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High School Sports Coaches' Perspectives of Mental Skills Training Implementation

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Concordia University–Portland
College of Education
Doctorate of Education Program

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High School Sports Coaches' Perspectives of Mental Skills Training Implementation

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Concordia University–Portland

College of Education

Dissertation submitted to the Faculty of the College of Education

in partial fulfillment of the requirements for the degree of

Doctor of Education in

Transformational Leadership

Julie McCann, Ph.D., Faculty Chair Dissertation Committee

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Concordia University–Portland

2020

Abstract

The purpose of this qualitative multiple case study was to gain an in-depth understanding of the perceived benefits and challenges that exist when implementing a Mental Skills Training (MST) program in high school sports, from the perspectives of high school sports coaches.

Constructivism theory informed this study's arguments about the role that the benefits and challenges had on the coaches' perspectives of MST. For this research, interactions with six high school sports coaches took place through one-on-one virtual interviews and an asynchronous online focus group. The primary research question that guided this study was, "How do high school sports coaches perceive the benefits and challenges of implementing an MST program?" The conversations provided this researcher with an understanding of what the coaches learned from their perceived benefits and challenges of implementing an MST program. Five major themes arose: (a) reasons for implementing MST, (b) structure of MST and topics, (c) perceived effects on athletic performance, (d) perceived effects on life skills, and (e) support. The findings in this study can offer future high school sports coaches with relevant evidence about whether MST programs are a viable method of improving high school athlete performance and life skill development.

Keywords: Mental Skills Training (MST), high school sports, high school sports coaches perceptions

Dedication

This dissertation would not be completed without the support of my husband, Darren, and our son Reus. They spent many Saturday mornings at the San Gabriel River, and going out to breakfast together so that “mama could work.” This research is dedicated to them.

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Chapter 1: Introduction

The National Federation of State High School Associations (NFHS), leading administrations for education-based athletics, collected data for the first time on high school sports participation across the United States in 1971. In that first year, approximately 3.9 million high school students participated in organized school sports (NFHS News, 2018). Since then, participation in high school sports has increased to almost 8 million, with a steady increase occurring in the last 29 consecutive years, according to the NFHS report for 2018. High school sports participation reached an all-time high for the 2017–2018 school year when the nearly 8 million mark was reached (NFHS News, 2018). Over half of all high school students participate in school sports; the NFHS has stated participation in sport is valuable because athletes build life skills that can be applied in all areas of their lives (“Mission Statement,” n.d.).

According to Gould and Carson (2008), a life skill learned in sport is transferred into other domains such as classroom assignments and interpersonal relationships. One example is the discipline sports coaches report is required by high school athletes to manage the demands of schoolwork and sports commitments (Pierce, Erickson, & Dinu, 2018). Gould, Chung, Smith, and White (2006) reported that high school coaches viewed building life skills as equally important as physical development in sports. Some sports coaches have also stated they believe it is within their responsibility to build those skills (Camiré, Forneris, Trudel, & Bernard, 2011). The promotion of life skill development by organizations such as the NFHS has led both coaches and parents to believe high school students will gain valuable skills through sport (Forneris, Camiré, & Trudel, 2012). While the NFHS promotes those beliefs, research on life skill development does not support a link between sport and life skills development from mere participation (Camiré, 2014; Pierce et al., 2018). For high school athletes to learn life skills and

apply them to other domains of their lives, those skills need to be taught to athletes deliberately and practiced by the athlete (Camiré, 2014).

A program designed specifically for use in a sport that focuses on developing athletes' life skills, also referred to in the literature as psychosocial skills, is Mental Skills Training (MST). MST derives from applied sport psychology, an aspect of sport psychology that took techniques and theories from psychology and applied them to sport for improving athlete performance and well-being (Williams & Straub, 2001). MST programs are education-based and focus on training skills in either group or individual settings. These skills are taught by either a Certified Mental Performance Consultant (CMPC®) or a sports coach who has received coach education on how to implement an MST program. A CMPC® is a professional recognized by the Association of Applied Sport Psychology as the most capable sport psychology providers. They have met standards in education, training, and supervised practice, and passed a certification exam ("What is a Certified Mental Performance Consultant (CMPC)?", n.d.).

MST programs implemented by either the sports coach or a CMPC® include a variety of cognitive-somatic skills that typically contain strategies on self-talk, goal-setting, imagery, and emotion regulation (Weinberg & Williams, 2001). Sport psychology consultants designed MST programs to be a combination of skills; some researchers have suggested a benefit to participants (Danish, Forneris, & Wallace, 2005). A combined approach was reported by Danish et al. (2005) to be beneficial for students in a high school setting because of the demographic differences of students. While some athletes have learned to set goals, for example, some athletes will not have learned about goal-setting when they arrive in high school (Danish et al., 2005). The variety of ages, ethnic groups, and economic status of high school athletes results in access to different resources throughout their lives.

There is some evidence MST programs improve the athletic performance of athletes in a high school setting (Gilbert & Lewis, 2013; Gilbert, 2011). Improved performance is essential for any athlete, especially for those in high school who plan to receive college scholarships (Camiré, 2014). There is also evidence MST can improve not only the competitive performance of athletes but also life skills such as self-efficacy, self-regulated learning, and an optimistic style of thinking (Sheard & Golby, 2006). College, professional, and Olympic sports have recognized the importance of MST and have made it a deliberate part of athlete training. The result is better performance and well-being for the athletes who participate.

Furthermore, an acknowledged leader in sport and physical activity, The National Association for Sport and Physical Education (NASPE), promotes mental training in sport. As part of their Society of Health and Physical Educators (SHAPE America) program, they have published The National Standards for Sports Coaches (NSSC) to provide athletic coaches with competencies to assist them in delivering quality sport experiences for athletes. Standard 27 in the NSSC states the following:

Sport coaches incorporate mental skills training at all age levels as a means to increase learning and performance, but also as a part of the holistic development of the athlete. They provide training for mental skills (e.g., goal-setting, arousal regulation, attentional control, imagery/visualization, self-talk) through a periodized model that allows athletes to progress in their development of these skills and peak at appropriate times during the season. Sport coaches help athletes develop a mental competition plan that includes pre-competition preparation, contingency plan for errors during competition, and managing stress. (SHAPE America, 2018, para. 6)

While not a requirement, the training of mental skills is encouraged at the high school level, and some coaches have started to implement the training. This researcher examined the potential benefits and challenges of implementing an MST program from the perspective of high school sports coaches. Data collected captured how high school sports coaches describe their experiences as they incorporated MST into existing practice plans. The information will provide insight for future high school sports coaches who are considering including MST in student–athlete training.

MST programs currently exist in professional, collegiate, and Olympic sports and other realms of performance, such as the United States military. Evidence of improved performance and development of skills such as self-efficacy and self-regulated learning has led to the growth of MST programs (Adler et al., 2015). While research exists about the effectiveness of utilizing MST programs, the implementation of MST at the high school level has not seen the same growth (Weissman, 2005). There are few programs designed for high school students, and few schools are implementing those programs (Gilbert & Lewis, 2013). While MST programs tailored to high school student–athletes are uncommon, those studied have demonstrated improved performance and life skill development through the use of quantitative data (Gilbert, 2011, 2017; Gilbert, Gilbert, Loney, Wahl, & Michel, 2006). Those few research studies that do exist have examined only the benefits of MST for the performance and well-being of high school students. Almost no studies have examined both the benefits and challenges of implementing an MST program at the high school level. Currently, the suggestion from NASPE and SHAPE America (2018) is for coaches to incorporate mental skills into athlete training. For this reason, it is essential to examine how high school sports coaches perceive the benefits and challenges of implementing mental skills.

Problem Statement

This study explored high school sports coaches' experiences implementing MST what they learned from those experiences, and how it shaped their perspectives. Existing research supports the idea that MST develops the life skills of athletes, something that Camiré (2014) has stated needs to be targeted deliberately in high school sports. The MST model can be seamlessly integrated into sports, but implementation at the high school level is almost nonexistent. There are very few research studies that examine MST in high schools, and the researchers conducting those studies have placed their focus on the benefits to athletes using primarily quantitative data (Gilbert & Lewis, 2013; Gilbert, 2011; Gilbert et al., 2006). Researchers have also examined the perceptions of coaches, administrators, and elite-level athletes, surrounding sport psychology and mental skills, but there are almost no studies examining high school sports coaches' perceptions (Gilbert & Lewis, 2013; Wrisberg, Withycombe, Simpson, Loberg, & Reed, 2012). It is currently unknown how or why high school sports coaches implement MST or how they perceive the benefits and challenges.

While researchers have documented the potential benefits of MST, there may be operational challenges for high school sports coaches. Understanding their experiences with MST is relevant for future high school sports coaches who are considering implementation. The data collected in this study will extend the literature surrounding perceptions of MST. This researcher will examine high school sports coaches' opinions of the effects of MST on athletes, the support from the community, their role in implementation, and whether they believe continued use of MST is worthwhile.

Nature of the Study

This researcher implemented a multiple case study design to examine high school sports coaches' perceptions. A multiple case study includes several in-depth examinations of the same case (Yin, 2014). This research design made it possible to examine similarities and differences across the cases and provided more robust data (Stake, 2006). One-on-one online interviews, an asynchronous online focus group, and a document review were the primary sources of data for this study. The purpose of the online interviews was to uncover the experiences of the high school sports coaches and the benefits and challenges they perceived. The online focus group provided an opportunity to discuss shared experiences around a set of questions provided by this researcher. This researcher also conducted a document review of planning meetings, emails, and topics covered during implementation.

Research Questions

Interviews, one focus group discussion, and document reviews answered the primary research question and subquestions in this study. Triangulation increased the validity of the data reported in this study (Yin, 2014). These methods allowed this researcher to answer this primary research question, "How do high school sports coaches perceive the benefits and challenges of implementing an MST program?" The following research subquestions assisted in answering the primary research questions:

- How are high school sports coaches implementing MST?
- How do high school sports coaches perceive the effects of MST on performance and life skill development?

Research Objective

The objective of this research was to examine high school sports coaches' perceptions of the benefits and challenges of implementing MST. According to the National Standards for Sports Coaches (NSCC), it is the responsibility of the coach to incorporate mental training into practice plans. This study explored how and why some coaches are taking on that responsibility. This researcher conducted one-on-one interviews and a focus group discussion with six high school sports coaches who deliberately integrated MST for athletes into existing practice plans. This research provides valuable insight into the experiences of high school sports coaches.

Purpose of the Study

The purpose of this qualitative multiple case study is to gain an in-depth understanding of the perceived benefits and challenges that exist when implementing an MST program in high school sports. While some researchers are beginning to show the benefits of MST for high school athletes with quantitative data, the functionality of those programs needed further exploration. To date, almost no qualitative studies are examining the experiences of MST from the high school sports coach's perspective. This researcher could locate only one study conducted by Camiré and Trudel (2013) that considered perceptions of high school sports coaches as they relate to mental training. The purpose of that study was to understand the coaches' experiences with a mental training program designed to teach them how to incorporate mental skills into their coaching style (Camiré & Trudel, 2013). Understanding the insights of high school sports coaches who have implemented MST requires further examination. The findings in this study can provide future high school sports coaches with relevant evidence about whether MST programs are a viable method of improving athlete performance and life skill development.

Conceptual Framework

The National Association for Sport and Physical Education (NASPE) and Society of Health and Physical Educators (SHAPE America) set forth an expectation for sports coaches to teach and incorporate mental skills into training for athletes in the National Standards for Sport Coaches (NSSC). Number 27 on their list of standards states that coaches should provide training on mental skills such as goal-setting, self-talk, imagery, and emotion regulation to enhance performance and athlete well-being (SHAPE America, 2018). With these recommendations in place, the lack of research surrounding high school coach perceptions of MST demands exploration. Current literature examining the ongoing life skill development in sport, and the benefits, challenges, and perceptions of MST within college and professional domains provide context for this study. There is evidence that when coaches incorporate MST into athlete training, there are increases in athlete performance and development of psychosocial skills such as optimism and self-efficacy (Sheard & Golby, 2006; Wright, O'Halloran, & Stukas, 2016). Challenges implementing MST are also reported, such as the stigma surrounding the term psychology and a lack of finances to support training (Wrisberg et al., 2012). The research examined in this study provides a framework for how and why coaches are implementing MST and how they perceive the benefits and challenges.

This qualitative study is grounded in the constructivism theory. Piaget's theory emphasizes that individuals create knowledge through experiences (Fosnat & Perry, 1996). Two components of constructivism are accommodating and assimilating. Assimilating involves the incorporation of new experiences into old experiences and leads to the development of new outlooks and perceptions. Accommodating involves reframing or changing old perspectives from new experiences (Fosnat & Perry, 1996). Constructivism theory informed this study's arguments

about the role that the benefits and challenges had on the coaches' perspectives of MST. Within the context of this study, Piaget's constructivism theory provided a framework for this researcher to understand how learning from the experienced benefits and challenges influenced the perceptions of each coach. This researcher expected that participants learned from the benefits and challenges and either continued or discontinued the use of MST. The goal of this research was to rely as much as possible on the views of the participants. For this research, interactions with high school sports coaches took place through virtual interviews and an asynchronous online focus group. The conversations that took place provided this researcher with an understanding of what the coaches learned from their perceived benefits and challenges of implementing an MST program.

