creates a situation of stress for the coaches; they know from subjective experience, they use the skills subjectively, but they lack the belief that it could work and will always be a hesitation to use it; the reason for approach comes from their feeling, not from their knowledge. We can then assume that this is linked to the lack of knowledge in the systematic process and implementation of MST from the coaches. It is evident in this conclusion that systematic practice and belief are the most important piece of knowledge in MST. Coaches and athletes that were part of an MST program for youth rugby players believed that it was important too; train MST techniques that they learn and to train them in their practice sessions like physical training sessions (Sharp et al., 2013). For example, athletes would combine the techniques of mental imagery with the physical practice of the intended skill, also called visuomotor behaviour rehearsal (Behncke, 2004). Findings presented limited points that suggested the practice of MST, however, coaches did perceive MST to be beneficial for performance. In terms of the benefits of MST, often the role of a professional was mentioned in the aspect of formally and systematically applying MST. These coaches do not perceive themselves as the biggest role players of MST to their athletes within their sports. Coaches of the NCAA, all perceived mental toughness to be a key component of sports with themselves as having a critical role in developing mentally tough athletes at that level (Weinberg et al., 2011). Essentially, coaches play an important role in the development of MST (Edwards & Steyn, 2008), where the main goal is to promote the use of MST techniques systematically and with an in-depth perspective (Pain & Harwood, 2004). We have thoroughly established that the

coaches' knowledge of MST is paramount in reaching optimal performance, particularly for athletes who believe the importance of the development of coaches' knowledge and perceptions of MST and its methods. (Sharp et al., 2013). Coaches would not make much of a success of MST should they not take the time to learn it. Previously, in terms of MST knowledge of coaches, the major problem was the lack of time for the coaches to teach mental skills, whereas a lack of knowledge and experience were not perceived as major roadblocks (Gould et al., 1999).

Essentially, for MST to be successful, coaches need to be provided with tangible, relevant sporting-specific examples and activities for the emergence and boosting of MST use in training sessions (Gould et al., 1999), this would provide them with the confidence to implement MST at will and within their periodized training schedule. Coaches will understand the true value of its work, but determine what works for them to achieve optimal performance. In conjunction, training environments would need to be formed to mimic demanding experiences at various levels of development, it is only through these demanding experiences over time that develops mental toughness (Weinberg et al., 2011). Moreover, it was found that coaches who took an interest in MST courses and were certified, felt confident they had more sport psychology knowledge, and felt the importance to analyse and identify an athletes mental skill weaknesses (Gould et al., 1999). Gould et al (1999) further suggests that there is evidence to believe that attending a sport psychology course is related to increased coach awareness and knowledge about mental skills training.

Coaches have often mentioned that MST is important for the player and team readiness before matches and tournaments. South African Netball coaches and players have agreed that psychological factors play an important role, particularly during an athlete's preparation for

competition (Van den Heever et al., 2008). Additionally, a study on tertiary hockey players results showed the vital importance of psychological preparation to any sports performance (Eloff et al., 2011). Similar to the sports of this study, it is evident that MST is proven to be a concept that cannot be disregarded in the desire for optimal performance.

5.3.2 MST is used subjectively

A common practice is telling a player to "just relax" or "stay focused" as they take the step into an important performance and we know this is not easy to do unless one has had training in relaxation and concentration skills (Weinberg & Gould, 2015). The findings around the components of MST suggest that most coaches were able to define each concept accurately, in some shape, way or form. This is linked to the conclusion that coaches' knowledge of MST is based on their experiences. Concerning the components of MST, the study found that the use of MST of the explored skills was concluded to have been expressed subjectively on experience, in the same way as the knowledge of MST. Like all MST components, based on Weinberg and Gould (2015) they ought to be trained with some intention to improve, a deliberate approach to performance. The classification of deliberate practice is known as a vastly organized activity demanding a great amount of concentration and effort (Kudlackova, 2011).

Overall, concentration, imagery, mental preparation, and self-confidence were well understood and defined. When unpacked, mental skills like; mental imagery, concentration, self-confidence, goal setting and motivation, appear to overlap (Edwards & Steyn, 2011). The findings in the study have suggested this overlapping of MST, where examples of these skills are presented concerning coaches' perceptions are linked to Weinberg et al. (2011), with goal

setting and self-confidence, mentally tough athletes can psychologically prepare for competition, as well as develop game plays and set plans (Weinberg et al., 2011). Research, suggests that; mentally tough athletes will do the extra sessions independently to reach their goal, they have the motivation to work hard (Weinberg et al., 2011); motivation strategies to build mental toughness included encouraging athletes to watch other performing athletes and teams, showing motivational video clips of athletes demonstrating mental toughness, as well as teaching athletes to use visualization (Weinberg et al., 2011). Similarly, the current study's findings suggest the following scenario in the regard of Weinberg's (2011) argument; a coach perceived that athletes would not be guaranteed to reach success if they continue to skip training sessions, especially when they have written this in their goals. Coaches would provide their athletes with motivational quotes and have one-on-one conversations to inspire and encourage their athletes and attempt to create a nourishing and positive environment if it means their athletes will perform better. Coaches understand that some form of work is required when it comes to training the mind, albeit players are learning to breathe, write down their goals, or focus on only the internal stimuli, it requires effort and practice (Kudlackova, 2011).

Further findings presented concentration as a means of focusing on multiple stimuli, for long periods, and was trained and used frequently under fatigue. Every coach understands the meaning of staying focused, the skill is truly a skill to be mastered, or performance will almost always suffer (Wilson et al., 2006). The main goal is to avoid being easily distracted, and to focus attention on the task at hand in situations, even when adverse or unexpected situations occur, especially through irrelevant external and internal stimuli (Wilson et al., 2006). Concentration is a mental skill, much like a physical skill that is unique to each individual and can vary according to the person you're dealing with (Nideffer, 2006).

Coaches believed the skill of concentration to be mastered almost always under pressure and fatigue; not exactly an unrealistic take on the training of concentration, but it requires more techniques and to address Nideffer's (1993) Theory of Attentional Control Training (ACT), a vertical and horizontal dimension of focus.

Along with concentration and goal setting, findings suggest that coaches easily understood imagery as a skill in MST; coaches understood the meaning of the term, creation of an experience in your mind using all senses, like playing a movie in your head (Weinberg, 2008). The imagery was the most accurately used component of the seven mental skills, labelling its true nature as a simple image of the ideal situation (Cumming & Hall, 2002). Coaches often describe it as a picture of performance, to plan and prepare for matches, an overlapping use of the skill to initiate the reaching of the desired outcome. Imagery is the viewing of one's performance, whereas mental practice is preparing for performances to come (Weinberg, 2008).

Anxiety and Worry Management was the most poorly defined skill and was mostly linked to social media, parents, results and individual achievements despite the skill being an identification of what creates anxiety and the human body's physical response to stress. Coaches were not aware that this particular skill is about the athlete developing the skills to manage the way they respond to stress, instead, the findings suggested that coaches attempted to manage their stress. To better manage anxiety during competitive situations, athletes need to learn to identify what stimulates their stress and manage the response for their benefit (Gaetano et al., 2015). Though the external environment plays a role in the stimulation of anxiety, owing to the athlete's goals that are set, it is a source of great stress and anxiety due to the intrinsic uncontrollability of the external events (Burton, 1989). Anxiety and worry

management were related to the external sources that weigh down on the athletes. The psychological characteristics of successful athletes are influenced by a variety of environmental factors and significant others (e.g., coaches, parents, teammates) at earlier times in their playing careers (Weinberg et al., 2011). Coaches related their understanding of anxiety and what stresses athletes to pressures from external stimuli. In contrast, a positive mental environment is comprised of creating a confident and positive atmosphere, and expectations within the sport and during its training (Weinberg et al., 2011).

Findings suggest that motivation and relaxation proved to have an average response from coaches, both regarding knowledge and use. Coaches perceived relaxation to be a post-match or training activity, and not a technique used for the relief of muscle tension and vascular constriction; it is the management of the somatic responses to the body (Parnabas et al., 2014).

Coaches documented the importance of relaxation in competitive winner, and will often reassuring athletes either to relax or to "psych up" should they wish to succeed (Sadeghi, 2010). The deal with relaxation is that coaches perceived the skill as a complete off-switch. It was suggested as a post-match tactic through the use of a recovery cool-down session or a tactical timeout. Practising relaxation techniques can reduce athletes' resort to other substances to reduce anxiety and enhance performance (Parnabas et al., 2014). While motivation was described as a tool used to encourage athletes through the external approach as a means of creating a winning spirit and culture within the athletes and in the team. Coaches resorted to the options of sending motivation quotes and signage over WhatsApp group chats. In simple terms, coaches believe that motivation is about finding the "why" in sports. Motivation relies on the social backgrounds and individualism that support the fulfilment of the basic needs to facilitate natural development processes (Deci & Ryan, 2000) and that includes intrinsically

motivated behaviour and integration of extrinsic motivations (Deci & Ryan, 2000). Athletes that prevent independent thought processes, competence, or relatedness are linked with poor motivation, performance, and well-being (Deci & Ryan, 2000). The performance will be dictated by self-confidence and as it has been the most consistent psychological characteristic of mentally tough athletes identified in a variety of studies (Jones et al., 2002; Bull et al., 2005; Thelwell et al., 2005; Weinberg, 2011). Looking at the findings surrounding self-confidence, coaches had no tangible experiences to recall regarding their approach to using it. Self-confidence was rarely used as coaches failed to understand how to work on the skill or rather teach the athletes how to work on their self-confidence. Knowledge was well within the scope of its definition, whereas the use of self-confidence in MST had zero examples. As soon as athletes' beliefs about their capacities and abilities are unsatisfactory, their motivation to train in their sports is lowered, resulting in a higher amotivation of them (Sari et al., 2015). Thus, coaches need to improve their knowledge of MST to avoid the collapse in youth athletic performances; coaches would be able to identify what the consequences of this type of negative thinking can have on a young athlete. Findings presented that respondents relied on motivation to upskill their athletes when they lacked self-confidence, respondents were incapable of identifying that they could not manage their athletes on how self-confidence works.

Findings finally revealed that motivation lacked complete skill comprehension, respondents did not fully grasp the concept that motivation comprises two important elements, namely, intrinsic and extrinsic motivation (Ryan & Deci, 2000). Self-confidence was established to have considerably correlate with intrinsic motivation (Sari et al., 2015).

Overall, the findings of the research study achieved the exploration of the use of MST, as coaches presented some form of implementation, but not systematically. It lacks consistency in the holistic use of MST. Thus, we can assume that:

- MST improves mental toughness
- MST can be used to improve athletic and team performance
- MST helps coaches manage team dynamics and environments
- MST is a concept made up of components or skills
- MST is only for all types of athletes

5.3.3 Coaches' belief in MST: Do they trust it?

The findings revealed in the instance of the belief that coaches have limited belief in the concept and process of MST. The majority of the respondents revealed that they believe in MST while the findings suggest that, despite not having the correct knowledge and use, respondents continued to show their belief in the concept. However, the findings suggest that because the knowledge is relative to the coaching experience, and so is the use of MST, the belief would be subjective. It would be unrealistic for coaches to expect athletes to train MST systematically if the coaches are not equipped with the knowledge foundations – this too needs training (Gould et al., 1999). Youth rugby athletes were unanimous in their belief that coaches' knowledge and support should be improved (Sharp et al., 2013). The more the respondents showed confidence in their responses concerning the knowledge and use of MST, the more they felt they believed it works. Furthermore, the findings revealed that the respondents reviewed MST as a learning experience, and they were able to create an improved perspective of MST, for themselves and their athletes and teams. Previous researchers have misunderstood

the concept of what it means to be mentally tough as they examined the phenomenon based on their personal beliefs and experience, it lacked theoretical simplicity and precise exploration (Connaughton et al., 2008). Findings revealed that the importance of MST was created, an awareness of its need in the sports performance level. Common among coaches were the beliefs that sport psychology is only for problem athletes and that it derived its value by providing a quick-fix solution to these problems (Pain & Harwood, 2004). Aligned with the MST myths by Weinberg and Gould (2015), coaches in the study presented some evidence of the limitations in the thinking of MST like; it takes too much time, it is only for the elite, and it is not entirely useful (Weinberg & Gould, 2015). Based on the coaches' responses, coaches have presented their doubts regarding MST, and we have understood that their knowledge is subjective and limited to their own experiences. Should they reach a moment to desperately need a winning formula, they tend to whip out the motivation to get out of jail card. Coaches know the value of MST, and they certainly believe it works, but when it comes to trusting its ability throughout the performance, and as a stand-alone pillar of performance, how confident are they to use it systematically and consistently?

5.4 STUDY CONCLUSIONS

According to the opinions of the respondents and the findings of the research study, it was determined that the coaches of youth provincial sports have limited knowledge and belief of MST but cannot implement it within their respective sports teams and with their athletes. There is conclusive evidence to understand that coaches do not understand nor have the skills to implement MST on the most basic level. Coaches will need to continue upskilling their knowledge of MST and attempt to implement the use of MST systematically first, before truly

knowing its benefits. The findings of the research study revealed that MST knowledge, use and belief were relative to;

- their education as coaches, as students, as people
- to their experiences, personal, emotional or professional as coaches
- their background and history of coaching
- their relationships, albeit learnt and developed from athletes and teams

5.5 RECOMMENDATIONS FOR FUTURE RESEARCH

5.5.1 Recommendations 1: Future research studies

The research study had many areas for possible improvements for future research, suggestions for enhancing the development of the participants and the overall improvement of the South African high-performance industry, especially within youth sports. The recommendations in this section are made in accordance with what the study deems beneficial and worthy of attention.

1. The research could be done with a bigger sample of coaches, from many more team sports and including a gender diverse approach of both coaches and athletes. Coaches from different levels of coaching, from the most elite to the level of sport promotion and development. This research study used a sample of six coaches from three different team sports, each of male and female youth teams. There was no significance in this study with regard to gender, however, future research could evaluate the effects of an MST program on male and female youth sports, understanding the roles of coaches in

this program, the differences in the perceptions of MST in both genders and the differences in the reception of an MST on both genders.

2. Research on this level should include the opinions of athletes to match up with the opinions of the coaches. With the current study having expressed plenty subjective viewpoints, it would be interesting to see what the athletes would say in the same regard as to what coaches have expressed. This would give better insights with regard to the coach's feedback of MST, it would change the way they respond and it would remove any room of biased opinions.
3. The research study employed a basic interview schedule based on Bull's Mental Skills Questionnaire; questions that could improve the responses should be aligned to how respondents experience challenger of MST, how MST aids in winning, and developing professional coaching skills.

5.5.2 Recommendations 2: Coaches Professional Development

1. Coaches will need to explore some professional development. Future research should look at suggestive ways to include findings and make the importance of MST known in coaching courses. The current study had found the pattern of subjective recall with regard to MST from coaches and this recommendation suggests that coaches receive support in learning to separate their view points and feelings on mental toughness as opposed to what the science says about it. There is great value in the knowledge of MST, and previous studies have gone on to definitively express the importance of coaches having MST knowledge. Coaches are essentially required to obtain a coaching qualification; the importance of MST is becoming relevant and more apparent in recent years, where a foundation would benefit not only coaches, but youth athletes too.

2. Coaches need assistance in improving their understanding of MST, from a knowledge and application point of view, it would be best to do an intervention program for coaches to establish the basis of their knowledge and the ability to use it. A future research program including an intervention of program of coaches learning MST and implementing a basic program for their athletes, will provide the confidence and create a sense of a true holistic coaching.
3. Coaches should attempt to work with a professional simultaneously on a sports performance project to achieve an improved understanding of what MST is capable of, as well as further educate both athletes and coaches along the way.
4. Coaches' emotional intelligence needs to be improved when working with MST and youth athletes. This alludes to the subjective point of views; the coaches need to learn how and when to separate their personal viewpoints and experiences if they wish to make a success of performance.

5.6 CHAPTER CONCLUSION

The chapter highlights the summary of the research by reviewing the aims and objectives of the study again to stress the purpose. Then, the research discussions take place to elaborate on the findings from chapter 4 through the literature of what was done before, to bridge the gap between past and present. Furthermore, the chapter gives the research study conclusions that bring the research to an end point, following with the recommendations for future research to be conducted.

REFERENCES

Abernethy, B. (2001). Attention. In R. N. Singer, H. A. Hausenblaus, & C. M. Janelle, *Handbook of sport psychology* (pp. 53-85). New York:: John Wiley & Sons, Inc.

Akin, A. (2007). The development and the psychometric characteristics of the self-confidence scale. *AİBÜ, Eğitim Fakültesi Dergisi 7(2)*, 165-175.

Ampofo-Boateng, K. (2009). *Understanding sport psychology.* Selangor, Malaysia: UPENA.

Andrade, J., May, J., Deeprose, C., Baugh, S., & Ganis, G. (2014). Assessing vividness of mental imagery: The Plymouth Sensory Imagery Questionnaire. *British Journal of Psychology (105)*, 547–563.

Bandura, A. (1982). Self-efficacy mechanism iti human agency. *American Psychologist, 37* , 122-147.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: Freeman.

Bardin, L. (2011). *Content analysis (5th ed.).* Lisbon: Ed. 70.

Barnett, M. L., & Stanicek, J. A. (1979). Effectsof goal setting on achievement in archery. *Research Quarterly 50*, 328-332.

Barriball, K. L., & While, A. (1994). Collecting data using a semi-structured interview: a discussion paper. *Journal of advanced nursing, 19*, 328-335.

Behncke, L. (2004). Mental skills training for Sports: A breif review. *Athletic Insight; The Online Journal of Sport Psychology 6(1)*, 1-19.

Bernal, J. C., Nix, C., & Boatwright, D. (2012). Sport Officials' Longevity: Motivation and Passion for the Sport. *International Journal of Sport Management, Recreation and Tourism (10)*, 28-39.

Besharat, M. A., & Pourbohlool, S. (2011). Moderating Effects of Self-Confidence and Sport Self-Efficacy on the Relationship between Competitive Anxiety and Sport Performance. *Psychology 2(7)*, 760-765.

Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development.* Sage Publications, Inc.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3(2) https://doi.org/10.1191/1478088706qp063oa*, 77–101 .

Bull, S. J., Albinson, J. G., & Shambrook, C. J. (1996). *The mental game plan: Getting psyched for sport.* Brighton: Sport Dynamics.

Burns, N., & Grove, S. K. (2001). *The Practice of Nursing Research: Conduct, Critique & Utilization.* Saunders. https://books.google.co.za/books?id=kVJqAAAAMAAJ.

Burton, D. (1983). Evaluation of goal-setting training on selected cognitions and performance of collegiate swimmers. . *Unpublished doctoral dissertation, University of Illinois*.

Burton, D. (1989). Winning isn't everything: Examining the impact of performance goals on collegiate swimmers' cognitions and performance. . *The Sport Psychologist, 3(2)*, 105-132.

Burton, D. (1998). Measuring competitive state anxiety. In J. L. Duda, *Advances in sport and exercise psychology measurement* (pp. 129-148). Morgantown, WV: Fitness Information Technology, Inc.

Burton, D., & Weiss, C. (2008). The fundamental goal concept: The path to process and performance access. In T. Horn, *Advances in sport psychology (3rd)* (pp. 339-375). Champaign: IL: Human Kinetics.

Cacioppo, J., Tassinary, L. G., & Berntson, G. G. (2007). *Handbook of psychophysiology (3rd Ed).* New York: Cambridge University Press.

Cahill, B. R., & Pearl, A. J. (1993). *Intensive Participation in Children's Sports.* Human Kinetics Publishers.

Campbell, E., & Jones, G. (1997). Precompetition anxiety and self-confidence in wheelchair sport participants. *Adapted Physical Activity Quarterly 14*, 95–107.

Campen, C., & Roberts, D. C. (2011). Coping Strategies of Runners: Perceived Effectiveness and MAtch to Precompetitive Anxiety. *Journal of Sport Behaviour*, 144.

Cohen, D., & Crabtree, B. (2006). *Qualitative Research Guidelines Project.* http://www.qualres.org/HomeSemi-3629.html.

Connaughton, D., Wadey, R., Hanton, S., & Graham, J. (2008). The development and maintenance of mental toughness:Perceptions of elite performers. *Journal of Sports Sciences 26(1)*, 83 – 95.