Definition of Terms

For this research study, the following definitions describe key terms within the concepts of this research.

Life skills. Life skills are psychosocial abilities that enable individuals to manage the demands of everyday life more effectively. The skills also transfer into domains outside of sport (Gould & Carson, 2008).

Mental Skills Training (MST) programs. MST programs are educational training programs that teach athletes psychological skills to control cognition and emotions. Most MST programs focus on goal-setting, self-talk, visualization, anxiety management, and concentration (Weinberg & Williams, 2001).

Performance. Performances are discrete events where a performer or a group of performers, often referred to as a team, showcase a specific set of skills (Hays, 2012).

Self-efficacy. Self-efficacy is the belief in the ability to complete tasks and achieve goals (Bandura, 1977).

Self-regulated learning. Self-regulated learning is guided by metacognition and motivation. Students who are self-regulated initiate and direct their efforts (Bandura, 1986).

Sports coach. The sports coach is the person in charge of the instruction and training of a high school sports team.

Assumptions

For this study, the researcher assumed a qualitative multiple case study was the best design for this research. This researcher chose this design because this study focused on taking an in-depth examination of the perceptions of the high school sports coaches as they implemented MST. According to Yin (2014), researchers commonly apply a case study design when exploring perceptions. This researcher utilized a multiple case study design to compare similarities and differences for more robust data (Stake, 2006). For this study, the researcher assumes the following about the high school sports coaches participating in the research:

1. Participating high school sports coaches were familiar with MST programs.
2. Participating high school sports coaches would be honest in reporting their perceptions of the benefits of MST to athletes.

Limitations

Certain limitations exist for this research. The first limitation that exists is the researcher's current role as a CMPC®. This researcher has implemented MST programs, and that experience creates a bias. While this researcher separated her understandings from this study through reflexive note-taking, her previous familiarity with MST could have affected her perceptions about the benefits and challenges that the high school sports coaches reported. The

researcher, as the primary source of data collection, is also a limitation in this qualitative case study due to researcher bias potentially impacting the findings (Yin, 2014). Another limitation of this study is the small number of participants. While not a limitation for qualitative research, the small number of participants will make the ability to generalize the data impossible.

Data collection for this study included interviews, an online asynchronous focus group, and document review gathered from six participants. Despite the benefits of triangulation, there are also limitations (Merriam & Tisdell, 2016). For example, this researcher did not statistically calculate the results of this study, and the sample size was small. For these reasons, generalizability is low, and readers should not use the data presented in this study to make predictions about MST implementation. Participants also represented one gender, male, and the sports coached were limited to three types of sport. Therefore, this study does not represent a full depiction of the high school coaching population. A more expanded sample selection could have resulted in a broader range of perceptions.

Retrospective reporting by participants is another limitation of this study. The participants were asked to recall how and why they implemented MST, which for some coaches, was many months before the data collection. Only one participant in this study worked with a mental coach that was provided by the school's athletic department. The other five participants either had experience implementing MST, or they worked with a previous coach who applied MST. They each took steps on their own to execute MST with their athletes, which could have created a positive bias on their perceptions. This researcher assumes the participants provided honest responses in the interviews and the focus group discussion. However, the participants' willingness to implement MST could have caused them to view the benefits and challenges more

positively. If the majority of participants had been offered MST from the athletic department, the data reported in this study might have been different.

Scope and Delimitations

The research was delimited by certain boundaries that provided parameters for the scope of the study (Creswell, 2013). The first delimiting factor was high school sports coaches who implemented an MST program that includes common strategies such as goal-setting, self-talk, visualization, and emotion regulation. This researcher selected this boundary because research surrounding MST examines programs that include those strategies. Another delimiting factor is high school sports coaches who have implemented an MST program for a minimum of one full athletic season. For the researcher to thoroughly examine the experiences of the high school sports coaches, a commitment to implementing MST for an entire athletic season was necessary to understand what they learned.

Significance of the Study

According to the review of the literature, MST programs have the potential to improve life skill development and the physical performance of athletes. With over half of all high school students participating in sport, MST may be worthwhile to integrate into practices. Sharing the potential benefits and challenges experienced by coaches who are implementing MST in high school sports is a valuable first step to understanding whether it is worthwhile (Hwang, Feltz, Kietzmann, & Diemer, 2016). Benefits and challenges of incorporating mental training as perceived by elite-level coaches exist in the literature currently, but there is almost no research examining high school sports coaches' perspectives. This research will add to the literature as it relates to high school sports coaches' perspectives of executing MST programs. Information gathered from this study can be beneficial to other coaches and administrators when making

decisions about implementing an MST program. The results of this study will provide future high school sports coaches with an awareness of the potential benefits and challenges as they make decisions about implementing mental skills into athlete training.

Summary

In this qualitative multiple case study, this researcher explored the perceptions of high school sports coaches surrounding MST. Through the lens of constructivism theory, this researcher took an in-depth examination of the experiences high school coaches had when implementing MST and how those experiences shaped their perspectives. This researcher was interested in the perceived challenges and benefits of MST, specifically as they related to athlete performance, life skills, and community support. Offering MST to athletes has gained momentum in the professional and college sports worlds, and, in 2017, the NFHS Learning Center launched an online course about MST for coaches (Miller, 2017). The benefits and challenges of implementing MST at the high school level are necessary to explore.

Chapter 1 introduced the reader to the topic and the purpose of the study. Chapter 2 provides an expansion of the conceptual framework through a review of the literature on the benefits and challenges of MST and current perceptions of MST. Chapter 3 outlines the design of the study, which utilizes a multiple case study design and data collection tools. Chapter 4 offers a report on the data collected. Chapter 5 concludes the study with a discussion and suggestions for future research.

Chapter 2: Literature Review

Introduction

The NFHS promotes a holistic approach to the positive development of high school student-athletes, stating “student participation in education-based high school athletics: develops leadership, and life skills” (“Mission Statement,” n.d.). Adult stakeholders of high school student-athletes such as parents, coaches, and administrators believe sports participation contributes to life skill development for the athletes involved (Camiré, 2014). Perceived benefits of sports participation include learning about health and fitness, physical development, and developing positive life skills like optimism (Gould & Carson, 2008). However, there is little evidence that the development of psychological characteristics such as optimism occurs unless someone like a coach teaches athletes how to build those skills (Camiré, 2014). To enhance the sporting experience for high school athletes and ensure the development of life skills such as goal-setting and self-confidence, Camiré (2014) recommended changes to high school sport that align with the features of positive development by the National Research Council and Institute of Medicine. One of the suggested changes is to provide athletes with opportunities to build psychological skills that lead to life skill development.

An acknowledged leader in sport and physical activity, NASPE, promotes mental training in sports. As part of their SHAPE America program, NASPE has published The National Standards for Sports Coaches (NSSC) to provide athletic coaches with competencies that promote a quality athletic program. Listed in the NSSC is standard 27, which states that coaches should incorporate mental skills such as goal-setting and self-talk into training plans (SHAPE America, 2018). While this standard exists, it is not required to implement any MST in high school sports (Gilbert, 2017). Camiré (2014) suggested that the role of high school sports

coaches is significant in the life skills development of athletes because they can provide high school student–athletes with the opportunities to build psychological skills by including mental training into existing training plans.

Practitioners in the field of sport psychology designed MST programs for sports environments, and researchers have shared beliefs about the power of MST for athletes. MST is an education-based program that can be implemented in high school sports by the coach or a Certified Mental Performance Consultant (CMPC®). In high school settings, researchers have found that MST programs lead to enhanced performance and psychosocial skill development in athletes (Gilbert, 2017). MST programs have been increasingly used in professional and college sports to teach mental skills to athletes. The mental skills practitioners commonly include in an MST program are self-talk, goal-setting, imagery, and strategies for emotion regulation (Weinberg & Williams, 2001). There is evidence in the literature that the strategies learned in MST programs help athletes grow both on and off the field, and college and professional sports have made MST a part of athlete training (Gucciardi, Gordon, & Dimmock, 2009).

While evidence exists for the positive effect MST has on performance and athlete psychosocial development, MST programs do not currently exist in high schools in any formal way (Weissman, 2005). Some researchers have examined the potential benefits of MST for athletes at the high school level when the programs are taught to the athletes by the sports coach (Gilbert & Lewis, 2013; Gilbert, 2011, 2017). Camiré (2014) suggested that the role of the coach is essential in providing opportunities for the development of life skills in high school. Since the coach is responsible for developing the practice plans, they can implement programs like MST by integrating the programs into those plans. Currently, the literature surrounding perceptions of sport psychology and MST has examined college and elite-level coach and administrator

perceptions, but virtually no studies have examined the perceptions of high school sports coaches. It is unknown how and why high school sports coaches are implementing MST, and if they consider the training worthwhile for enhanced performance and life skill development. This study will examine the perceived benefits and challenges high school sports coaches experienced while implementing an MST program.

The study topic. Researchers have examined the positive impact of MST on sports performance and the development of life skills for athletes (Birrer & Morgan, 2010; Sheard & Golby, 2006; Sotoodeh, Talebi, Hemayattalab, & Arabameri, 2012). The evidence in the literature has resulted in MST programs included as a standard part of athlete training within professional sports and college athletic programs. Those higher-level sports organizations recognize the significance of MST on athlete performance and well-being, but the implementation of MST is not reflected in high schools. High school sports coaches have stated that training the mind is just as essential as physical training, and they believe it is in their responsibility to implement MST (Gould et al., 2006). While high school sports coaches have reported that the mental component of sport is essential, many do not take steps to implement any type of deliberate MST (Orlick, 2016). There is almost no literature examining the implementation of MST in high school sports, and very few researchers conduct studies on the effects of MST on high school athletes' performance and psychosocial development (Gilbert & Lewis, 2013; Gilbert, 2011). This research is interested in the perceived benefits and challenges of MST from high school sports coaches who have implemented a program.

The context of the study. To date, most of the research on perceptions of sport psychology and MST focuses on college-level athletics and professional sport, with little research conducted at the high school level. Two potential reasons for this that need further

examination is the lack of understanding about what MST programs are in high schools and how the programs work (Martin, 2005). Currently, there is a lack of qualitative research that takes an in-depth look at the experiences of high school sports coaches who have implemented MST. This research examines the experiences of sports coaches in the high school level and explores perceptions of the effect of MST on athletes' performance and life skills, how coaches are implementing MST, and the level of support from the community. This literature review examines the existing research on the strategies commonly included in MST and how the application of those skills by athletes affects physical performance and life skill development. Specifically, the literature reviewed presents data about changes in athlete performance and the impact of MST on life skills such as self-efficacy and self-regulation. Research about common challenges implementing MST is also reviewed in this section. The review of literature presents both positive and negative perceptions and experiences of coaches and administrators who have implemented MST. The current literature on the benefits and challenges of implementation provides this research with a context for understanding high school sports coaches' perceptions.

The significance of the study. According to Hwang et al. (2016), over half of high school students in the United States participate in school sports, and that number continues to rise. With so many students participating in sports, it is essential to teach mental skills that benefit physical performance on the field and skills that are readily transferable into other areas of an athlete's life (Lesyk, 2005). For high school student-athletes to fully gain all the benefits of sports participation, there must be a focus placed on transferable mental skill development, in addition to physical and tactical development (Danish & Nellen, 1997). MST programs can potentially be a resource for high school sports that focuses on the application of psychological theories to enhance the physical performance and the life skill development of athletes (Williams

& Straub, 2001). Mental factors such as controlling cognition and emotion are essential to success in sport, and MST programs can enhance the ability to manage cognition and emotions (Behncke, 2004; Weinberg & Williams, 2001). Presented in this study is an exploration of the experiences of high school sports coaches who have applied an MST program as a method for teaching mental skills to high school athletes. This research adds to the literature as it relates to high school sports coaches' perspectives on the benefits and challenges of implementing MST programs. The results of this study provide valuable information for other high school sports coaches and administrators who are considering implementing MST.

The statement of the problem. The benefits and challenges of MST programs for athlete performance and psychosocial development have been examined in the literature. Still, that research has been conducted primarily with elite-level athletes and the use of quantitative methods. While the previous research surrounding MST shows potential promising benefits for high school athletes, very few studies have been conducted at that level (Gilbert & Lewis, 2013; Gilbert, 2011; Gilbert et al., 2006). To date, the research on coach perceptions of MST is also limited to elite-level and college coaches, with almost no studies examining the perceptions of high school sports coaches. It is not known how and why high school sports coaches implement MST or how they perceive the benefits and challenges they experienced.