Cope, D. G. (2014). Methods and meanings: credibility and trustworthiness of qualitative research. *Oncology nursing forum 42(1) https://doi.org/10.1188/14.ONF.89-91*, 89–91.

Corbin, C. (1972). Effects of mental practice on skill development after controlled practice. In W. Morgan, *Ergogenic aids and muscular performance* (pp. 93–118.). New York: Academic Press.

Cox, R. H. (1994). *Sport psychology: Concepts and applications.* Dubuque, IA: Brown .

Cox, R. H. (2007). *Sport Psychology, concepts and applications (6th ed.).* New York: McGraw-Hill.

Creswell, J. W. (2003). *Research Design: qualitative, quantitative and mixed methods approaches (2nd Edition).* Thousand Oakes: Sage Publications.

Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches (Third Edition).* Thousand Oaks: Sage Publications.

Cumming, J., & Hall, C. (2002). Deliberate imagery practice: The development of imagery skills in competitive athletes. *Journal of Sports Sciences, 20(2) https://doi.org/10.1080/026404102317200846*, 137–145.

Cumming, J., & Hall, C. (2002). Deliberate imagery practice: The development of imagery skills in competitive athletes. *Journal of Sports Sciences, 20(2), https://doi.org/10.1080/026404102317200846* , 137–145.

Cypress, B. S. (2017). Rigor or reliability and validity in qualitative research: Perspectives, strategies, reconceptualization, and recommendations. *Dimensions of Critical Care Nursing, 36(4), https://doi.org/10.1097/DCC.0000000000000253*, 253–263.

Davis, M., Eshelman, E. R., & McKay, M. (2000). *Relaxation & stress reduction work book (5th ed.).* Oakland, CA: New Harbinger Publications.

Deci, E. L. (1971). Effects of Externally Mediated Rewards on Intrinsic Motivation. *Journal of Personality and Social Psychology (18)*, 105-115.

Deci, E. L. (1975). *Intrinsic Motivation.* New York: Plenum Press.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior.* New York: Plenum Press.

Di Corrado, D., Murgia, M., & Freda, A. R. (2014). Attentional focus and mental skills in senior and junior professional rugby union players. *Sport Sci Health (10)*, 79–83.

Ding, Z. (1986). *Introduction to psychology in physical education.* Jinan, China: Shandong Education Publishing House.

Durand-Bush, N., Salmela, J. H., & Green-Demers, I. (2001). The Ottawa mental skills assessment tool (OMSAT-3). *The sport psychologist, 15 (1)*, 1-19, .

Edwards, D. J., & Steyn, B. J. (2008). Sport psychological skills training and psychological well-being. *South African Journal for Research in Sport, Physical Education and Recreation, 30(1)*, 15-28.

Edwards, D. J., & Steyn, B. J. (2011). Establishment of norms for the Bull's Mental Skills Questionnaire in South African university students: an exploratory study psychology. *African Journal for Physical Health Education, Recreation and Dance, 17(3)*, 526.

Efran, J., Lessor, G., & Spiller, M. (1994). Enhancing tennis coaching using a metaphor model. *The Sport Psychologist, 8* , 349-359.

Elmusharaf, K. (2012). *Qualitative sampling techniques. Training Course in Sexual and Reproductive Health Research.* Geneva: RCRU.

Eloff, M., Monyeki, M., & Grobbelaar, H. (2011). A survey of mental skills training among South African field hockey players at tertiary institutions. *African Journal for Physical, Health Education, Recreation and Dance, 17(1) https://doi.org/10.4*, 37–50.

Epstein, M. (1980). The relatiobship of mental imargery and mental rehearsal to performance of motor task . *Journal of Sport Psychology (2)*, 211-220.

Eysenck, M. W. (1993). *Principles of cognitive psychology.* Hove: Lawrence Erlbaum.

Fallby, J., Hassemén, P., Kenittä, G., & Durand-Bush, N. (2006). Relationship between locus of control, sense of coherence, and mental skills in Swedish elite athletes. *International Journal of Sport and Exercise Psychology, 4 (2)* , 111-120.

Feltz, D. L. (1988). Self-Confience and Sport Performance. *Exercise and Sport Science Reviews (16)*, 423-457.

Feltz, D. L., & Chase, M. A. (1998). The measurement of self-efficacy and self-confidence in sport. In J. Duara, *Advancements in sport and exercise psychology measurement* (pp. 63-78). Morgantown.

Feltz, D. L., Chase, M. A., Moritz, S. E., & Sullivan, P. J. (1999). A Conceptual Model of Coaching Efficacy: Preliminary Investigation and Instrument Development. *Journal of Educational Psychology, 91(4),. https://doi.org/10.1037/0022-0663.91.4.7*, 765–776.

Feltz, D., & Landers, D. (1983). The effects of mental practice on motor-skill learning and performance: A meta-analysis. *Journal of Sport Psychology, 2*, 210-220.

Frey, M. (2007). College coaches' experiences withstress – 'problem solvers' have problems too. *The Sport Psychologist (21)*, 38–57.

Gaetano, R., Paloma, F. G., & Gaetano, A. (2015). Anxiety in the youth physical and sport activity. *Mediterranean Journal of Social Sciences, 6(3) https://doi.org/10.5901/mjss.2015.v6n3s2p227*, 227–230.

Galloti, K. M. (1994). *Cognitive psychology in and out of the laboratory.* Pacific Gouve, CA : Brooks/Cole.

Garavalia, L., Garavalia, B., Spertus, J. A., & Decker, C. (2009). Exploring patients' reasons for discontinuance of heart medications. *The Journal of Cardiovascular Nursing, 24(5)*, 371.

Ghesquiere, A., & Ayllon, T. (1980). Behavioral Coaching in the development of skills in football, gymnastics and tennis. *Journal of Applied Behavior Analysis, 2*, 297–314.

Gillet, N., Vallerand, R. J., Amoura, S., & Baldes, B. (2010). Influence of coaches' autonomy support on athletes' motivation and sport performance: A test of the hierarchical model of intrinsic and extrinsic motivation. *Psychology of Sport and Exercise (11)*, 155-161.

Golby, J., & Sheard, M. (2004). Mental toughnessand hardiness at different levels of rugby league. .*Personality and Individual Differences, 37 (5)*, 933-942.

Golby, J., & Wood, P. (2016). The Effects of Psychological Skills Training on Mental Toughness and Psychological Well-Being of Student-Athletes. *Psychology, 07(06), https://doi.org/10.4236/psych.2016.76092*, 901–913.

Gould, D., & Krane, V. (1992). The arousal-performance relationship: current status and future directions. . In T. S. Horn, *Advances in sport psychology.* Champaign IL: Human Kinetics.

Gould, D., Damarjian, N., & Medbery, R. (1999). An examination of mental skills training in junior tennis coaches. *Sport Psychologist 13(2), https://doi.org/10.1123/tsp.13.2.127*, 127–142.

Gould, D., Medbery, R., Damarjian, N., & Lauer, L. (1999). A Survey of mental skills training knowledge, opinions, and practices of junior tennis coaches. *Journal of Applied Sport Psychology, 11(1), DOI: 10.1080/10413209908402949*, 28-50.

Greenberg, J. S. (2008). *Comprehensive stress management (10th ed.).* New York, NY: McGraw-Hill.

Grobbelaar, H. W. (2007). A survey of South African provincial netball coaches\' opinions, abilities and limitations regarding mental skills training. . *South African Journal for Research in Sport, Physical Education and Recreation, 29(2), https://doi.org/10.4314/sajrs.v29i2.25965*.

Hacker, C. M. (2000). Women's World Cup: Performance enhancement through mental skillstraining. *Professional psychology: Research and practice, 31(4)* , 363-364.

Hackmann, A., Bennett-Levy, J., & Holmes, E. A. (2011). *Oxford guide to imagery in cognitive therapy.* Oxford, UK: Oxford University Press.

Hall, C. (2001). Imagery in sport and exercise. In R. Singer, H. Hausenblas, & C. Janelle, *Handbook of research in sport psychology (2nd Ed)* (pp. 529-549). New York: Wiley.

Hanin, Y. (2007). Emotions in Sport: Current issues and perspectives. In G. Tennebaum, & R. Eklund, *Handbook of Sport Psychology* (pp. 31-58). Hobokan, NJ: John Wiley & Sons.

Hardy, J., Hall, C. R., & Hardy, L. (2004). A note on athletes' use of self-talk. . *Journal of Applied Sport Psychology, 16 (3)*, 251-257.

Hardy, L., & Parfitt, C. G. (1991). A catastrophe model of anxiety and performance. *British Journal of Psychology 82*, 163-178.

Harris, D. V. (1985). Cognitive skills and strategies for maximising performance. In N. K. Butts, T. T. Gushiken, & B. Zarins, *The Elite athlete* (pp. 145-162). New York: Spectrum.

Harris, D. V., & Harris, B. L. (1984). *The athlete's guide to sport psychology: mental skills for physical people.* . Champaign, IL: Leisure Press.

Harrison, G. (2013). Psychological skills, coaching, and performance of cyclo-cross athletes. *University Of Wisconsin-La Crosse, College of Science and Health Human Performance*.

Harrison, T., & Becker, H. (2007). A qualitative study of menopause among women with disabilities. *Advances in Nursing Science, 30(2)*, 123–138.

Hassmén, P., Raglin, J. S., & Lundqvist, C. (2004). Intra-Individual Variability in State Anxiety and Self-Confidence in Elite Golfers. *Journal of Sport Behavior, 27(3)*, 277–290.

Hazlett-Stevens, H. (2008). *Psychological approaches to generalized anxiety disorder: A clinician's guide to assessment and treatment.* New York: Springer.

Hennink, M. M., & Kaiser, B. N. (2020). *Saturation in qualitative research.* SAGE Publications Limited.

Henry, L., Dunning, E., Halpin, L., Stanger, D., & Martin, L. (2008). Nurses' perceptions of glycemic control in patients who have undergone cardiac surgery. *Clinical Nurse Specialist, 22(6)*, 271–277.

Hinshaw, K. (1991). The effects of mental practice on motor skill performance: Critical evaluation and meta-analysis. *Imangination, Cognition and Personality (11)*, 3-35.

Hodge, K., & McKenzie, A. (2002). Motivationand confidence. In B. Hale, & D. Collins, *Rugby Tough* (p. 35 60). Champaign, IL: HumanKinetics.

Holland, M. J., Woodcock, C., Cumming, J., & Duda, J. L. (2010). Mental qualities and employed mental techniques of young elite team sport athletes. *Journal of Clinical Sport Psychology, 4(1), https://doi.org/10.1123/jcsp.4.1.19*, 19–38.

Holmes, E. A., & Mathews, A. (2010). Mental imagery in emotion and emotional disorders. *Clinical Psychology Review (30)*, 349–362.

Hook, R., & Newland, A. (2018). A basic needs coaching paradigm for coaches of intercollegiate and high school athletes. . *Journal of Sport Psychology in Action, 9(3) https://doi.org/10.1080/21520704.2018.1463328*, 182–195.

Horn, T. S. (2008). Coaching effectiveness in the sport domain. In T. S. Horn, *Advances in Sport Psychology (3rd Ed)* (pp. 239-267). Champaign, IL: Human Kinetics.

Hower, B. L. (1986). Motivation for Success in Sport. *International Journal of Sport Psychology (17)*, 1-9.

Howland, J. M. (2006). Mental Skills Training for Coaches to Help Athletes Focus Their Attention, Manage Arousal, and Improve Performance in Sport. *The Journal of Education (187)*.

Jacobson, E. (Chicago, IL). Progressive Relaxation. *University of Chicago Press*, 1938.

Janelle, C. M., Singer, R. N., & Williams, A. M. (1999). External distractions and attentional narrowing: Visual search evidence. *Journal of Sport and Exercise Psychology, 21*, 70-91.

Johnson, C. A., & Gilbert, J. N. (2004). The Psychological Uniform: Using Mental Skills in Youth Sport. *Strategies, 18(2), https://doi.org/10.1080/08924562.2004.10591116*, 5–9.

Jones, G. J., & Hardy, L. (1990). *Wiley series in human performance and cognition. Stress and performance in sport.* Oxford, England: John Wiley & Sons.

Kallio, H., Pietila, A.-M., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: Developing a framework for a qualitative semi-structured interview guide. *Journal of Advanced Nursing (Accepted Article; doi: 10.1111/jan.13031)*, na.

Kavanagh, D. J., Andrade, J., & May, J. (2005). Imaginary relish and exquisite torture: The elaborated intrusion theory of desire (112). *Psychological Review*, 446–467.

Kavussanu, M., Boardley, I. D., Jutkiewicz, N., Vincent, S., & Ring, C. (2008). Coaching efficacy and coaching effectiveness: Examining their predictors and comparing coaches' and athletes' reports. *Sport Psychologist, 22(4), https://doi.org/10.1*, 383–404.

Kingston, K. M., & Hardy, L. (1997). Effects of different types of goals on processes that support performance. *The Sport Psychologist 11* , 277-293.

Korstjens, I., & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice, 24(1), https://doi.org/10.1080/13814788.2017.1375092*, 120–124.

Kosslyn, S. M., Ganis, G., & Thompson, W. L. (2001). Neural foundations of imagery. *Nature Reviews Neuroscience (2)*, 635–642.

Kozhevnikov, M., Motes, M. A., & Hegarty, M. (2007). Spatial visualization in physics problem solving. *Cognitive Science (31)*, 549–557.

Krefting, L. (1991). Rigor in qualitative research: The assessment of trustworthiness. . *The American journal of occupational therapy, 45(3)*, 214-222.

Kudlackova, K. (2011). Relationship Between Mental Toughness, Relaxation Activities, and Sleep in Athletes at Different Skill Levels. *Florida State University Libraries*.

Le Scanff, C. (2003). The methods based mental preparation [The basic methods of mental training]. In L. Scanff, *Manual of Sport Psychology — 2. Intervention with athletes [Sport psychology handbook — 2. Interventions for athletes]* (pp. 65–11). Paris, France: ´Editions Revue EP.S.

Le Scanff, C., Hardy, L., & Larue, J. (1999). Les alternatives `alath´eorie du "U" invers´e [The alternatives to the Inverted-U Theory]. In C. Le Scanff, & J.-P. Famose, *La*

gestion du stress: entra^ınement et comp´etition [Stress management and competition] (pp. 11–17)). Paris, France: ´Editions Revue EP.S.

Leat, D. (1993). A Conceptual Model of Competence. *Journal of In-Service Education 19 (2) DOI: 10.1080/0305763930190207*, 35-40.

Li, J., Liu, S., & Xu, S. (1986). *Sport psychology.* Xian, China: Shanxi People's Education Publishing House.

Lincoln, Y. S., & G, G. E. (1985). *Naturalistic Inquiry.* Beverly: Sage.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry.* Beverly-Hills, CA: Sage.

Li-Wei, Z., Orlick, T., Qi-Wei, M., & Zitzelsberger, L. (1992). The effect of mental-imagery training on performance enhancement with 7-10-year-old children. *The Sport Psychologist (6)*, 230-241.

Locke, E. A., & Latham, G. P. (1985). The application of goal setting to sports. *Journal os sport and exercise psychology 7*, 205-222.

Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychology Association*, 705-717.

Locke, E., & Bryan, J. (1968). Goal setting as a determinant of the effects of knowledge of score in performance. *American Journal of Psychology 81*, 398-406.

Locke, E., & Latham, G. (1990). *A theory of goal setting and task performance.* Engelwood Cliffs, NJ: Prentice Hall.

Lowe, A., Norris, A. C., Farris, A. J., & Babbage, D. R. (2018). Quantifying Thematic Saturation in Qualitative Data Analysis. . *Field Methods, 30(3), https://doi.org/10.1177/1525822X17749386*, 191–207.

Lundqvist, C. (2006). Competing Under Pressure : State Anxiety, Sports Performance and Assessment. *(Doctoral dissertation, Department of Psychology, Stockholm University)*.

Mahoney, M. J., & Avener, M. (1977). Psychology of the elite athlete: An exploratory study. *Cognitive Therapy and Research. (1)*, 135-141.

Marchant, D. B., Morris, T., & Andersen, M. B. (1998). Perceived importance of outcome as a contributing factor in competitive state anxiety. *Journal of Sport Behavior 21(1)*, 71–91.

Martens, R. (1987). *Coaches guide to sport psychology.* Champaign, IL: Human Kinetics.

Martens, R., Vealey, R. S., & Burton, D. (1990). *Competitive anxiety in sport.* Champaign: IL: Human Kinetics.

Martens, R., Vealey, R. S., & Burton, D. (1990). *Competitive Anxiety in Sport.* Champaign, Illinois: Human Kinetics.

Martin, K. A., Moritz, S. E., & Hall, C. R. (1999). Imagery use in sport: A literature reviewand applied model. *The sport psychologist, 13*, 245-268.

Maxwell, J. A. (1996). *Qualitative Research Design: An Intractive Approach London, Applied Social Research Methods Series.* Thousand Oakes: SAGE Publications.

Mays, N., & Pope, C. (1995). Qualitative Research: Observational methods in health care settings. *The Bmj, 311(6998), https://doi.org/10.1136/bmj.311.6998.182*, 182.

McNally, I. M. (2002). Contrasting Concepts of Competitive State-Anxiety in Sport: Multidimensional Anxiety and Catastrophe Theories. *Athletic Journal Online Journal of Sport Psychology. (http/www.Contrasting Concepts of Competitive State-Anxiety in Sport.htm).*

Miles, M. B., & Huberman, M. A. (1994). *Qualitative Data Analysis: An expanded sourcebook (2nd Edition).* Thousand Oakes: Sage Publications.

Miller, T. J., & McAuley, E. (1987). Effects of a Goal-Setting training program on Basketball free-throw Self-Efficacy and Performance. *The Sport Psychologist 1*, 103-113.

Mohsin, A. (2016). A Manual for Selecting Sampling Techniques in Research. *Munich Personal RePEC Archive, 2016*, 1–56.

Mosoi, A. A. (2012). Skills and Motivation of Junior Tennis Players. *Social and Behavioral Sciences 78*, 215 – 219.

Moulton, S. T., & Kosslyn, S. M. (2009). Imagining predictions: Mental imagery as mental emulation. *Philosophical Transactions of the Royal Society B Biological Sciences (364)*, 1273–1280.

Mulder, T. (2007). Motor imagery and action observation: cognitive tools for rehabilitation. *Journal Neural Transmission (Vienna). 114(10)*, 1265-78.

Muris, P., Hoeve, I., Meesters, C., & Mayer, B. (2004). Children's perception and interpretation of anxiety-related physical symptoms. *Journal of Behavior Therapy and Experimental Psychiatry*, 233-244.

Muris, P., Merckelbach, H., Meesters, C., & van den Brand, K. (2002). Cognitive development and worry in normal children. *Cognitive Therapy and Research*, 775-787.

Nideffer, R. (2006). A.C.T.: Attention Control Training. *Enhanced Performance Systems. Retrieved January 2019 www.enhanced-performance.com/wp-content/articles/ACT_2006.pdf.*

Nideffer, R. M. (1976a). Test of attentional and interpersonal style. *Journal of Personality and Social Psychology (34)*, 394-404.

Nideffer, R. M. (1993). Attention Control Training. In R. N. Singer, M. Murphey, & L. K. Tennant, *Handbook of Research on Sport Psychology* (pp. 542-556). New York: Macmillan.

Nideffer, R. (n.da). Theory of Attentional and Personal Style vs. Test of Attentional and Interpersonal Style (TAIS). *Enhanced Performance Systems. Retrieved January 2019 http://www.enhanced-performance.ca/articles/article10.pdf*.

Nideffer, R., & Bond, J. (n.d). A Cross Cultural Examination of the Concentration Skills of Elite Level Athletes. *Enhanced Performance System. Retrieved January 2019 http://www.enhanced-performance.ca/articles/article09.pdf*.

Olusoga, P., Maynard, I., Butt, J., & Hays, K. (2014). Coaching Under Pressure: Mental skills training for sports coaches. *Sport & Exercise Psychology Review 10(3)*, 31-44.