For this reason, understanding high school sports coaches' perceptions of implementing MST is essential for future high school sports coaches who are considering implementation. While the potential benefits of MST are apparent, there may be operational challenges for high school sports coaches that need investigating. The data collected in this study extends the literature surrounding perceptions of MST. This researcher utilized a multiple qualitative case study design to explore high school sports coaches' viewpoints of the effects of MST on athletes,

how and why they implemented MST, the support from the community, and whether they believe continued use of MST is worthwhile.

The organization of the chapter. The next section presents an overview of the conceptual framework. This researcher divided the review of literature into sections that are first organized by life skills development in sport, followed by strategies included in MST programs, and the benefits and challenges of implementing MST programs. The literature reviewed on benefits and challenges includes stigma, finances, enhanced performance, and development of life skills. Following these sections is research surrounding current perceptions of mental skills by coaches, athletes, and administrators. The literature presented in this review provides a foundation for examining the perceived benefits and challenges of MST by high school sports coaches.

Conceptual Framework

As a national authority on all physical education, NASPE, along with the SHAPE America, sets standards for sports coaches that represent essential skills and knowledge coaches should possess. Number 27 on their list of standards states that coaches should provide training on mental skills such as goal-setting, self-talk, imagery, and emotion regulation to enhance performance and athlete well-being (SHAPE America, 2018). MST programs take an educational approach to teach athletes that psychological factors are within individual control, and athletes learn strategies such as goal-setting, self-talk, imagery, and emotion regulation to help them control those factors. There have been multiple studies in the field of sport psychology that have shown measurable improvements in the performance of athletes who participate in MST programs (Mamassis & Doganis, 2004; Sheard & Golby, 2006; Thelwell & Greenlees, 2003; Thelwell, Greenlees, & Weston, 2006). Research surrounding MST has also found

increases in life skills such as self-efficacy, self-regulation, and self-determined behavior (Deci & Ryan, 2000; Hatzigeorgiadis, Zourbanos, Goltsios, & Theodorakis, 2008; Schunk, 1990).

While there are minor variations in MST programs, the clear majority include cognitive-somatic strategies focused on self-talk, goal-setting, imagery, and emotion regulation (Weinberg & Williams, 2001). These educational approaches to learning and developing mental skills are designed to improve performance and well-being. MST programs are one of the most utilized procedures for enhancing performance and psychosocial skills (Williams & Krane, 2001).

With recommendations from NASPE and SHAPE America for coaches to implement MST, the lack of research surrounding high school coach perceptions of the utility of MST demands exploration. Current literature examining the benefits, challenges, and perceptions of MST within college and professional domains provide a foundation for this study. Common obstacles to implementing mental skills, as well as the reported benefits, are addressed in the review of the literature. There is evidence that when practitioners incorporate MST into athlete training, there are increases in athlete performance and life skills such as optimism and self-efficacy (Sheard & Golby, 2006; Wright et al., 2016). Challenges implementing MST are also reported, such as the stigma surrounding the term psychology and a lack of finances to support training (Wrisberg et al., 2012). This review also outlines literature surrounding whether life skills development is a by-product of sport. The research examined in this study provides relevant information for potential benefits and challenges high school sports coaches can experience during MST implementation.

In addition to the effects on performance, the use of skills such as imagery, self-talk, and goal-setting have an impact on life skills development. Self-regulated learning is a life skill applicable to this research because of the reported benefits of MST on the components of self-

regulated learning. Researchers define self-regulated learning as individual control over cognitions, emotions, and behaviors (McCardle, Young, & Baker, 2017). Techniques commonly found in MST programs, such as goal-setting, develop the components of self-regulated learning (Zimmerman & Kitsantas, 1996). Of interest to this study is research that has indicated that lesser skilled athletes do not naturally demonstrate the components of self-regulated learning in the same way that expert performers do (Bartulovic, Young, & Baker, 2017). Student-athletes in high school are typically considered to be lesser skilled novice performers because of the number of accumulated hours devoted to their sport (Ericsson, Krampe, & Tesch-Römer, 1993). High school student-athletes can benefit from cognitive training because of the positive effect on self-regulated learning. Researchers have also indicated that increases in self-regulated learning allow student-athletes to become more successful in sports and in learning that takes place in the academic environment (Panadero, 2017).

Self-efficacy theory is also relevant to this research. Researchers define self-efficacy as a person's belief in their ability to complete situation-specific tasks and achieve their goals. There are four primary sources of self-efficacy that influence performance: mastery experiences that come in the form of past performance; vicarious experiences which is the observation of others who are similar in skill; verbal persuasion that includes the persuasion of others and our own self-talk; and emotional and physiological states (Duda & Treasure, 2001). Of the four sources, past performance is considered to be the most influential source of self-efficacy on performance. MST focuses on effective appraisals of past performance and effective verbal persuasion through strategies such as self-talk. Multiple studies have found that increases in self-efficacy lead to increases in performance and classroom learning (Chase, 2001; Hepler & Feltz, 2012; Lee & Mao, 2016).

This qualitative study is grounded in constructivism theory. Piaget's theory emphasizes that knowledge is created through experiences (Piaget & Cook, 1952). Two components of constructivism are accommodating and assimilating. Assimilating involves the incorporation of new experiences into the old and leads to the development of new outlooks and perceptions. Accommodating involves reframing or changing old perspectives as a result of new experiences (Fosnat & Perry, 1996). Constructivism theory informed this study's arguments about the role the benefits and challenges had on the coaches' perspectives of MST. Within the context of this study, Piaget's constructivism theory provided a framework for understanding how learning gained from the experienced benefits and challenges influenced the perceptions of the coach (Piaget & Cook, 1952). The goal of this research is to rely as much as possible on the views of the participants. This researcher expected that participants learned from the benefits and challenges and either continued or discontinued the use of MST. For this research, interactions with high school sports coaches were conducted through interviews and an asynchronous online focus group. The conversations that took place provided this researcher with an understanding of how the coaches created meaning about the perceived benefits and challenges of implementing an MST program (Fosnat & Perry, 1996). Figure 1 provides a visual representation of the conceptual framework.

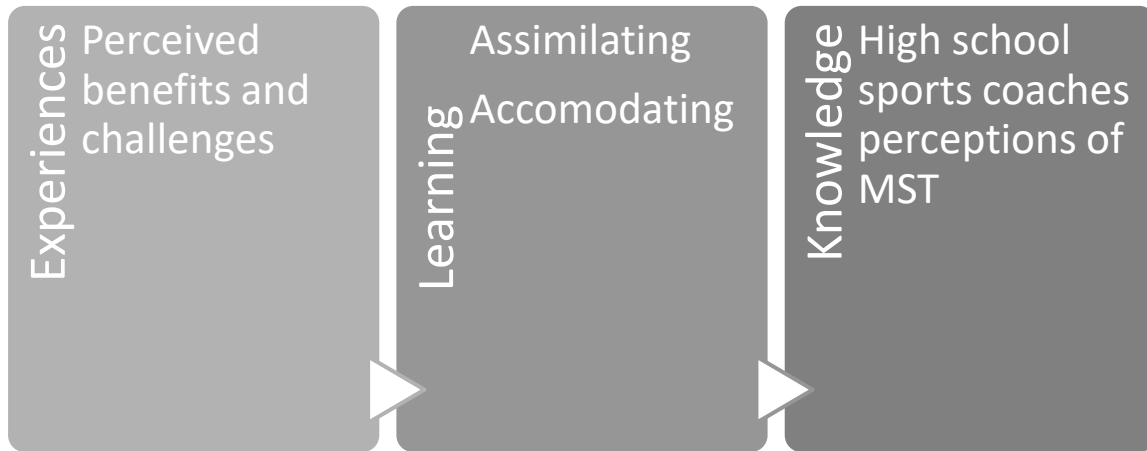


Figure 1. Conceptual framework depicting participant experiences with the benefits and challenges of MST implementation, how they learned from those experiences, and how their new knowledge shaped their perceptions.

Review of Research Literature

To answer the research question and subquestions in this study, two search engines, ProQuest and Taylor and Francis online, were the primary databases used to explore the literature surrounding the benefits and challenges of MST programs and current perceptions of MST. Specifically, this review of research focused on the effect of MST on athlete performance and life skills development. The literature examined also focused on the use of MST programs and the perceptions of athletes, coaches, and administrators. The articles presented provide a framework for understanding the potential benefits and challenges of MST for high school athletes by summarizing the existing research on the benefits, challenges, and perceptions of coaches, athletes, and administrators.

Introduction

According to the NFHS, the number of students participating in high school sports has steadily increased for the last 29 years, with the most recent statistics showing almost 8 million high school students participated in organized sports (NFHS News, 2018). With participation growing each year, there is an opportunity to provide student–athletes with programs that can help to improve their performance and life skills. Student–athletes face a unique set of stressors when they balance athletics along with academic responsibilities and social relationships (Golby & Wood, 2016). There is evidence that MST specifically designed for high school student–athletes is useful for improving athletic performance and life skills that help to manage those unique stressors (Gilbert, Loney, Wahl, & Michel, 2006). One MST program, called the Psychological UNIFORM, is designed to be run by high school sports coaches and has documented success on high school athlete performance and life skills development (Gilbert & Lewis, 2013).

Most resources within psychology have traditionally focused on how to improve problems that individuals experience. MST differs from other traditional resources by switching focus from fixing problems to taking a proactive educational approach to learning mental strategies that benefit performance and well-being. Athletes and coaches who are drawn to MST and seek out the training do so because of the enhancements observed in performance and the seamless integration of the training into the sporting environment (Fortin-Guichard, Boudreault, Gagnon, & Trottier, 2017). Professional teams, colleges, and other realms of performance, such as the military and surgeons in the medical community, are all implementing MST because of the benefits (Anton & Stefanidis, 2016; Fitzwater, Arthur, & Hardy, 2017; Mathers, 2017). Professional teams in football such as the Seattle Seahawks and Minnesota Vikings and

professional baseball teams like the Chicago Cubs and Houston Astros, all employ Certified Mental Performance Coaches (CMPCs®) and have well established MST programs. CMPCs® are approved by the Association for Applied Sport Psychology, the governing body for sport psychology services and research. The United States Army also employs CMPCs® and has MST centers at every major installation in the United States and overseas.

While the reported benefits of MST are many, they are also challenges with implementation. The perceived stigma around the word psychology and lack of finances to support the execution of MST have been described as challenges (Wrisberg et al., 2012; Wrisberg, Simpson, Loberg, Withycombe, & Reed, 2009). This chapter will explore the literature related to the research questions presented in chapter one by reviewing studies outlining the benefits and challenges of MST and current perceptions from athletes, coaches, and administrators that exist in the literature currently.

Life skills development in sport. Parents and coaches assume high school sports participation leads to the development of valuable life skills that can be applied in other domains of a student–athlete’s life (Camiré, 2014). Researchers, however, have not yet found support for a direct link between participation in sport and the development of transferable life skills (Pierce, Erickson, & Dinu, 2018). In one Midwest state, 12 teacher-coaches participated in a qualitative study conducted by Pierce et al. (2018) on the life skills development of athletes in high school sports. The participants had an average age of 35 years and the average amount of time coaching high school sports was approximately 13 years. The researchers conducted purposeful sampling of the teacher-coaches, receiving recommendations by student–athletes who reported the teacher-coaches were effective at promoting life skills. The participants were informed of the sampling technique and took part in a semistructured, in-person interview conducted by the lead

researcher. Collectively, the participants reported that life skills development and the transfer of life skills outside of sport is a goal of high school sports participation, and while they believe that it can take place, they were unsure that it occurred. From the interviews conducted by the researchers, the participants reported both individual and contextual factors that helped and hindered life skills development. Individual factors included student–athlete characteristics and life histories, and contextual factors included the coaching style of the teacher-coaches. The researchers cited several limitations of this study, including the purposeful sampling method. Pierce et al. (2018) reported that selecting participants who supported life skills development in sport may have limited the ability to gain a more complete picture. The lead researcher as the interviewer who reported supporting life skills development in high school sports, also created a bias that may have guided participants to give responses as supportive of life skills development. Recommendations for future research included more qualitative and quantitative studies examining successful life skills development (Pierce et al., 2018).

Strategies included in MST programs. A strategy commonly included in MST programs is self-talk. Researchers define self-talk as the internal dialogue that occurs naturally during a performance, and the type of dialogue that takes place can either hurt or hinder an athlete’s performance (Zinsser, Bunker, & Williams, 2001). Multiple studies within the context of sports have examined the effectiveness of self-talk. Hatzigeorgiadis, Galanis, Zourbanos, and Theodorakis (2014) found that self-talk strategies enhanced performance in both competitive and noncompetitive environments. The participants in the study were 41 swimmers with an average age of 14; researchers divided participants into the study into an experimental group and a control group. The swimmers in the experimental group developed a self-talk plan to adhere to during their competitive performances. Both the control and experimental groups had their

swimming times recorded before the intervention, and then again after the intervention. The researchers reported that the performance of the intervention group improved, while the control group showed no significant changes in performance. The study experienced limitations the researchers expected, given the competitive environment. For example, the environmental conditions of the pre- and post-test could not be identical since the researchers conducted the study in a live competitive environment. The participants also competed in different events from each other, which is why the researchers compared the changes in the pre- and post-test of each swimmer's time. The fact that participants were competing in the events that they were most comfortable in could have influenced how they applied the self-talk strategies (Hatzigeorgiadis et al., 2014).

Wright et al. (2016) also examined the effects of self-talk on athletes' performance. In that study, a total of 96 participants took part in a within-subjects design and a between-groups design that assessed the effectiveness of mental skills on performance and self-efficacy (Wright et al., 2016). The participants completed three different self-efficacy scales and then randomly assigned to a group with a specific mental skill the participants were instructed to implement into their performances. The participants completed a series of novel motor tasks and were given a mental skill to implement for each task. The results indicated an improvement in performance for the group that used self-talk, as well as a significant increase in self-efficacy. A limitation of this study, however, was the tasks were not reflective of real-world experiences. For this reason, it may be difficult to generalize the findings to a competitive sports setting.

Goal-setting is another strategy included in MST programs that focuses on setting personal process goals, often referred to as mastery-oriented goals. Goal-setting has led to an increase in self-regulated learning by guiding individuals to assign performance outcomes to

factors within individual control (Kitsantas, Robert, & Doster, 2004). Research has also shown that the adoption of process-oriented goals enhances intrinsic motivation and performance, increasing self-determined behavior (Cerasoli & Ford, 2014). Mastery-oriented goals provide individuals with a framework to set goals that focus on a specific standard obtained at a specific time. Goals set to those standards have been shown to positively impact sports performance (Lochbaum & Gottardy, 2015). Lochbaum and Gottardy (2015) conducted a meta-analysis to summarize the literature surrounding goal-setting in sport psychology. A total of 17 studies were examined with the researchers using accepted meta-analytic procedures; results indicated a positive relationship between mastery-oriented goals and performance. A limitation of this review of research was the limited number of studies the researchers analyzed.

Imagery is another commonly incorporated strategy in MST reported by researchers to improve performance. Imagery refers to the practice of using all of the senses to create or re-create an experience within the mind (Vealey & Greenleaf, 2001). Researchers have stated that using the skill of imagery to focus on viewing situations as challenges rather than as threats positively impacted confidence and self-efficacy (Munroe-Chandler, Hall, & Fishburne, 2008; Sari, 2015). Simonsmeier and Buecker (2017) assessed imagery use and its effect on performance with 80 gymnasts between the ages of 7 and 17. The participants completed the Sport Imagery Questionnaire-Children (SIQ-C) and the Sport Imagery Ability Questionnaire before the start of the competitive season. The questionnaires were designed to assess imagery use and ability; researchers collected competition scores at the beginning and end of the season in which the athletes applied the imagery skill. The results indicated that the use of imagery was a predictor of better performance for the gymnasts. The researchers in this study stated that imagery use and ability are significantly related, and they suggested teaching young athletes

about imagery early in sport. A limitation of this study was the use of self-report measures to gather data on imagery use and ability. Self-reported answers can be exaggerated, and biases such as social desirability bias can affect participant responses. The researchers reported they could have measured imagery using a variety of measures, such as physiological measures, which other studies of imagery have included (Simonsmeier & Buecker, 2017).

The individual skills included in MST programs have each shown positive effects on performance and life skills. There have been some reports where individual skills did not make as much improvement to performance as combining skills. For example, Kolovelonis, Goudas, and Dermitzaki (2012) reported increases in self-regulated learning and performance when combining both goal-setting and self-talk, but no significant changes in participants who only utilized goal-setting. They studied 86 fifth and sixth graders in a dart-throwing task to examine the changes in self-regulated learning and performance. The participants were given a self-assessment to measure changes in self-regulated learning. The researchers reported that there were more significant changes in performance for the combined skill group, which is consistent with previous research (Kolovelonis et al., 2012).

Comprehensive MST programs. Gilbert and Lewis (2013) conducted a quantitative study on a 12-week MST program that provided self-talk, imagery, goal-setting, and relaxation techniques to 130 high school athletes. The researchers used two assessments to measure changes in mental skill use, the Test of Performance Strategies (TOPS), and the Ottawa Mental Skills Assessment Tool (OMSTAT-3). Both measures assess the commonly included mental skills. The purpose of the study was to determine if high school athletes were able to learn the skills and apply them on their own in practice and competition. The results of the study indicated the athletes applied multiple skills in both practice and competition. The researchers also

measured self-efficacy using The Self-efficacy Psychological Skills Training Questionnaire. They discovered no changes in self-efficacy, a result that is inconsistent with the literature. The researchers concluded the lack of increase in self-efficacy scores could have been because the athletes were asked to apply too many skills to their sport. The researchers suggested that in the future it would still be worthwhile to teach all skills, but have athletes select the ones they believe will work best for them to apply to their performance. Letting the athletes focus on one or two skills to apply to their sport might be more worthwhile than asking them to apply all the skills.

Golby and Wood (2016) examined the effects of MST on the mental toughness and well-being of 16 female student-athlete rowers. The participants in the study volunteered to participate in one-on-one mental skills sessions that focused on the development of self-talk, concentration and focus, self-confidence, and the use of imagery. To measure mental toughness and psychological well-being, the researchers administered a battery of tests at the beginning of the intervention and again at the end of the season. Researchers assessed mental toughness with the Sports-related Mental Toughness Questionnaire (SMTQ) and the Psychological Performance Inquiry-Alternative (PPI-A). They measured psychological well-being with The Rosenberg Self-Esteem Scale (RSES), The Generalized Self-Efficacy Scale (GSES), The Life Orientation Test (LOT), and The Positive and Negative Affect Schedule (PA-NAS). Results of the psychometric measures indicated an increase in mental toughness, self-efficacy, positive affect, and self-esteem. While the overall results of the study support the benefit of MST on mental toughness and well-being, it is important to note that the data is specific to female rowers and cannot be generalized.

According to organizations like NASPE, high school sports coaches have the responsibility of training the mental side of the sport to their athletes, but they are not given the exact resources to do so. Camiré and Trudel (2013) conducted a study focused on helping youth sport coaches integrate MST into their coaching. They provided nine high school football coaches from Canada with workshops on how to integrate mental skills into their coaching. Some of the skills included goal-setting and imagery. The researchers conducted interviews with the coaches both pre- and postseason. The pre-season interviews provided the coaches with an opportunity to ask the researcher questions about the intervention; the postseason interviews provided the coaches with the opportunity to share their experiences. When coding the data from the postseason interviews, the researchers coded one theme as transformational. In that theme, coaches indicated they appreciated being provided with tools on how to train the mental component.

In the interviews, the coaches stated that they knew what they wanted the athletes to achieve mentally, but they did not have the tools to teach the athletes. Researchers also reported perceived challenges from the postseason interviews. The researchers coded one of the themes in the postseason conversation as a lack of openness. Included in that theme were statements about how the coaches perceived some of the content presented in the workshops. Coaches stated that some of the information was difficult to understand, so they could not see any application for the content. Coaches also reported that some of the information seemed to conflict with football culture and was challenging to implement for that reason. There were limitations to this study; one was that the researcher conducting the interviews was also responsible for teaching the workshops to the coaches which could have affected how the coaches responded in the

interviews. Another limitation was that the coaches were from the same football team at one high school, making it difficult to generalize any findings.

Micoogullari (2016) conducted a 12-week MST program with 48 male soccer players who were members of a professional soccer team. The program consisted of 15–30-minute educational sessions where the lead researcher taught athletes self-talk, goal-setting, imagery, breathing, and team-building. The quantitative study included a battery of measurements: Group Environment Questionnaire (GEQ), Trait Sport-Confidence Inventory (TCSI), State-Trait Anxiety Inventory (STAI), and Ryff's Psychological Well-being Scale. The participants completed the measures before and after the 12-week intervention. Results indicated that cohesion and confidence increased, and anxiety decreased. The results of the Ryff's Psychological Well-being Scale also noted an increase in well-being following the intervention. The researcher reported the improvements in psychological skills and well-being were preserved for six months post-intervention. The researcher did not report any limitations, but one limitation was the lead researcher as the person conducting the intervention. Participant responses could have been skewed, knowing the person conducting the intervention was also recording the data from the measures.

Shpherd, Basevitch, Filho, and Gershoren (2018) examined the effects of MST on the performance and psychosocial skills of 45 male and female college soccer players. The athletes received training on imagery and self-talk bi-weekly during the offseason. The researchers utilized field-based assessments to measure shooting self-efficacy for both the men and women, situational and tactical awareness for the men, communication for the women, and performance under pressure for both the men and women. The assessments were split to target each team's weaknesses from the prior season. The researchers designed each assessment, which involved a

soccer skill. To measure self-efficacy, the researchers designed a shooting task with different levels of difficulty. The participants were instructed to tell the researcher where they were aiming; if they chose one of the more difficult areas, the researcher recorded high self-efficacy. If the shot was accurate, then the researcher also reported accurate shooting skills. Researchers designed similar situation-specific tasks for each component they assessed. The investigators reported an increase in positive self-talk from pre- to post-test, an increase in shot accuracy for the self-efficacy task and the performance under pressure task, and an increase in self-efficacy. While the results were positive in this study, the researchers reported that the changes were not significant; overall, the improvements were small. The researchers also stated that the use of actual soccer tasks on the field resulted in a less controlled environment, allowing environmental factors to have some influence.

Perceptions of MST programs. MST is implemented widely in elite-level sports, with a variety of training programs in existence. However, the practice of sport psychology and the implementation of MST programs are not standardized (Portenga, Aoyagi, & Cohen, 2017). Comprehensive MST programs typically include the strategies of self-talk, imagery, goal-setting, and emotion regulation, but sport psychology consultants are free to incorporate additional strategies such as mindfulness meditation. Those variations could be one reason why MST is currently not a standard offering at the high school level (Gee, 2010). Additional reasons for lack of implementation at the high school level could be due to perceptions of MST by coaches, athletes, and administrators. Some sports coaches have stated they think the mental component to performance is a by-product of sport, so they do not view deliberate training of mental skills as necessary (Orlick, 2016). Other reported challenges have included stigma toward MST because of the roots in psychology; some coaches and athletes believe the training is only for those who

have problems (Martin, 2005). Researchers have also reported that a lack of funding and support from administrators are additional challenges (Wrisberg et al., 2012). The following sections take a closer look at the different perceptions of sport psychology resources from athletes, coaches, and administrators.

Athlete perceptions. Martin (2005) conducted a quantitative study that examined high school and college athlete perceptions of sport psychology using The Sport Psychology Attitudes-Revised form. For this study, 793 athletes ranging in ages 14 to 27 completed the questionnaire, with 122 athletes (15%) having reported seeing a sport psychology consultant at least once. Those participants who had exposure to sport psychology reported appreciation of mental skills and reported they were more likely to seek out additional resources if they were available. Participants without exposure to sport psychology reported concern over seeking out sport psychology resources, with high school athletes reporting more stigma than college athletes. Stigma included being perceived as weak for seeking out sport psychology resources. Results indicated athletes confuse sport psychology with counseling and the term psychology was found to be unattractive to athletes. Martin (2005) suggested naming sport psychology resources differently to reduce stigma in the quantitative study. While this study provided some insights into the perceptions of college and high school athletes, the sample was not random and cannot be generalized to all college and high school athletes.

Wrisberg et al. (2009) surveyed 2,240 NCAA Division I athletes about their willingness to seek out MST and their perceptions of the benefits. Results of the web-based survey indicated that NCAA Division I athletes are generally open to MST, especially if the focus of the training is on increased performance. Some factors that affected openness to sport psychology included sport type, gender, and the experience of the sport psychology consultant. Female student–

athletes reported a greater willingness to seek out sport psychology resources, as were athletes who were a member of team sports rather than individual sports. Those athletes who had previous involvement with a sport psychology consultant also stated greater inclination to seek out resources. A consideration in this study is that Wrisberg et al. (2009) relied on coaches to forward the web-based survey to their athletes. The willingness of the coaches to forward the survey and the willingness of the athletes to complete the survey may have contributed to more openness towards sport psychology.