Omar-Faueez, M. S., Samad, N., Gheimi, Z., Asmuni, M. N., & Johar, M. (2012). Mental Toughness among Footballers: A Case Study. *International Journal of Academic Research in Business and Social Sciences (2)*, 639-658.

Onestak, D. M. (1991). The effects of progressive relaxation, mental practice, and hypnosis on athletic performance: A review. *Journal of Sport Behavior 14(4)*, 247-282.

Orlick, T. (1990). *In pursuit of excellence (2nd ed.).* Champaign, IL: Leisure Press.

Orlick, T., & Partington, J. (1986). *Psyched: Inner views of winning.* Ottawa, ON: Coaching Association of Canada.

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

Ostrow, A. C. (1996). *Directory of psychological tests in the sport and exercise sciences (2nd).* Morgantown, WV: Fitness Information Technology.

Page, S. J., Sime, W., & Nordell, K. (1999). The Effects of Imagery on Female College Swimmers' Perceptions of Anxiety. *The Sport Psychologist*, 458-469.

Pain, M. A., & Harwood, C. G. (2004). Knowledge and perceptions of sport psychology within English soccer. *Journal of Sports Sciences, 22(9), https://doi.org/10.1080/02640410410001716670*, 813–826.

Parnabas, V. (2015). The Effect of Competitive State Anxiety on Sport Performance among Sepak Takraw Athletes. *The International Journal of Indian Psychology*, 42-51.

Parnabas, V. A., Mahamood, Y., & Ampofo-Boateng, K. (2013). Competitive State Anxiety and Performance aong Malaysian Athletes from the view of Multidimensional Anxiety Theory. *Malaysian Journal of Sport Science and Recreation*, 22-32.

Parnabas, V. A., Mahamood, Y., Parnabas, J., & Abdullah, N. M. (2014). The Relationship between Relaxation Techniques and Sport Performance. . *Universal Journal of Psychology, 2(3), https://doi.org/10.13189/ujp.2014.020302*, 108–112.

Partington, J. (1990). Personal knowledge in imagery: Implications for novice gymnasts,figure skaters and their coaches. . *Canadian Society for Psycho-Motor Learning and Sport Psychology,.* Windsor, ON.

Patel, D. R., Omar, H., & Terry, M. (2010). Sport-Related Performance Anxiety in Young Female athletes. *Journal od Pediatric and Adolescent Gynecology*, 325-335.

Pelletier, L. G., Fortier, M. S., Tuson, K. M., Brière, N. M., & Blais, M. R. (1995). Toward a New Measure of Intrinsic Motivation, Extrinsic Motivation, and Amotivation in Sports: The Sport Motivation Scale (SMS). *Journal of Sport and Exercise Psychology (17)*, 35-53.

Pervin, L. A., & John, O. P. (2001). *Personality, theory and research (8th Ed).* USA: John Wiley & Sons, Inc.

Pineschi, G., & Di Pietro, A. (2013). Anxiety Management through Psychophysiological Techniques: Relaxation and Psyching-Up in Sport. *Journal of Sport Psychology in Action (4)*, 181–190,.

Poag, K., & McAuley, E. (1992). Goal Setting, Self-Efficacy, and Exercise Psychology. *Journal of Sport & Exercise Psychology*, 352-360.

Raglin, J. (1992). Anxiety and sport performance. . In O. Holloszy, *Exercise and Sport Sciences Reviews* (pp. 20:243-74.). Baltimore: Williams & Wilkins.

Raglin, J., & Hanin, Y. L. (2000). Competitive anxiety and athletic performance. . *Emotions in Sport: Human Kinetics.*, 93-112.

Reynolds, C. R., & Richmond, B. O. (1985). *Revised children's manifest anxiety scale.* Los Angeles, CA: Western Psychological Services.

Rushall, B. S. (1992). *Mental skills training for sports: a manual for athletes, coaches and sport psychologist.* Australia: Sport Science Associates.

Ryan, R. M., & Connell, J. P. (1989). Perceived Locus of Causality and Internalization: Examining reasons for acting in two domains. . *Journal of Personality and Social Psychology (57)*, 749-761.

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions. *Contemporary Educational Psychology, 25(1), https://doi.org/10.1006/ceps.1999.1020*, 54–67.

Ryan, R. M., & Deci, E. L. (2000). Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development and Well-Being. *American Psychology Association (55)*, 68-78.

Sadeghi, H., Omar-Fauzee, M. S., Jamalis, M., Ab-Latif, R., & Cheric, M. C. (2010). The Mental Skills Training of University Soccer Players. *International Education Studies, 3(2)*, 81-90.

Sage, G. (1977). *Introduction to motor behavior: A neuropsychological approach (2nd ed.).* Reading, MA: Addison-Wesley.

Sandelowski, M. (2000). Whatever happened to qualitative description? . *Research in Nursing & Health, 23(4)*, 334–340.

Santarcangelo, E. L., Scattina, E., Carli, G., Ghelarducci, B., Orsini, P., & Manzoni, D. (2010). Can imagery become reality? *Exp Brain Res (206)*, 329–335.

Sari, I., Ekici, S., Soyer, F., & Eskiler, E. (2015). Does self-confidence link to motivation? A study in field hockey athletes. *Journal of Human Sport & Exercise 10(1)*, 24-35.

Sari, I., Ekici, S., Soyer, F., & Eskiler, E. (2015). Does self-confidence link to motivation? A study in field hockey athletes. . *Journal of Human Sport and Exercise, 10(1), https://doi.org/10.14198/jhse.2015.101.03*, 24–35.

Scanlan, T. K., Babkes, M. L., & Scanlan, L. A. (2005). Participation in sport: A developmental glimpse at emotion. In J. L. Mahoney, R. W. Larson, & J. S. Eccles, *Organized activities as contexts of development: Extracurricular activities, after-school and community programs.* (pp. 275-309). Mahwah, NJ: Lawrence Erlbaum.

Schacter, D. L., Addis, D. R., & Buckner, R. L. (2007). Remembering the past to imagine the future: The prospective brain. *Nature Reviews: Neuroscience (8)*, 657–661.

Schmid, A. B. (1982). Coach's reaction to Dr. A.B. Frederick's coaching strategies based upon tension research. In L. D. Zaichkowsky, & W. E. Sime, *Stress management for sport* (pp. 95-100). Reston, VA: AAHPERD.

Schwartz, D. L., & Black, J. B. (1996). Analog imagery in mental model reasoning: Depictive models. *Cognitive Psychology (30)*, 154–219.

Sharpe, L.-A., Woodcock, C., Holland, M. .., Cumming, J., & Duda, J. L. (2013). A Qualitative Evaluation of the Effectiveness of a Mental Skills Training Program for Youth Athletes. *The Sport Psychologist; Human Kinetics (27)*, 219-232.

Smith, J. C. (2007). The Psychology of Relaxation. In P. M. Lehrer, R. L. Woolfolk, & W. E. Sime, *Principles and Practice of Stress Management* (pp. 38-52). New York: The Guilford Press.

Soratto, J., Pires, D. E., & Friese, S. (2020). Thematic content analysis using ATLAS.ti software: Potentialities for researchs in health. . *Revista Brasileira de Enfermagem, 73(3), e20190250. https://doi.org/10.1590/0034-7167-2019-0250*.

Spielberger, C. (1979). *Understanding stress and anxiety.* New York: Harper & Row.

Spielberger, C. D., Gorsuch, R. L., & Lushene, R. E. (1970). *Manual for the State-Trait Anxiety Inventory (STAI).* Palo Alto: Consulting Psychologist Press.

Start, K. B., & Richardson, A. (1964). Imagery and mental practice. *British journal of education psychology*, 38-51.

Suinn, R. (1976). Body thinking for Olympic champs. *Psychology Today (10)*, 38-43.

Taherdoost, H. (2016). Sampling Methods in Research Methodology; How to Choose a Sampling Technique for Research. *International Journal of Academic Research in Management, 5(2) ISSN: 2296-1747*, 18-27.

Taherdoost, H. (2018). Sampling Methods in Research Methodology; How to Choose a Sampling Technique for Research. . *SSRN Electronic Journal, September. https://doi.org/10.2139/ssrn.3205035*.

Terry, P. (1989). *The Winning Mind.* Wellingboroug, Northamptonshire: Thorsons.

Thelwell, R. C., & Greenlees, I. A. (2001). The effects ofa mental skills training package on gymnasiumtriathlon performance. *The Sport Psychologist, 15 (2)*, 127–141.

Thelwell, R. C., & Greenlees, I. A. (2003). Developing Competitive Endurance Performance using Mental Skills Training. . *Sport Psychologist, 17(3), https://doi.org/10.1123/tsp.17.3.318*, 318–337.

Tuckett, A. G. (2005). Applying thematic analysis theory to practice: A researcher's experience. *Contemporary nurse, 19(1-2)*, 75-87.

Turner, C. M., & Barrett, P. M. (2003). Does age play a role in the structure of anxiety and depression in children and youths? An investigation of the tripartite model in three age cohorts. *Journal of Consulting and Clinical Psychology (71)*, 826-833.

Vallerand, R. J. (1997). Toward Hierarchical Model of Intrinsic and Extrinsic Motivation. *Advances in Experimental Social Psychology*, 271-360.

Vallerand, R. J. (2007). Intrinsic and extrinsic motivation in sport and physical activity: A review and look at the future. In G. Tenenbaum, & R. C. Eklund, *Handbook of Sport Psychology (3rd)* (pp. 49-83). New York: John Wiley.

Vallerand, R. J., Pelletier, L. G., Blais, M. R., Brière, N. M., Senecal, C., & Vallières, E. F. (1992). The Academic Motivation Scale: A measure Intrinsic, Extrinsic and Amotivation in Education. *Educational and Psychological Assessment*, 1003-1017.

Van den Heever, Z., Grobbelaar, H. W., & Potgieter, J. C. (2007). A survey of sport psychological skills training in South African netball. . *African Journal for Physical, Health Education, Recreation and Dance, 13(3), https://doi.org/10.4314/ajpherd.v13i3.*

Vealey, R. S. (1986). Conceptualization of sport-confidence and competitive orientation: Preliminary investigation and instrument development. *Journal of Sport Psychology, 8(3)*, 221–246.