Woods, Meade, Mahoney, and Breslin (2015) examined the perceived benefits of sport psychology from 68 elite and sub-elite athletes by having them complete an online survey. Seven of those athletes also took part in a semistructured interview. The results indicated athletes were willing to participate in sport psychology training, especially if the training focused on enhancing performance. While participants reported value and interest in sport psychology, perceived access to sport psychology resources was low. Almost half of the athletes surveyed reported that coaches, support networks, and governing bodies were responsible for providing sport psychology resources. Since researchers conducted the study in Ireland, cultural differences may have influenced reported perceptions.

Coach and administrator perceptions. According to Neelis, Blom, Drane, Speed, and Phillips (2012), NCAA Division I head softball coaches believe mental skills to be necessary for athletes, but only about half reported having access to a sport psychology consultant such as a Certified Mental Performance Consultant (CMPC®). In their study, 88 softball coaches completed the Sport Psychology Attitudes- Revised Coaches (SPA- RC) form. The form presents questions about sport psychology consultant use and perceptions of benefits and barriers to hiring and utilizing a sport psychology consultant. The results of the study indicated that of the

88 coaches surveyed, 75 reported that MST is crucial for athletes. The coaches also reported that they believe 75% of sport is mental, and they spend 26.5% of their time training the mental side. Some barriers to implementing MST the participants reported included lack of access to resources and lack of knowledge and experience with sport psychology. The researchers concluded the sample and the use of just the SPA-RC was a limitation of this study. Since participants were all softball coaches, the results cannot be generalized to other sports. Also, researchers have not widely implemented the SPA-RC. The researchers stated that since coaches are the people responsible for implementing MST for athletes, more studies need to be conducted to examine their perceptions. The researchers also suggested studying coach perceptions across different levels of athletics and different sports.

A study conducted by Johnson, Andersson, and Fallby (2011) built on previous research from Pain and Harwood (2004) and examined Swedish premier soccer coach perceptions of sport psychology. For the research, 28 coaches completed the Psychology for Football Questionnaire that asked questions about the coaches' experiences with sport psychology and questions about barriers to working with a sport psychology consultant. Of the 28 coaches, four also took part in an interview that examined the results of the questionnaire in depth. Researchers determined to focus the interviews on perceived barriers to utilizing a sport psychology consultant based on the results from the questionnaires. The results of the study indicated lack of knowledge about sport psychology was the most significant barrier to engaging in sport psychology resources for Swedish premier soccer coaches. Transferability of the results to similar organizations outside of Sweden may be limited, as well as transferability to soccer organizations outside of the premier league.

Pain and Harwood (2004) found a lack of knowledge about sport psychology to be a significant barrier for coaches and academy directors in English soccer. Thirty-eight participants completed a questionnaire about knowledge and perceptions of sport psychology, and six directors participated in an interview. Interview results uncovered that the directors had a stigma to the word psychology. Directors reported that athletes and coaches believe something is wrong with them if they seek out sport psychology resources. Results of the questionnaire highlighted a lack of knowledge was a barrier to seeking out sport psychology resources, but a lack of finances was the most significant barrier. Lack of funds was also discovered to be a barrier to seeking out sport psychology resources after Wrisberg et al. (2012) surveyed 256 NCAA Division I administrators. Participants of the study completed a questionnaire about the benefits of sport psychology and willingness to hire a full-time sport psychology consultant. While participants reported positive perceptions of sport psychology, a lack of appropriate finances made administrators reluctant to hire a full-time sport psychology consultant.

The research suggests that athletes, coaches, and administrators find value in sport psychology, but a variety of barriers prevent full-time use of sport psychology resources. Specific to athletes, lack of time and fear of being perceived as mentally weak are some of the most significant barriers to seeking out sport psychology resources. Athletes have reported they do not want to be labeled as a problem because the term psychology implies an individual is dealing with psychological issues (Fortin-Guichard et al., 2017). Coaches and administrators report a lack of financing and lack of knowledge about what sport psychology resources entail as the most significant barriers to implementing sport psychology. An area missing in the literature is perceptions focused on MST programs. The literature reviewed in this chapter focuses on perceptions of sport psychology resources typically provided by a Certified Mental Performance

Consultant (CMPC®). Research focused on perceptions of implementing a comprehensive MST program is virtually nonexistent.

Review of Methodological Issues

Past research studies implemented a variety of methodological approaches when examining the benefits and perceptions of MST programs and sport psychology resources, with most of the researchers implementing a quantitative research design. To date, research on the components of MST and comprehensive MST programs has focused on the effectiveness of interventions. Research on perceptions of athletes, coaches, and administrators have also taken on a primarily quantitative or mixed-method design. The primary focus of the perception studies in this review was to establish support for hiring sport psychology consultants in different sports settings. For example, Wrisberg et al. (2009) stated that more information about perceptions of sport psychology and mental training is needed to support the increase of employment opportunities for Certified Mental Performance Consultants (CMPCs®). The use of surveys as the primary data collection tool for research on perceptions of sport psychology in past studies was utilized to answer a different type of research question (Yin, 2014). The studies reviewed answered research questions about types of MST and which organizations were hiring CMPCs®. Researchers reported trying to understand employment opportunities for sport psychology practitioners. This research is interested in a deeper understanding of how and why high school sports coaches are implementing MST programs and whether they believe it to be worthwhile for athletes. An in-depth analysis of the perceptions of the coach cannot be achieved using a survey.

Camiré (2014) recommended that researchers need to conduct more qualitative studies on high school sports programs that are fostering student–athlete performance and life skills development to gain a deeper understating of their effects. While quantitative studies were

necessary for past research to demonstrate the effectiveness of MST and understand what coaches, athletes, and administrators generally think about mental training, this study benefits from qualitative research design. The literature has examined elite coach perceptions of mental training, but virtually no studies have examined high school sport coach perceptions of MST programs through a qualitative lens. The goal of this research is to examine the experiences of high school sports coaches regarding the implementation of MST programs. To answer the research question and subquestions, this researcher employed a multiple case study design that included one-on-one interviews with each participant, a focus group discussion, and document review.

Case study as a method of research has been stereotyped as weak in comparison to quantitative methods that incorporate advanced statistical analysis. Even with the stereotype, however, scholars have continued to utilize case studies across many different disciplines (Yin, 2014). The distinct qualities of a case study provide unique benefits that have drawn researchers to the method, such as the rich and detailed information a case study provides. A case study provides in-depth descriptions of cases within their real-life context and allows for a thorough understanding of a case (Merriam & Tisdell, 2016). For this study, the descriptive nature of a multiple case study design allowed for the exploration necessary to answer the research questions. This researcher is interested in how high school sports coaches perceive the implementation of MST; a multiple case study allowed for comparisons across the cases.

The multiple case study design allowed this research to go beyond statistical information and provide an understanding of the high school sports coaches' experiences associated with executing an MST program. The multiple case study design permitted the researcher in this study to use a variety of data collection methods that rely on the views of the participants, through

interviews and a focus group, and compare the data collected from case to case to allow for greater depth (Yin, 2014). The data collected add to the literature surrounding perceptions of sport psychology, specifically MST, by providing the views of high school sports coaches, a demographic currently missing.

Synthesis of Research Findings

Chapter 2 began with a review of the research in applied sport psychology, in particular, the effectiveness of skills commonly included in MST programs and comprehensive MST programs. According to researchers, the most effective programs include strategies on self-talk, goal-setting, imagery, and emotion regulation (Adler et al., 2015). In a study with 2,432 soldiers in basic combat training, Adler et al. (2015) found that soldiers performed better and increased their confidence after a 10-week MST program that included the commonly used strategies. Other programs examined by researchers have also shown to improve performance, as well as psychosocial development, in athletes across a variety of domains (Deci & Ryan, 2000; Hatzigeorgiadis et al., 2014; Mamassis & Doganis, 2004; Schunk, 1990; Thelwell & Greenlees, 2003; Thelwell et al., 2006). The researchers who conducted those studies used primarily quantitative methods to determine the effect of MST on athlete performance and psychosocial skills.

The second focus of this literature review included perceptions about MST programs. Camiré et al. (2011) reported that coaches of youth athletes believe it is within their responsibility to implement MST. The research surrounding those who have implemented MST has highlighted that coaches, athletes, and administrators see value in implementing programs, but a variety of factors such as stigma and lack of financial resources stop them from doing so (Fortin-Guichard et al., 2017; Johnson et al., 2011; Martin, 2005; Neelis et al., 2012; Woods et

al., 2015; Wrisberg et al., 2012; Wrisberg et al., 2009). The authors of the majority of studies focused primarily on the perceptions of college and elite-level coaches and administrators used quantitative methods such as surveys to gather their data. The purpose of those studies was to determine how participants viewed sport psychology resources.

A theme among the literature reviewed was the importance of MST for athletes. The research reported benefits to athlete performance and psychosocial development, and positive perceptions of coaches, athletes, and administrators. It was difficult to find research on MST programs tailored to high school student–athletes, and only very few studies on high school sport coach perceptions of mental training could be located (Camiré, 2014; Camiré & Trudel, 2013; Gilbert, 2011, 2017; Gilbert et al., 2006). Examining the benefits and challenges of MST through the lens of the high school sports coaches is an area of study that can expand the current literature base.

Critique of Previous Research

The research on individual mental skills such as goal-setting that are included in MST and comprehensive MST programs varied regarding population, sample size, and procedures. Micoogullari (2016) showed long-term improved psychological skills with 48 male soccer players after a 12-week MST program. The participants in both the control and experimental group completed questionnaires, and the researcher applied both MANOVA and ANOVA in the data analysis (Micoogullari, 2016). While the results of the study indicated that performance, psychological skills, and well-being improved after the intervention, the research was conducted with one male professional soccer team so the results cannot be generalized. Adler et al. (2015) reported increased use of mental skills and higher levels of self-confidence in the early phases of Basic Combat Training (BCT) with 2,432 United States Army soldiers. However, the effects

were small. The study was a longitudinal group-randomized trial, and the researchers noted the setting of BCT as a limitation because of the newness of the skills learned. The soldiers may not have had enough energy to focus on the refinement of the newly learned skills while also trying to implement mental skills (Adler et al., 2015). The results of this study could provide valuable information for high school coaches because their athletes are also in a new environment and potentially learning new skills.

Hatzigeorgiadis et al. (2014) detailed the improved performance of 41 swimmers after a 10-week self-talk intervention, a mental skill commonly included in MST programs. Researchers recorded pre- and post-intervention swimming times, and the athletes reported self-talk use using a 10-point scale following supervised training sessions. Results indicated that the intervention group improved their performance more than the control group. One limitation of this study was that the swimmers competed in different events. The researchers assessed individual performance by comparing scores to a baseline score to account for that limitation.

Gilbert and Lewis (2013) conducted a 12-week MST program titled the psychological UNIFORM, specially designed for high school students, with a group of 138 student-athletes. The researchers utilized six surveys, one demographic and five specific to mental skills. Athletes completed the surveys before and after the 12-week program. The researchers found that student-athletes were using mental skills more on their own after the intervention. While the results of the study indicated the effectiveness of the intervention, they did report that the control group in the study also showed higher scores of mental skills use. The investigators reported contamination from previous MST that was conducted at the same school the participants in the experimental group attended.

While many quantitative studies have examined the effectiveness and perceptions of MST, this researcher could locate only one study that explored the perceptions high school sports coaches have about MST (Camiré & Trudel 2013). The research by Camiré and Trudel (2013) examined coach perceptions of incorporating mental skills into their coaching style by conducting an intervention at a high school in Canada and then interviewing the coaches about their perceptions. The participants in the study were coaches of the same football team at the school. The purpose of the study was to examine the method of helping coaches integrate mental training into their coaching practices. Researchers taught the coaches how to integrate leadership principles, goal-setting, self-awareness, and visualization into their coaching by the lead researcher in a workshop format. After being instructed on how to incorporate the topics into practice sessions for one full competitive season, the participants discussed their perceptions of the experience with the lead researcher at the end of the season.

Overall, the coaches reported benefits to the training, such as better interactions with student-athletes by labeling more of the athletes' positive behaviors. There was no discussion in the interviews around some of the common barriers reported in other perception studies (e.g. lack of finances), but coaches did report some similarities such as lack of time. Two possible reasons for the differences could have been the mental training was being provided to them for free by the researcher and the administrators at the school agreed to allow time for the training. The focus of the study was also different, examining the best process for how to integrate MST into coaching. The researcher reported limitations such as the participants from one team at one high school, and the lead researcher as the person conducting both the intervention and the interviews. Some of the responses from the coaches could have been skewed since they were reporting their thoughts directly to the person who conducted the training. The researchers stated that more

studies need to be done with high school sports coaches across varied sports settings to better understand the integration of mental training into coaching.

Summary

The literature review in this chapter presented perceptions of life skills development in high school sport, the effectiveness of MST, and coach, athlete, and administrator perceptions of sport psychology resources. The first section of the literature review outlined studies about life skills in sport. Researchers have reported that while coaches believe life skills development should happen through sport participation, they cannot be sure it occurs. The second section focused on the research offering evidence of the positive impact of MST on performance and life skills in different realms of performance, to include sport, businesses, and the military (Adler et al., 2015; Danish, Forneris, Hodge, & Heke, 2004; Gucciardi, Peeling, Ducker, & Dawson, 2016). To date, the research surrounding MST has primarily focused on effective interventions that implemented a quantitative research design. This section of the literature review provided evidence of the potential benefits of MST programs for high school athletes. The third section of the review examined the literature on perceptions of MST. The research examined provided evidence of positive perceptions of athletes, coaches, and administrators regarding MST programs, as well as common challenges that can be expected (Fortin-Guichard et al., 2017; Johnson et al., 2011; Martin, 2005; Neelis et al., 2012; Woods et al., 2015; Wrisberg et al., 2012; Wrisberg et al., 2009).

Most of the research examined obtained participants from colleges and professional sports. Few studies have focused on MST in high school sport (Camiré & Trudel, 2013; Gilbert, 2011, 2017; Gilbert et al., 2006). Examining the perceived benefits and challenges of MST at the high school level would add to the current literature. This literature review has provided support

for pursuing a research project to answer the following question: “How do high school sports coaches perceive the benefits and challenges of implementing an MST program?”

Chapter 3: Methodology

Introduction

MST programs arose out of the field of sport psychology, a subdiscipline of psychology and sport science, and the goal of MST programs is to train athletes in cognitive-somatic techniques to improve performance (Weinberg & Williams, 2001). MST programs are interventions that can include a variety of cognitive-somatic skills such as goal-setting, anxiety control, and imagery. Over the last 20 years, the field of sport psychology has seen significant growth with professional and Olympic sports hiring Certified Mental Performance Consultants (CMPCs®) to conduct MST with athletes (“About Applied Sport & Exercise Psychology,” 2018). However, the growth that has occurred at the professional level has not occurred at the high school level. Currently, there is no requirement for MST, even though it is a recommended standard by the National Association for Physical Education (NASPE). There are very few MST programs designed for high school athletes (Gilbert & Lewis, 2013). This research is interested in the perceived benefits and challenges of implementing an MST program at the high school level. Specifically, the researcher is interested in the subjective perspectives of the high school sports coaches who have implemented MST.

This qualitative multiple case study is grounded in constructivism theory. Piaget’s theory emphasizes that knowledge is created through experiences (Piaget & Cook, 1952). Two components of constructivism are accommodating and assimilating. Assimilating involves the incorporation of new experiences into old experiences and leads to the development of new outlooks and perceptions. Accommodating involves reframing or changing old perspectives from new experiences (Fosnat & Perry, 1996). Constructivism theory informed this study’s arguments about the role the benefits and challenges of implementing MST programs had on the high

school sports coaches' perspectives of MST. Within the context of this study, Piaget's constructivism theory provides a framework for understanding how learning from the experienced benefits and challenges influenced the perceptions of the coach (Piaget & Cook, 1952). The goal of this research was to rely as much as possible on the views of the participants and report their experiences with the benefits and challenges of implementing MST. A multiple case study design examined the experiences and perceptions of six high school sports coaches who implemented an MST program.

This chapter provides a rationale for the selected multiple case study design to examine high school sports coaches' experiences. This researcher was interested in any perceived benefits to student-athlete physical performance and life skills development, and the potential challenges that arose during implementation. There is some evidence MST enhances the performance and life skills development of athletes who participate in the education portion of the training and then apply the skills to their sport (Williams & Straub, 2001). While practitioners designed MST for application in the sports environment, Gilbert and Lewis (2013) reported, high school student-athletes also use the skills while studying and preparing for school assignments and interpersonally, both with family and friends. Transfer of the mental skills learned in MST programs into areas outside of sport such as academics and interpersonal relationships are believed to be an essential benefit for high school athletes (Gilbert & Lewis, 2013). The research conducted in this study is interested in similar perceived benefits, as well as any of the common challenges that arise with the implementation of MST. This chapter outlines the methodology of this study, including the research question and subquestions, purpose and design of the study, population and sampling method, and the sources of data. Also identified in this chapter are the

limitations, assumptions, and delimitations of this study, and the chapter concludes with a summary of the critical points of this study's methodology.

Research Questions

This qualitative multiple case study included participants from across the United States who have implemented MST. This study focuses on perceptions of high school sports coaches regarding the benefits and challenges of implementing MST programs with high school student-athletes. Specifically, this study explored high school sports coaches' subjective perceptions about the effect of MST on athlete performance and life skills development, how and why coaches implemented MST, the level of support from the community, and the challenges faced. The observations of high school sports coaches regarding their experience implementing MST are important to consider because of the extended amount of time they spend with student-athletes (Hicks, Harrison, & Smith, 2016). Coaches are aware of an athlete's performance on the field and how they are performing in the classroom for eligibility purposes. This research seeks to answer this primary research question, "How do high school sports coaches perceive the benefits and challenges of implementing an MST program?" The research subquestions that assist in answering the primary research question are:

- How are high school sports coaches implementing MST?
- How do high school sports coaches perceive the effects of MST on performance and life skill development?

Purpose and Design of the Study

The purpose of this qualitative multiple case study is to gain an in-depth understanding of the perceived benefits and challenges when implementing MST programs with high school athletes, as seen through the lens of the high school sports coach. The National Association for

Sport and Physical Education (NASPE), a national authority on all physical education, along with the Society of Health and Physical Educators (SHAPE America) created National Standards for Sports Coaches (NSSC). Number 27 states that coaches should incorporate MST into sports (SHAPE America, 2018). While sports coaches, coach educators, and administrators accept those standards for direction about skills coaches should possess, there is no requirement for high school coaches to adhere to those standards. Schools do not require training that teaches high school sports coaches how to implement mental skills into existing training. Many high school sports coaches are unaware of MST programs (Brylinsky, 2002).

While some researchers are beginning to highlight the benefits of MST for high school athletes with quantitative data, the functionality of those programs needs exploration. To date, there are almost no qualitative studies examining the experiences of MST from the high school sports coach's perspective. Understanding the insights of high school sports coaches who have implemented MST provides valuable information for future coaches. The findings in this study can provide future high school sports coaches with relevant details about how and why some coaches are implementing MST programs, how they perceive the effects on athlete performance and life skills development, and the utility of MST at the high school level.

This researcher utilized a multiple case study design to answer the research question and subquestions. According to Yin (2014), a case study investigates a case within a real-life context and provides a comprehensive examination of the evidence. In this study, six high school sports coaches participated in a one-on-one interview and a focus group to share their perceptions of the benefits and challenges they experienced implementing MST programs. This research sought to understand the benefits and challenges of MST at the high school level by exploring the experiences of the coaches. High school sports coaches spend much time during the school year

with their athletes, and they are kept informed of their classroom behavior and academic performance (Hicks et al., 2016). Due to the amount of time coaches spend with athletes, and the recommendations set forth by NASPE and SHAPE America, their perceptions of the effectiveness of MST provide valuable insight for future coaches and administrators considering MST implementation. In this research, the case is the perception of a high school sports coach, considered within the context of experiences with MST implementation.

Quantitative studies are typical among the literature examining the effectiveness of MST programs. For example, Gilbert and Lewis (2013) used five pre- and post-test surveys, such as the Test of Performance Strategies (TOPS), to measure changes in mental skills use and ability following a 12-week MST intervention program. While quantitative studies are necessary for testing interventions, they are not enough to answer the research questions for the present study because a deeper understanding of the selected case is needed (Creswell, 2013). Research on coach perceptions of sport psychology has also utilized a quantitative design. Wrisberg et al. (2012) surveyed 198 Division I athletic directors and 58 presidents on perceptions of sport psychology. The purpose of that study, however, was to expose athletic directors and presidents to the array of sport psychology services and highlight the need to hire Certified Mental Performance Consultants (CMPCs®).

To access the depth and rich detail necessary to answer the question of how high school sports coaches perceive experiences of implementing MST programs, a multiple case study design is the selected method (Yin, 2014). The use of qualitative data collection tools such as interviews, focus groups, and document review allowed this researcher to focus on the perceptions of the coaches in order to explore a deeper understanding of the case (Rowley, 2002). This researcher selected a multiple case study design after careful review of qualitative

designs from Merriam and Tisdell (2016), Stake (2006), and Yin (2014). High school sports coaches' views about the benefits and challenges of implementing an MST program has not received a thorough examination in the literature. Only one study conducted by Camiré and Trudel (2013) was located on high school coach perceptions of MST, and the researchers focused on the coaches' perceptions of the intervention in which they participated. This research adds to the existing literature about perceptions of MST by examining the observations of six high school sports coaches. This research investigates how the coaches implemented MST, their reasons for implementing, and the challenges and benefits they experienced. This researcher examined multiple cases through detailed data collection that involved various sources of information (Creswell, 2013). Multiple cases were examined to highlight consistencies and discrepancies in the benefits and challenges of MST reported by the six high school sports coaches. The comparison across cases was conducted to strengthen the results of the data (Stake, 2006).

Target Population and Sampling Method

The target population for this study was high school sports coaches across the United States. The specific high school sports coaches who participated in the study either taught MST themselves to athletes or sought out a CMPC® to teach MST to athletes. Participants in the study were high school sports coaches whose MST programs included strategies on self-talk, goal-setting, imagery, and emotion regulation (Weinberg & Williams, 2001). For this multiple case study design, purposeful sampling was conducted to obtain participants who fit the boundaries of the case (Creswell, 2013). This researcher purposefully selected participants from those who responded with interest in the study and who implemented an MST program that included some of the commonly used strategies such as self-talk, imagery, goal-setting, and emotion regulation.

Participants were recruited initially through the sport psychology Listserv. Both high school sports coaches and CMPCs® subscribe to the Listserv which has over 1,000 members. To select participants appropriate to answer the research question, a recruitment survey was sent out to the sport psychology Listserv regarding knowledge and implementation of MST (see Appendix A). The coaches who completed the survey and reported interest in participating in the study were selected to take part in the next steps. The last question of the survey asked if the coach was interested in participating in the next phase of the study and if they answered yes, they were directed to a click consent and provide their preferred contact information.

Related Procedures

After receiving approval from Concordia University's Institutional Review Board (IRB), an initial recruiting email was sent out to the sport psychology listserv run through Temple University. This researcher selected participants from those who gave their consent to participate in the study. Currently, there is no nation-wide requirement for high school sports coaches to implement MST. The lack of requirement for MST made the potential to find participants who fit the boundaries of the study limited. For that reason, the following guidelines were set to be used only if more than 10 participants gave their consent to participate. The researcher planned to use the following guidelines if narrowing the number of participants was necessary:

- Gender
- Type of sport coached

The guidelines were unneeded as the participant pool was less than 10.

Instrumentation

This research study began with a recruitment survey to gain information on background, experience in sports coaching, and general knowledge about MST programs (see Appendix B).

This researcher selected participants from high school sports coaches who completed the survey. Once participants were selected, triangulation of data was used as a technique to ensure the richness and depth of the data collected (Yin, 2014). Triangulation involves using multiple sources of data collection to check for consistency in the findings and increases validity and credibility by cross verifying the information collected (Yin, 2014). Three primary data collection tools were included in this research: one-on-one semistructured e-interviews, an asynchronous online focus group, and document review. The comprehensive approach to gathering data provided more information for the researcher to draw conclusions about high school sports coach perceptions of MST programs.

Data Collection

Recruitment survey. A multiple case study is a qualitative approach to research that draws on qualitative and quantitative data, such as surveys (Yin, 2014). This study utilized a recruitment survey to determine high school sports coaches' background and familiarization with MST (see Appendix C). The survey was emailed to the sport psychology Listserv as part of the purposeful sampling method to identify participants who report familiarization with a comprehensive MST program. The researcher used the data from the survey to highlight whether high school sports coaches are generally familiar with MST. The email gave an overview of the study and a link to a qualtrics survey created through Concordia University's Qualtrics XM site. A question was included asking participants if they would like to participate in the study. If they answered yes, participants were directed to a click consent and were able to include their preferred contact information. The researcher then reached out to those participants and provided them with a consent form to participate.

One-on-one e-interviews. To better understand the perceptions and experiences high school sports coaches have with MST, one-on-one semistructured synchronous e-interviews were conducted to paint a complete picture. E-interviews allowed this researcher to go beyond methods of data collection such as surveys and serve as a method to understand, more deeply, the perceptions high school sports coaches have about MST implementation. Salmons' (2016) e-interview framework and key questions were used to guide this data collection tool in order to obtain rich and usable information.