Vealey, R. S. (1988). Future directions in psychological skills training. *The Sport Psychologist (2)*, 318–336.

Vealey, R. S. (2007). Mental Skills Training in Sport. In G. Tenenbaum, & R. C. Eklund, *Handbook of Sport Psychology* (pp. 287-309). New Jersey: John Wiley & Sons, Inc. http://dx.doi.org/10.1002/9781118270011.ch13.

Vidic, Z., & Burton, D. (2010). The Roadmap: Examining the impact of a systematic Goal-Setting program for collegiate women's Tennis players. *The Sport Psychologist 24*, 427-447.

Walker, J. L. (2012). Reporting Saturation. . *Canadian Journal of Cardiovascular Nursing 22(2)*, 37–41.

Walsh, A. E. (2011). The Relaxation Response: A Strategy to Address Stress. *International Journal of Athletic Therapy & training*, 20-23.

Wang, L., Huddleston, S., & Peng, L. (2003). Psychological skill use by Chinese swimmers. *International Sports Journal, 7(1)*, 48-50.

Wanlin, C., Hyycaiko, Q., Martin, D., & Mahon, M. (1997). The efficacy of a goal-setting package on the performance of speed skaters. *Journal of Applied Sport Psychology, 9*, 212-228.

Weinberg, R. (1996). Goal setting in sport and exercise: Research to practice. In J. L. Van Raalte, & B. W. Brewer, *Exploring sport and exercise psychology* (pp. 3-24). Washington, DC: American Psychological Association.

Weinberg, R. (2008). Does Imagery Work? Effects on performance and mental skills. *Journal of Imagery Research in sport and physical activity (3)*.

Weinberg, R. M. (1984). The relationship between extrinsic rewards and intrinsic motivation. In J. M. Silva, *Psychology foundations of sport* (pp. 177-187). Champaign, IL: Human Kinetics.

Weinberg, R. S. (2013). Goal setting in sport and exercise: Research and practical applications. . *Revista da Educação Física/UEM, 24* , 171-179.

Weinberg, R. S., & Gould, D. (2006). *Foundations of sport and exercise psychology.* Champaign, IL : Human Kinetics.

Weinberg, R. S., & Gould, D. (2007). *Foundations of Sport and Exercise Psychology.* Champaign, IL: Human Kinetics.

Weinberg, R. S., & Gould, D. (2011). *Foundations of Sport and Exercise Psychology. .* Champaign, IL: Human Kinetics.

Weinberg, R. S., & Gould, D. (2015). *Foundations of Sport and Exercise Psychology, 6th Ed.* United States: Human Kinetics.

Weinberg, R., Butt, J., & Culp, B. (2011). Coaches' views of mental toughness and how it is built. . *International Journal of Sport and Exercise Psychology, 9(2), https://doi.org/10.1080/1612197X.2011.567106*, 156–172.

Weinberg, R., Butt, J., & Knight, B. (2001). High school coaches' perceptions of the process of Goal Setting. *The Sport Psychology 15*, 20-47.

Weinberg, R., Stitcher, T., & Richardson, P. (1994). Effects of a seasonal Goal-Setting program on Lacrosse performance. *The Sport Psychologist 8*, 166-175.

Wheaton, K.-A. (1998). *A Psychological Skills Inventory for Sport, M.A Dissertation.* Stellenbosch, South Africa: University of Stellenbosch.

White, K. S., & Farrell, A. D. (2001). Structure of anxiety symptoms in urban children: Competing factor models of the Revised Children's Manifest Anxiety Scale. . *Journal of Consulting and Clinical Psychology (69)*, 333-337.

Williamson, A. (2004). *Musical Excellence: Strategies and Techniques to Enhance Performance* . New York: Oxford University Press.

Wilson, V. E., Peper, E., & Schmid, A. (2006). Training strategies for concentration. In J. Williams, *Applied Sport Psychology: Personal Growth to Peak Performance (5th Ed)* (pp. 404-422). Boston: McGraw Hill.

Wolpe, J. (1958). *Psychotherapy by reciprocal inhibition.* Stanford: Stanford University Press.

Woodman, T., & Hardy, L. (2001). Stress and anxiety. In R. Singer, A. Hausenblas, & C. M. Janelle, *Handbook of research on sport psychology* (pp. 290-318). New York: Wiley.

Woodman, T., & Hardy, L. (2003). The relative impact of cognitive anxiety and self-confidence upon sport performance: a meta-analysis. *Journal of Sport Science 21*, 443-457.

Yang, Z., & Ding, X. (1986). *Psychology in sport competition.* Chong Peng, China: Southwest Normal University Publishing House.

Zeng, H. (2003). The difference between anxiety and self-confidence between individuals and team. *International Sports Journal/Winter*, 28-34.

Ziya, K., Nihan, A., Sertan, K., & Serdar, K. (2007). Competitive anxiety and Concentration Levels of Football Players. *Journal of Sports Science and Medicine (10)*.

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 3137 Fax: 27 21-959

E-mail: bandrews@uwc.ac.za

INFORMATION SHEET

Project Title: *An investigation of the knowledge and use of Mental Skills Training (MST) by Western Cape youth provincial sports coaches.*

This is a research project being conducted by Gabi-Lee Van Der Westhuizen at the University of the Western Cape. We are inviting you to participate in this research project because you have the coaching skills and expertise of your respective sport that is capable of performing the tests.

Purpose of the Study:

The purpose of this research project is to understand the knowledge and use of mental skills training in coaches, exploring whether they have the tools and skills to effectively work with their youth athletes or youth teams. Previous research has shown that a majority of coaches perceive MST as very important. This study specifically focuses on the knowledge and use of MST to better understand the quality and value of MST in Western Cape sport.

Description of the study and your involvement:

You will be asked to complete a series of phases in the research study. You will need to first complete a demographic sheet detailing all your information. Then, an allocated time will be given a week in advance regarding when testing will begin for each phase. Each phase will be conducted on separate days, to allow the researcher time to analyse the data. Phase 1, will involve you completing a questionnaire, a Modified Mental Skills Questionnaire (MMSQ), in a secure private venue of your choosing (options will be given). Phase 2, will involve you participating in a semi-structured interview which will allow for open-ended questions to further assess and evaluate your use of MST.

Anonymity and Confidentiality:

The researchers undertake to protect your identity and the nature of your contribution. To ensure your anonymity, no names of the participants will be used at any stage in this study; instead colour coding identification will be assigned to each coach for the classification of each coach's profile, which will allow for the researcher to link the surveys and all collected data to your identity. To ensure your confidentiality, all information gathered from this study will be locked in a file cabinet in the supervisor's office, including all profiles, and results where no one but the researchers and the supervisor have access. If we write a report or article about this research project, your identity will be protected.

In accordance with legal requirements and/or professional standards, we will disclose to the appropriate individuals and/or authorities' information that comes to our attention concerning child abuse or neglect or potential harm to you or others. In this event, we will inform you

that we have to break confidentiality to fulfil our legal responsibility to report to the designated authorities.

What are the risks?

There may be some risks from participating in this research study. All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

The benefits of this research:

The data collection will be made available to you for further investigation and improvement of your performance, specifically your MST knowledge and how to better equip you to use it in the future. Furthermore, an in-depth understanding of your MST knowledge and use that will aid you to further your coaching perspectives by broadening its principles and criteria.

Voluntary participation and withdrawal:

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

Questions:

This research is being conducted by Gabi-Lee Van Der Westhuizen, Sport, Recreation and Exercise Science Department at the University of the Western Cape. If you have any questions about the research study itself, please contact **Gabi-Lee** via telephone **(+27) 76 028 6820** OR email **msgabilee@gmail.com.**

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Dr Marié Young

Head of Department: SRES

University of the Western Cape

Private Bag X17

Bellville 7535

myoung@uwc.ac.za

Prof José Frantz

Dean of the Faculty of Community and Health Sciences

University of the Western Cape

Private Bag X17

Bellville 7535

chs-deansoffice@uwc.ac.za

This research has been approved by the University of the Western Cape's Senate Research Committee. (REFERENCE NUMBER **CHSHD 2016/02)**

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 3137 Fax: 27 21-959

E-mail: bandrews@uwc.ac.za

CONSENT FORM

Title of Research Project: An investigation of the knowledge and use of MST of Western Cape youth provincial sports coaches.

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

Participant's name…….….

Participant's signature……

Date…….…….…….

Personal Information

Name: _____ **Date**: _____

Age: _____

Gender:

○ ○

Male Female

Race:

○ ○ ○ ○ ○

Black African Coloured Indian Caucasian Other

Currently appointed as:

School:

○ ○ ○ ○

U14 Coach U16 Coach U18 Coach 1st Team

Provincial:

○ ○ ○ ○ ○

U14 Coach U16 District Coach U16 IPT Coach U18 District Coach U18 IPT

National:

○ ○ ○ ○

U15 Coach U16 Coach U17 Coach U19 Coach

Coaching Qualification(s) (Levels) & Year obtained

_____

Coaching Experience (Active Years):

Highest level Coached (International/National/Provincial)?

_____

How many Tournaments have you Coached? _____

Please specify all teams and tournaments you have coached at (Incl. Current teams): (e.g. 2011 WP U16 A IPT and 2016 1st Team All Girls Tournament)

_____

_____

_____

_____

_____

_____

_____

_____

Please indicate the number of Tournament placings achieved (Only top 3):

_____

_____

_____

_____

INTERVIEW SCHEDULE AND GUIDELINES FOR PROBING

Aims:

Explore coaches of youth sports knowledge, use and beliefs of Mental Skills Training (MST) across various sports disciplines.