The first key question in Salmons' (2016) framework involves aligning the purpose of the research with the selected design. For this study, participants were high school sports coaches from across the United States who implemented an MST program that included skills such as self-talk, goal-setting, emotion regulation, and imagery. Since MST is not a requirement for high school sports coaches, this researcher expected participants to come from a variety of school districts. E-interviews conducted through a video conferencing platform was the best option for the target study population because participants could come from any location in the country. Videoconferencing is a type of communication technology that most closely mimics face-to-face interviews, both of which are more conducive to semistructured interviews (Salmons, 2016). This researcher was interested in seeing the gestures and nonverbal communication of the participants, which could only be accomplished if video conferencing was used (Salmons, 2016). This research employed a semistructured interview style to obtain responses from the participants and to allow for the exploration of the perceptions of the high school sports coaches (Merriam & Tisdell, 2016).

Interviews were conducted once for each participant and were approximately 45–60 minutes in length. The participants were made aware of the length before the beginning of the

interview. Interviews were conducted through Cisco WebEx, a secure software-based program. The interviews were recorded, and participants were informed of the recording before participation to obtain their consent. The researcher then transcribed the interviews. Once the transcription was complete and member-checked to verify accuracy, the recordings were deleted. None of the participants denied recording an interview (Creswell, 2013). The semistructured interview style permitted the participants to describe their perceptions in their own words. The freedom to express perceptions allowed the subjective experience of the coach to be captured (Saldaña, 2016). After participants member-checked the transcriptions, this researcher manually coded the data. A computer-assisted qualitative data analysis software (CAQDAS) called NVivo was used to organize and verify identified codes.

Asynchronous online focus group. Participants of this study participated in an asynchronous online focus group to further discuss perceptions of MST. This researcher expected that the high school sports coaches who would participate in the study would be in different locations across the United States and have schedules that would make it difficult to meet face-to-face as a group. The ability to share experiences at any time of the day or night was necessary, and an asynchronous online resource allowed that freedom. Asynchronous groups allow participants to log in and answer questions prompted by the researcher and participate in discussions at any time. The researcher created discussion threads, and the participants posted responses to the threads. Burton and Bruening (2003) found that the asynchronous online focus group boosts participation because it allows the coaches to participate at times that fit their often-busy schedules. It is also a useful method for participants who live in different parts of the country (Burton & Bruening, 2003).

Participants were able to remain confidentiality by selecting a pseudonym to log in. The confidentiality allowed for greater equality in discussion among the group because there are no visible differences in status (Montoya-Weiss, Massey, & Clapper, 1998; Schneider, Kerwin, Frechtling, & Vivari, 2002). Salter, Douglas, and Kember (2017) also found that asynchronous online focus groups lead to more in-depth discussion because they allow participants more time for critical reflection. Participants of asynchronous online focus groups are also more active in discussions and more willing to participate, even when their thoughts differ from other participants (Burton & Bruening, 2003). One reason for the boost in participation is due to the absence of visual cues which, when present, could potentially distract others. Zwaanswijk and van Dulmen (2014) reported that participants found the lack of visual cues prevents them from being swayed by others and makes them more likely to state opinions openly.

This study used Focusgroupit.com to connect participants from across the United States, and participants were able to join at any time. This type of web forum allowed members to ask and answer questions, and the forum allowed participants to set their identity with a false name. This researcher served as the administrator and set privacy settings that allowed only the participants into the group the researcher to create discussion threads. The group remained open until all participants responded to the questions, with another week allowed for final questions and comments. All the comments and questions posted were available to the participants for member checking. This researcher hand-coded the participant responses. The CAQDAS program was used for validation of the coding conducted by the researcher.

Document review. To triangulate data from the interviews and focus group discussion, this researcher collected documents from the coaches about the implementation of the MST program. Email correspondence about MST, structure of MST plans, and information about

including MST into the athletic budget was collected. The purpose of collecting those documents was to examine any additional information about MST implementation and to discover any information about the benefits and challenges of the program. The purpose of the document review was to confirm the evidence from the other points of data collection (Yin, 2014).

Identification of Attributes

For this study, the researcher designed interview questions to collect data regarding high school sport coach perceptions of MST programs (see Appendix D). The interviews were semistructured and focused on the coach's perceptions of the following:

- Life skills development as a by-product of sport
- Perceived benefits of MST on athlete sport performance
- Perceived benefits of MST on athlete life skills development
- Challenges of implementing MST
- Coach's role during implementation
- Support of MST from others
- Overall perceptions of MST

Data Analysis Procedures

Yin (2014) suggests that in a multiple case study design that individual cases be analyzed separately, and then examined across cases to determine themes that exist in all the cases. The purpose of this method is to identify consistencies or inconsistencies in the data. Following those guidelines, raw data from the interviews and document review were collected, transcribed, and organized for analysis case by case. Then raw data from the focus group were analyzed, and finally, the data were examined across cases. The data were collected through recordings, typing, and hand-written notes, and all recordings were transcribed (Creswell, 2013).

Saldaña (2016) recommends a two-phased approach for coding qualitative data. In Vivo coding was applied as a first-round coding method to categorize the data from the interviews and focus groups using the actual words of the participants (Saldaña, 2016). In Vivo coding has been referred to as “literal coding” or “verbatim coding” because the data is coded using the exact language of the participants (Saldaña, 2016, p. 105). This research was conducted through the lens of constructivism and benefited from the verbatim principle to clearly capture what the coaches learned. The actual words of the coach were captured more accurately through In Vivo coding. Codes were derived from words and short phrases in the data (Saldaña, 2016). Focused coding was used as a second-cycle coding method to reexamine the initial coding, and to condense the categories created from the In Vivo coding. Saldaña (2016) stated that focused coding searches for the codes that appear as the most significant in the data, and for the codes that appear more frequently. Those codes were then outlined hierarchically and placed on a tree map as a category-generating method (Saldaña, 2016). After coding the data by hand, this researcher used a computer-based coding program, suggested by Saldaña (2016), as a method to check the accuracy of the codes created by the researcher.

Limitations of the Research Design

The online nature of this study can be a limitation because participants needed to consist of individuals who are internet users, have access to a webcam, and are comfortable with an online format. The need to be comfortable with an online format eliminated any potential participants who are not comfortable with computers, and who may not be comfortable sharing information virtually. The potential loss of confidentiality with anything conducted in an online format could also have limited the number of high school sports coaches who wanted to participate (Burton & Bruening, 2003; Merriam & Tisdell, 2016). Other considerations for the

asynchronous online focus groups included the potential use of alternative communication tools such as emoticons (Walston and Lissitz, 2000). However, none of the participants in this study used alternative communication tools. Asynchronous online focus groups can also have participants who do not engage in the discussion and must be emailed by the researcher to elicit engagement (Burton & Goldsmith, 2002). Two participants in this study had to be emailed and reminded to participate in the focus group discussion. There was also the potential for connectivity issues, which Salmons (2016) stated can cause frustration for both the researcher and the participant. Minimal connectivity issues occurred in this study and did not seem to have an impact on the participants.

Validation

To ensure the validity of qualitative research, researchers must present the findings in significant detail to support the conclusions made by the researcher (Firestone, 1987). This researcher's primary objective was to rely on the words of the participants as much as possible. Coding the findings resulted in major themes about high school sports coaches' perceptions of MST implementation. Data was triangulated through one-on-one interviews, a focus group discussion, and document review. This researcher's engagement in quality data collection permitted saturation (Merriam & Tisdell, 2016). Member checks of transcripts ruled out misinterpretation of findings and resulted in respondent validation (Merriam & Tisdell, 2016).

Credibility. To enhance credibility in this study, this researcher triangulated data using interviews, a focus group, and document review. Triangulation allowed this researcher to identify any themes that emerged across the data sources (Yin, 2014). This researcher engaged in transcribing and hand-coding the data from the one-on-one interviews and focus group discussion. To enhance credibility, this researcher utilized a computer-based coding program and

compared the results with the hand-coding conducted by the researcher. Hand-coding of the data conducted by this researcher compared to the codes of the qualitative computer data analysis program was used to check for consistency (Creswell, 2013).

Dependability. In qualitative research, validity involves the application of specific strategies to ensure the accuracy of the data (Creswell, 2013). This researcher employed member checking to enhance the internal validity of the study. The participants were provided with copies of the transcripts from the interviews and focus group discussion. They were able to read over the documents and check for the accuracy of the information (Creswell, 2013). Rich, thick description was also implemented by this researcher to provide a shared experience between the participants and the reader. Rich, thick description, combined with the verbatim principle used to transcribe, made the data more realistic and more robust (Creswell, 2013).

Expected Findings

This researcher expected to uncover the perceived benefits and challenges of MST from the perspectives of high school sports coaches. Learning about obstacles the coaches encountered when trying to implement mental skills, their reasons for deciding to implement, and the effects they saw in their athletes' performance and life skills development was anticipated. It was also expected that either a transfer of skills from sport into the classroom was reported, or a lack of transfer. Potential findings include a significant benefit from implementing MST or a lack of significant benefits to athletes. The findings could have indicated that coaches believe MST programs are not worth the time for high school athletes, or that they are too difficult to implement. This researcher expected to share findings of whether high school sports coaches consider the implementation of MST programs to be worthwhile and feasible.

Ethical Issues

Conflict of interest assessment. Merriam and Tisdell (2016) stated that the rigor of a qualitative study does not lie in the methods or design, but in the ethics of the researcher. The individual values and ethics as the researcher for this study guided the collection of data. As a former student–athlete, this researcher did have an interest in discovering how MST can potentially help current high school student–athletes. As a Certified Mental Performance Consultant (CMPC®), there was a level of optimism about the potential benefits coaches would state about MST. This researcher’s position as a former student–athlete and current CMPC® created a bias that was considered when conducting this research. However, this researcher is not interested in inflating or hiding any findings, only in discovering what is real about the perceived benefits and challenges of MST from the experiences of the high school sports coaches. This researcher internally reflected on biases at each step in the research process to acknowledge and manage those biases (Attia & Edge, 2017). This researcher was not compensated at any stage of the study. Publication of the findings in a peer-reviewed journal could provide benefits to this researcher professionally.

Researcher’s position. High school sports coaches play an important role in providing student–athletes with opportunities to learn skills that can help their performance and life skills development. With over half of all high school students participating in organized school sports, coaches can reach many students. If MST is valuable for high school athletes, coaches will be able to provide valuable perspectives about its utility. The coaches’ perceptions of the effects of MST is of utmost importance to discovering a viable method for conducting MST in high school sports. If MST is beneficial and operational at the high school level, then those benefits should be shared. If it is not, then other programs for athletes should be investigated.

Ethical issues in the study. Merriam and Tisdell (2016) stated that qualitative research is unique from quantitative research because of its roots in assumptions. When qualitative research is carried out, there are assumptions made about how the participants involved in the research study interpret their experiences (Merriam & Tisdell, 2016). It is vital for qualitative research to follow systematic steps to ensure a rigorous and ethical research design. This researcher began by gaining approval from Concordia University's Institutional Review Board (IRB) before starting any data collection. Once approval was obtained, recruitment surveys were sent out via a Listserv for high school sports coaches. Any email sent through the Listserv is approved by the administrators. Participation in the study was gained through the recruitment survey, and informed consent was obtained from the participants. All personal information about the participants was concealed, and a unique identifier was assigned to each participant. All recordings were destroyed immediately after transcription, and transcripts will be secured in a locked file cabinet until completion of the study, at which time they will also be destroyed.

Chapter 3 Summary

The purpose of this qualitative multiple case study was to explore high school sports coach perceptions of implementing MST programs. The benefits of a qualitative multiple case study design to examine a variety of evidence such as interviews, a focus group discussion, and document review were appropriate to answer the research question and subquestions (Yin, 2014). Multiple case study design was the best method for this study because the researcher was able to compare results across cases allowing for richer data (Stake, 2006). Purposeful sampling was the technique for the target population in this study. This nonprobability technique allowed for the selection of participants who met the inclusion criteria (Creswell, 2013). The recruitment of the participants began after approval from Concordia University's Institution Review Board (IRB).

Once approval was obtained, a recruitment survey was sent out to select participants. After gaining consent, each participant took part in one semistructured e-interview with the researcher. All participants then participated in an asynchronous online focus group discussion. Document review was also included as an additional source of data. Documents reviewed included MST training plans and schedules. The variety of sources provided a comprehensive understanding of the case (Yin, 2014). All the collected data were analyzed through coding by this researcher, and coding was verified by also running it through a computer program. It was expected that the results could be used for high school sports coaches and administrators considering implementing MST programs.

Chapter 4: Data Analysis and Results

Introduction

The objective of this qualitative multiple case study was to learn about high school sports coaches' perspectives on MST implementation. This researcher was interested in learning about the experiences high school sports coaches had implementing MST, what they learned from those experiences, and how it shaped their perspectives. As a national authority on all physical education, NASPE, along with SHAPE America, sets National Standards for Sports Coaches (NSCC) that represent essential skills and knowledge coaches should possess to improve the sport environment for athletes. Number 27 on the NSCC list states that coaches should provide training on mental skills such as goal-setting, self-talk, imagery, and emotion regulation to enhance performance and athlete well-being (SHAPE America, 2018). Even with this standard in place, there are very few MST programs designed for coaches to use in high school sports and very little research examining perceptions of MST from the perspective of the high school sports coach (Gilbert & Lewis, 2013).