Objectives:

Explore coaches of youth sports knowledge of MST

Explore coaches of youth sports use of MST

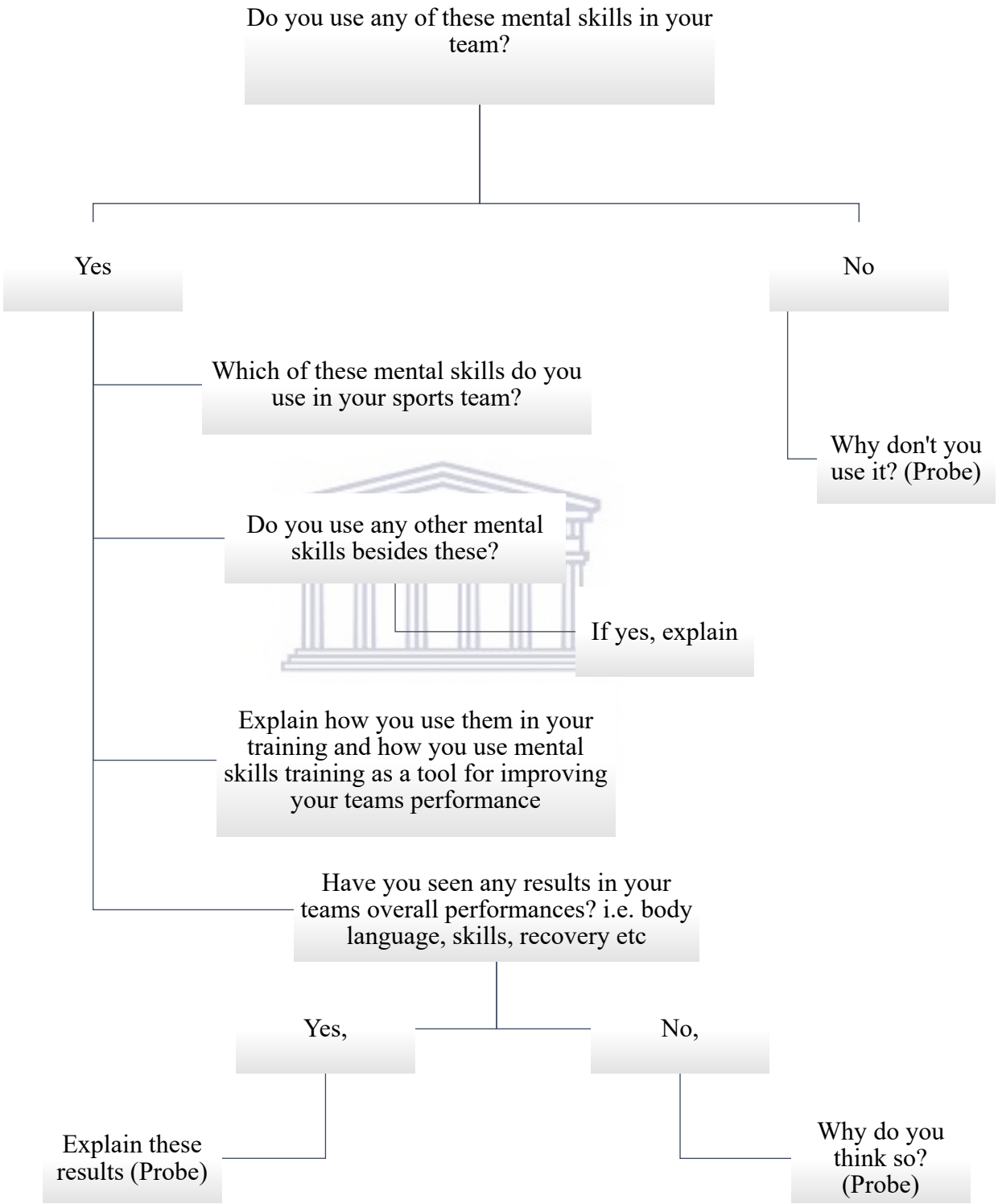
Explore coaches of youth sports beliefs of MST

Questions:

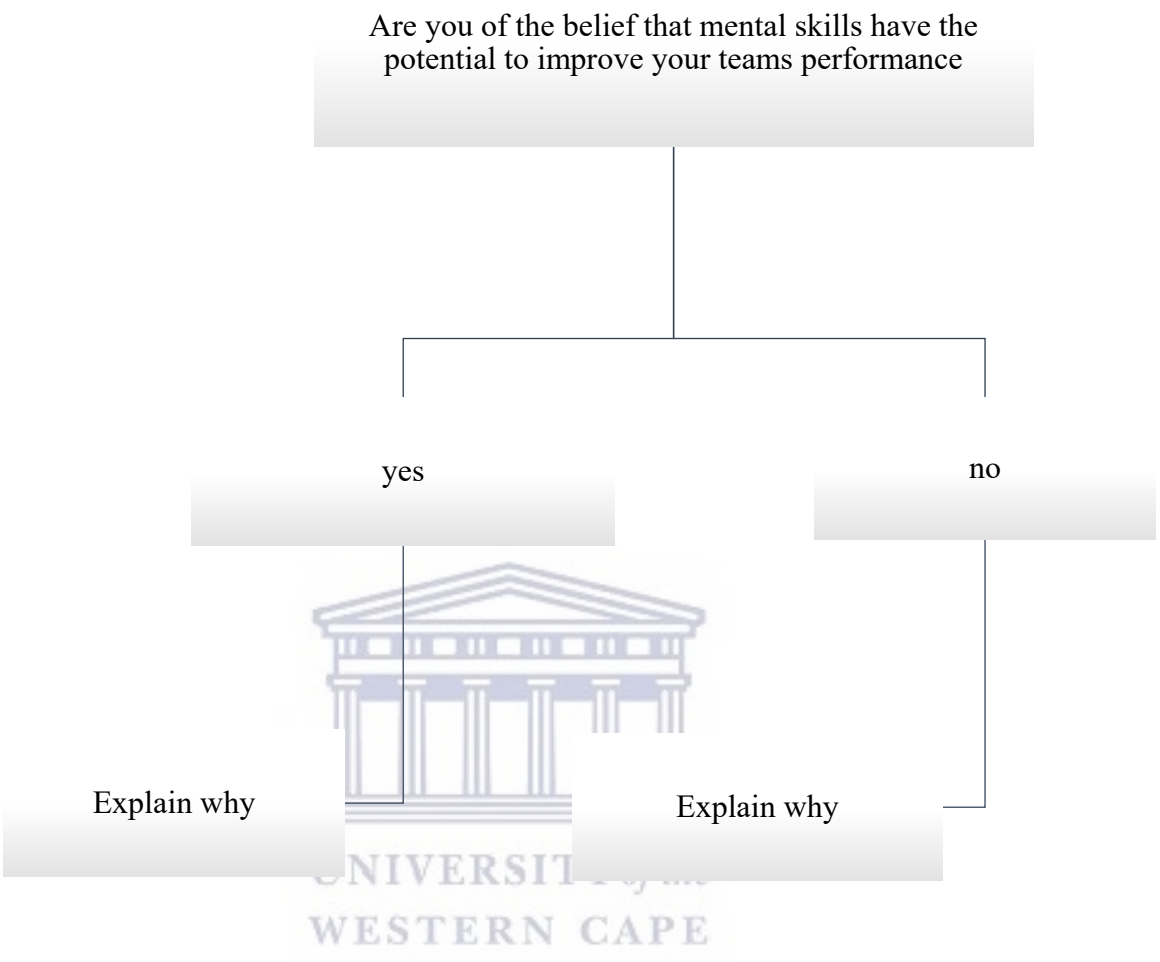
<u>Explore knowledge:</u>

1. Have you heard of the term mental skills/mental skills training?
2. Define what mental skills and mental skills training is to you.
3. Define the following mental skills:
    a. Imagery
    b. Mental preparation (goal setting)
    c. Self-confidence
    d. Anxiety and worry management
    e. Concentration
    f. Relaxation
    g. Motivation
4. Explain your understanding of these mental skills if using it in your specialized sport

Explore use:



Belief:



Mental Skills Questionnaire by Bull, Albison & Shambrook (1996).

Imagery ability						
1. I can rehearse my sport in my mind.	1	2	3	4	5	6
2. I rehearse my skills in my head before I use them.	1	2	3	4	5	6
3. It is difficult for me to form mental pictures.	6	5	4	3	2	1
4. I can easily imagine how movements feel.	1	2	3	4	5	6
Mental preparation						
5. I always set myself goals in training.	1	2	3	4	5	6
6. I always have very specific goals.	1	2	3	4	5	6
7. I always analyze my performance after I complete my performance.	1	2	3	4	5	6
8. I usually set goals that I achieve.	1	2	3	4	5	6
Self-confidence						
9. I suffer from lack of confidence about my performance.	6	5	4	3	2	1
10. I approach all competitions with confident thoughts.	1	2	3	4	5	6
11. My confidence drains away as competitions draw nearer.	6	5	4	3	2	1
12. Throughout competitions I keep a positive attitude.	1	2	3	4	5	6
Anxiety and worry management						
13. I often experience fears about losing.	6	5	4	3	2	1
14. I worry that I will disgrace myself in competitions.	6	5	4	3	2	1
15. I let mistakes worry me when I perform.	6	5	4	3	2	1
16. I worry too much about competing.	6	5	4	3	2	1
Concentration ability						
17. My thoughts are often elsewhere during competitions.	6	5	4	3	2	1
18. My concentration lets me down during competition.	6	5	4	3	2	1
19. Unexpected noises put me off my performance.	6	5	4	3	2	1
20. Being easily distracted is a problem for me.	6	5	4	3	2	1
Relaxation ability						
21. I am able to relax myself before a competition.	1	2	3	4	5	6
22. I become too tense before competition.	6	5	4	3	2	1
23. Being able to calm myself down is one of my strong points.	1	2	3	4	5	6
24. I know how to relax in difficult circumstances.	1	2	3	4	5	6
Motivation						
25. At competitions I am usually psyched enough to compete well.	1	2	3	4	5	6
26. I really enjoy a tough competition.	1	2	3	4	5	6
27. I am good at motivating myself.	1	2	3	4	5	6
28. I usually feel that I try my hardest.	1	2	3	4	5	6

IMPORTANT INSTRUCTIONS.

Mental Skills Questionnaire [5 minutes]

The questionnaire overleaf is concerned with the various types of mental skills that you may or may not currently use in your role as a coach. The use of mental skills varies greatly amongst coaches, so please complete the inventory as honestly as you can. Your answers will not be shared with anyone.

The inventory consists of 28 statements with which you are asked to rate your agreement on a scale ranging from 1 (disagree) to 6 (agree). Please read each statement carefully and circle the appropriate number before moving onto the next statement.

	Strongly **DISAGREE**					*Strongly* **AGREE**
Imagery Ability						
1. I can rehearse my sport in my mind.	1	2	3	4	5	6
2. I rehearse my skills in my head before I use them.	1	2	3	4	5	6
3. It is difficult for me to form mental pictures.	1	2	3	4	5	6
4. I can easily imagine how movements feel.	1	2	3	4	5	6
Mental Preparation						
5. I always set myself goals in training.	1	2	3	4	5	6
6. I always have very specific goals.	1	2	3	4	5	6
7. I always analyze my performance after I complete a competition.	1	2	3	4	5	6
8. I usually set goals that I achieve.	1	2	3	4	5	6
Self-Confidence						
9. I suffer from lack of confidence about my performance.	1	2	3	4	5	6
10. I approach all competitions with confident thoughts.	1	2	3	4	5	6
11. My confidence drains away as competitions draw nearer.	1	2	3	4	5	6
12. Throughout competitions I keep a positive attitude.	1	2	3	4	5	6
Anxiety and Worry Management						
13. I often experience fears about losing.	1	2	3	4	5	6
14. I worry that I will disgrace myself in competitions.	1	2	3	4	5	6
15. I let mistakes worry me when I perform.	1	2	3	4	5	6
16. I worry too much about competing.	1	2	3	4	5	6

Concentration Ability

17. My thoughts are often elsewhere during competition.	1	2	3	4	5	6
18. My concentration lets me down during competition.	1	2	3	4	5	6
19. Unexpected noises put me off my performance	1	2	3	4	5	6
20. Being easily distracted is a problem for me.	1	2	3	4	5	6

Relaxation Ability

21. I am able to relax myself before a competition.	1	2	3	4	5	6
22. I become too tense before competition.	1	2	3	4	5	6
23. Being able to calm myself down is one of my strong points.	1	2	3	4	5	6
24. I know how to relax in difficult circumstances.	1	2	3	4	5	6

Motivation

25. At competitions I am usually psyched enough to perform my coaching role well.	1	2	3	4	5	6
26. I really enjoy a tough competition.	1	2	3	4	5	6
27. I am good at motivating myself.	1	2	3	4	5	6
28. I usually feel that I try my hardest.	1	2	3	4	5	6

Coach Red

12 October 2017

The interview went very well. The coach's response reflects a lot of experience. Vast knowledge of MS and excellent description of definitions and overall terminology. With the assistance of the coach's page with all the synonyms, it aided in understanding and better explaining the actual mental skill. The terms used were direct from the MST questionnaire and may not be linked at all to the general populations daily vocabulary. The coach could accurately apply the term to its purpose within sport. In other words, when defining a MST term, she used many examples of the term in her own experiences within her sport. She spoke very confidently about the MS that she knew well and that she often applies in her sport. More so, the coach spoke of the skills she least understood, admitting her lack of knowledge of the skill – this was admirable and total signs of a growth mindset. It was clear in her body language and time spent answering/defining certain MS that she had no real understanding of certain MS. Basically it seemed tougher for her to explain, not able to recall exactly from the correct experience to do define the skill. With regard to the use, majority of the MS are/were applied. However, explaining the process of the skills in the application process of the sport seemed a lot more difficult to explain. The coach at some point never really spoke about the distinct differences of the MS in their application in the training and matches. The MS sound like it is being used, but not systematically structured and progressed. Often explanations are given in a scenario, but in terms of MS failed to be identified holistically and systematically. Terms are failed to be identified in its approach and its actual function within MS or as a MS. Self-confidence was the most important MS. The coach consistently recalled back to the self-confidence being an

important MS for her teams and coaching. Any other MS could rarely be discussed without talking about self-confidence or referring back to the importance of it. It is evident that the coach is very knowledgeable, and has a teacher instinct toward responses. She understands what she is talking about and not just answering whatever I want to hear, she knows her terminology. Seldom, misidentified the correct terms of MS and got right to the point of its definitions.

Coach Blue

13 October 2017

Enjoyable interview. The coach has plenty experience within the respective space. Fell short in defining MS by its purest definition as a MS; rather explained as a term through his experience of using it in certain situations – not very convincing in terms of "my/researcher" knowledge of the skills, but worthy of a definition in its basic form. Could possibly use his definitions to explain the lack of complete knowledge and understanding of MST. He struggled to explain EXACTLY what they mean. The coach clearly knows what confidence (self-confidence) means, but they do not know it in terms of it being a MS. The coach has a lot of experience in his sport; he had many examples to recall from and accurately explaining it according to the definition and had many examples of his application of MST. He definitely explained his application well, but again MST not used frequently enough in the physical training – which lacks the systematic approach that makes MST so unique. Imagery and visualization was one of his most applied MS. Another MS he regularly used was Anxiety and Worry Management and Relaxation. He found that players cannot perform under stress of the surrounding elements. He is a firm believer if relationship building. Could sense he had learned a lot through his experiences and in a transitional phase of his coaching as he described. He continued to reiterate visualization as a main skill and tool of MS. He has applied it in training

and in matches. Individuality was an important element of MST and of his coaching when in training for tournaments – and he has clearly been to many tournaments according to his information sheet. He always tries to follow the process and is very big on the processes of sport.

Coach Yellow

17 October 2017

This coach was well rounded his interview. He has identified many areas of his coaching and teams that lack the ability to perform at the highest level. In fact, he always mentioned what that was, when explaining his point of view, inhibiting factors pf performing at the highest level. Definitions were good, not exactly the MST standards, but in its understanding of his application and his sport. I like how he always looked ay correct processes. In terms of processes and what it really means in MST (goal setting), they like the others, fail at its true definition (by literature standards or even just google), which is the "how" and the how is related to the standard. Application of techniques and tactics are exceptional and the processes follow accordingly. But as for MS/MST not so much. No name or labels given to processes of MS application. It's just applied wherever they feel the need to. Especially ay tournaments. Time however (out of the pool) in the water polo is limited at tournaments. There is no evidence of systematic approaches of MST application, in this interview or in research (barely). It is definitely used though and maybe when the coach is under pressure and he can it, sense it and/or feel it, that some form of intervention is needed just like applying MS in Team Talks.

Coach Grey

21 June 2018

Quite a difficult interview. The coach struggled tremendously with the definitions and lacked basic knowledge of the concepts. The page given to the coach with the synonyms helped a lot with the basic understanding of the definitions. Initially, when asked about MST, she never heard of the term MST until it was asked a second time and then resonated with her. The definitions were difficult to explain especially the complex terms, and terms that need some cognitive processing and understanding (educational?) there were plenty examples of MS and the application of MS when asked about the definitions. I think the terms were overwhelming for her to explain – she may have seemed under a lot of pressure and felt that she was incapable of finding the best answers for the questions. I think the coach has never spoken about her experiences in little boxes each with a tiny label attached to it. Hence, the definitions were found to be difficult, she could not pin point the exact experience and understanding for the exact question/definition. She knows what is being asked or what is being spoken about, but for her to access it is difficult as it is not stored in her memory/experience by a scientific term. Religion was brought up when asked about MST. I need to be careful to label the theme of a higher. Defines self-confidence meticulously, motivation was very strong. Plenty player experience evident from her examples. Winning is clearly not important. Growth, standards and satisfaction thr most important – player contribution. The coach must always be positive; there were moments where the coach struggled to explain her thoughts, could it be a language barrier maybe? Application became even more difficult at the end. Last part was very rushed; application was lost a few times and could not get any examples across. The coach needed to rely on and use the examples from the definitions. Her personal beliefs are important to her, but I don't think there was a complete understanding of what the MS are and what it truly

means but its definitions – the word "skills" and "mental toughness is important" is not a definition. Standards are very important. The standard of acceptance was highlighted often. Previous experience could have taught her to accept and build a career on one standard – "Acceptance". Is that a mental skill?

On a side note, I was quite annoyed, as we started late, the questions were not being answered and a lot of time was spent talking about irrelevant points and experiences. Eventually, she said she has to leave in a few minutes' mid interview which I found quite unprofessional. I thought that when we agreed to the interview a dedicated time was given to the exercise and quality would be maintained as we would both act as professionals.

Coach Orange

22 June 2018

Great interview with the experienced water polo coach. Easy to interview, questions were answered comfortably, easy to probe for more depth and clarity, in fact, not much probing took place as the quality of answers were above average. Coach was exceptional amount of knowledge and experience. He was never a challenge, rather he was never tense at any point with the types of questions, though I attempted to challenge them more with probing for better in-depth understanding of his explanations of his knowledge and experience. He was relaxed and could easily find the answers to the questions, it seemed almost effortless at times. Took his time, well composed, was never under any haste – the answers flowed and under no pressure. The behavior of the coach suggested that he aimed to answer the questions as relevant as possible to the topics that align with his sport and experience, he gave many holistic examples and perspectives without really diving into his personal experiences within his domain. The behavior suggested his aim was to be realistic and honest as much as possible. I

enjoyed that he was confident in his knowledge, not many people can site definitions of the MS as well as what he did. As mentioned, he had many examples that mostly did not directly involve his own experiences, but had a holistic view of the topics – signs of an intelligent coach, drawing from multiple experiences. He described everything from an educational perspective. I was overly excited that this coach had sound knowledge and made super interesting to listen to that I engaged far too much in the conversation and not allowing them to complete some of his sentences; this could be aligned to the fact that not much probing was necessary. Thinking about the conversation now, I may have inhibited some of the flow of his answers, but I am certain the quality remained throughout and the answers are still exactly what they need to be. Lastly, what was really fascinating was the coach's knowledge and his ability to define the MS so efficiently; he was concise and to the point. Evidence of long term coaching experience as well as personal and professional growth.

Coach Green

6 April 2019

The interview went well, where the coach was able to keep up with the interview and the questions. There were difficult moments for the coach to describe certain definitions. The more questions were asked and the flow of the interview had improved, the easier it seemed for them to answer. Mental skills were related mostly to direct experience from the coaching and sometimes proved difficult and complicated to explain, but it was relatively easy to understand. The probing techniques helped a considerable amount of the time to dive deeper into their explanations. The coach seemed extremely confident in the skills they knew and gave the best examples possible. The coach gave most of their attention to the recalling their experience. I

enjoyed the relation between both genders of the sport, and on different levels of ages. The coach did not hesitate to move outside their field of work.