This researcher was interested in high school sports coaches' perceptions of the potential benefits and challenges of implementing MST because of the recommendations for coaches to incorporate MST into sports, and the lack of literature exploring perceptions at the high school level. Through the lens of Piaget's constructivism theory, this researcher explored participants' perspectives of MST implementation. This researcher investigated questions in this study to explore: (a) how high school sports coaches perceive the benefits and challenges of implementing an MST program, (b) how coaches implemented MST, and (c) how high school sports coaches perceive the effects of MST on performance and life skills development.

In this chapter, I present the study sample and setting. This researcher discusses the data collection and analysis, followed by a presentation of the findings. A summary of the findings are organized into themes, followed by a summary of the findings in relation to the research question and subquestions. The final section includes a review of the chapter.

Description of the Sample

The purpose of this study was to gain an in-depth understanding of high school sports coaches' perceptions of implementing an MST program that included strategies such as self-talk, emotion regulation, imagery, and goal-setting (Weinberg & Williams, 2001). Therefore, purposeful sampling of participants took place. The participant sample was drawn using a recruitment survey (see Appendix B) sent through a sports psychology Listserv. The recruitment survey gathered demographic information, which included gender, age, type of sport coached, and the number of years spent coaching at the high school level. A total of 23 coaches completed the survey, and 12 consented to take part in subsequent data collection. After reaching out to each participant via email for participation in the next steps of the study, a total of six participants scheduled one-on-one interviews. After completion of the individual interviews, the six participants took part in an asynchronous online focus group and shared documents related to MST implementation. Participants shared similar perspectives in the interviews, focus group, and document review, leading to saturation and discontinuation of data collection. Table 1 presents demographic data for the participants.

Table 1

Sample Population Demographics

Pseudonym	Gender	Age group	Sport	Years of coaching
P1	Male	35–44	Golf	16–20
P2	Male	25–34	Soccer	1–5
P3	Male	Over 55	Soccer	6–10
P4	Male	35–44	Basketball	Over 20
P5	Male	25–34	Soccer	1–5
P6	Male	35–44	Soccer	6–10

Research Methodology and Analysis

Qualitative research focuses on gaining an in-depth understanding of a phenomenon in a real-life context by gathering rich data. Often data in qualitative research comes from the subjective experiences of participants (Yin, 2013). The phenomenon examined in this study was the perceptions of six high school sports coaches who implemented a MST program with the high school sports team that they coached. This research presents the thoughts and feelings of the participants through a multiple case study design that captured the experiences and perceptions of the six high school sports coaches. The multiple case study design was selected to analyze findings across cases to gain a better understanding of the shared experiences of participants (Stake, 2006). The design also allowed for an in-depth, rich description of the data derived from the actual words of the participants (Merriam & Tisdale, 2016). Triangulation of the data through interviews, one focus group, and document review ensured the data gathered was accurate (Yin, 2014).

This study was framed by Piaget’s constructivism theory, which emphasizes that experiences create knowledge (Fosnot & Perry, 1996). Within this framework, this researcher sought to understand how experiences with MST implementation influenced the perceptions of the participants. To accurately capture the views of the high school sports coaches in this study,

this researcher relied on the exact words of the participants as much as possible in the data collection. The findings outlined in this research identify the individual experiences of the participants. Commonalities in their responses helped to answer the research question and subquestions.

Each of the participants voluntarily participated in this study. Before recruitment, this researcher obtained permission from Concordia University's IRB to maintain ethical integrity. After receiving approval from the IRB, the data collection process began with an email to recruit participants. This research sent the email using a sport psychology Listserv. (see Appendix A). The recruitment survey captured the demographic information of the participants and provided the participants with a click consent form that this researcher created using Concordia University's Qualtrics survey platform. Following the surveys, members of this study consented to one-on-one online synchronous interviews with the researcher using the video conferencing platform, Webex. Merriam and Tisdell (2016) suggest a virtual method of data collection for the following strength, "the researcher is no longer constrained by geography in considering participants" (p. 116).

This researcher selected Webex to conduct interviews based on the suggestion from Merriam and Tisdell (2016). To seek a rich understanding of the views of the participants, this researcher asked semistructured interview questions. Semistructured interview questions were selected as a method of data collection to ensure this researcher explored specific topics while allowing the researcher to respond to views of the participants that emerged during the interview (Merriam & Tisdell, 2016). Interviews lasted 45–60 minutes, were recorded, and transcribed by this researcher. Each transcribed interview was approximately twelve pages long and was emailed to the participants for member checking (Creswell, 2013). After the completion of each

interview, the participants took part in an online asynchronous focus group. Participants typed out their responses to the focus group questions at times convenient to them. The link for the focus group was locked, and only participants in this study had access. This researcher had administrator rights of the platform. The site remained open to the participants for four weeks to give each of them time to respond to questions. Each participant had the option to choose a pseudonym for the focus group; two participants decided to use a pseudonym. Participants also shared documents with the researcher via email about MST implementation. Documents included outlines of MST programs and emails explaining the purpose of MST.

This researcher read through the transcripts to become familiar with the data. During a second read-through of the transcripts, this researcher pre-coded notable quotes or passages with highlighting (Saldaña, 2016). Upon completion of the read-throughs and pre-coding for all of the data, the first cycle of coding began. This researcher reviewed the research questions and conceptual framework before each cycle of coding to focus the coding decisions. This researcher also considered a list of questions outlined by Saldaña (2016) to filter the codes through an analytic lens. Some of those questions included: How do participants talk about and understand what is going on? What assumptions are they making? What do I see going on here? This researcher manually coded the data and used In Vivo for the first cycle of coding to split the data and capture the exact words of the participants.

Codes were organized using a matrix for generating theme-based assertions, as suggested by Stake (2006). Focused coding was applied for the second cycle of coding to identify patterns and apply labels consistent with the literature and the research question and subquestions. For example, a participant responded to the question, “If I attended an MST session, what would I see?” with the response, “we talked about the conversations that they have in their head.” The

first cycle of coding labeled this response as “conversations in their head,” and the second cycle categorized “conversations in their head” as “self-talk.” Each case was coded individually and then compared across cases to identify patterns. After this researcher completed manual coding, the data was entered into a CAQDAS program called NVivo to organize and reconfigure the data and validate the initial manual coding. Documents received from the participants were reviewed to verify the data from the focus group and interviews. The documents provided to this researcher included MST training plans and emails explaining the purpose of MST.

Summary of the Findings

Constructivism theory provided a framework for understanding the perceptions of the participants by examining their experiences with MST implementation. Through the lens of constructivism, the goal of this research was to rely as much as possible on the views of the participants by capturing their views verbatim. The themes that emerged and a small number of codes for each theme are described using the exact words of the participants. The themes are as follows: (a) reasons for implementing MST, (b) structure of MST and topics, (c) perceived effects on athletic performance, (d) perceived effects on life skills, and (e) support. The presentation of the themes includes an explanation of the theme using participant answers to interview questions, followed by a table highlighting a small number of resultant codes and this researcher’s interpretive summary (Saldaña, 2016). The sequencing of the themes and descriptors aligns with the primary research question and subquestions.

Theme 1: Reasons for implementing MST. During the interviews and the focus group, participants shared responses about their reasons for wanting to implement MST. Interview questions asked participants what led them to implement the training, and if any life skills training existed for athletes before MST. Five of the participants said there were no life skills or

MST offered to athletes at the time they decided to implement; only one participant was offered MST by the athletic department. Four of the six participants explained they decided to implement MST because they did not know what to do to help athletes with the mental side of performance. P5 explained that warm-ups are generally a time to get mentally ready for a performance, but having some time before the game to stretch and warm up the muscles is not always enough; athletes needed something more. He said that physically warming up does not always mean an athlete is mentally ready to perform. P1 stated that he saw his athletes playing terribly in a state tournament and did not know what to do about it. He said, “I had no suggestion. Anything I tried did not work. I just felt ill-equipped to do anything about what I saw happening, I just had nothing to draw on.” Five of the six participants shared examples about how they would try giving their athletes more practice time and more coaching about the tactics, but it did not seem to help them with some of the challenges like choking under pressure. No matter how technically prepared they were, coaches shared that they observed athletes who would still choke, get distracted, and lack confidence.

Participants also shared a lack of consistency in performance as a reason for implementing MST. They explained how athletes would play well sometimes and poorly sometimes, and the coaches had difficulty pinpointing the reason for lack of consistency. P5 explained that without knowing the cause of the inconsistency, it was impossible to help the athletes. P3 discussed how high school athletes have a lot going on in their personal lives, and it can bleed over into how they play. He said that based on his observations, athletes sometimes struggle with balancing school, relationships, and sport, and they need tools to help them manage all of those demands. P6 also observed a lack of consistency and shared examples of athletes who would perform at their potential sometimes, and not at all other times even if the physical

conditions were right. He believed that athletes were performing poorly because of what was going on in their heads. He speculated that it was because of personal issues bleeding over into playing and athletes getting affected by the pressure, but he said there was no way to know the exact reasons. The participants shared that they thought MST could help athletes with the many possible reasons for lack of consistency.

Other reasons for implementing MST were to gain a competitive edge over other opponents and improve on skills such as team cohesion. All of the participants discussed how they felt athletes must train the mind because the mental side of performance affects so much of what happens in a game. P2 said coaches sometimes think tough physical training will automatically make athletes mentally tougher, but he does not believe that to be true. He shared that teaching athletes mental skills is what makes them stronger mentally. The coaches in this study believed that training the mental skills gave their athletes an edge over the competition because they increased their mental toughness. They felt when they played teams who matched them technically and tactically, that mental skills gave them the edge they needed to set them apart.

Additionally, several participants shared cohesion as one reason for implementing MST. P6 reported he would take the athletes to do activities together, but he wanted more team-building than just hanging out together. He thought MST could give the athletes opportunities to work through problems together. P5 shared how he needed his athletes to work together effectively because he cannot be out there during a game, making decisions for them. He hoped MST could help them to work together without his help, especially during games. Table 2 includes the codes that emerged from the transcripts and document review, data supporting those codes, and this researcher's interpretative summary of the findings.

Table 2

Reasons for Implementing MST

Codes	Data supporting the code	Researcher's interpretive summary
Lack of mental tools	"I could see the implosion happening, and I had nothing."	Athletes lacked strategies to handle the mental side of the game like pressure; coaches lacked strategies to help athletes handle the mental component.
Lack of consistency	"They would play lights out just because they felt good that day, but it was never two consistent good performances in a row."	Athletes performed inconsistently, sometimes they performed well, and sometimes they did not. Uncontrollable factors dictated performance.
Choking	"I have a state championship runner who had placed in the top 10 show up on race day and tank."	Athletes who can perform well choke in pressure situations.
Gain a competitive edge	"In the high school setting, our players are set up for success against equally skilled teams."	Teams had an edge when playing someone equally skilled.
Cohesion	"Playing together was difficult. I wanted them to start to understand each other."	Athletes needed to work together for a common goal.

Theme 2: Structure of MST and topics. The second theme was the result of asking coaches questions about how they implemented MST. There was some variation in the skills each coach focused on, but there were skills consistently implemented among the participants. Those skills were goal-setting, self-talk, emotion regulation, self-reflection, and mental rehearsal. P1 shared examples of how he would ask athletes questions following a performance that would get them to reflect on their tactical approach to the game and the mental component of the game. P5 said self-reflection was an essential component of MST for his athletes. He shared how the coaches would pause a drill and give an athlete time to reflect on what just happened. They

would also ask the athletes questions about their tactical approach and about some mental components such as how their focus and confidence were during the drill. He said it was a great way to get them to see situations more accurately because of the immediacy of reflecting right after a drill, practice, or game ended. What coaches identified as self-reflection often included reflecting on the athletes' mental skills such as goals and self-talk as well as their tactical approach.

Coaches also worked on additional mental skills with athletes individually. Several of the participants provided examples of how they would have athletes write down goals and then help them make those goals more specific. P3 and P5 both shared how athletes would write very general or outcome-focused goals, and they needed coaching on how to make their goals realistic and specific. P6 had his players work on individual goals and an overall team goal for the season and also explained how high school athletes need guidance to set practical goals. P3 said that athletes needed coaching on other skills that were included in MST as well, such as self-talk. He said that athletes don't know how to talk to themselves, and they often don't realize just how negative their self-talk really is. Several participants summarized how they included self-talk as part of MST. P6 said his athletes would work through identifying thoughts that pop into their heads during different performances and the effect they had on emotions. P1 also had athletes identify how they could reframe their thoughts if they were not helpful.

Coaches also explained other specific strategies, such as emotion regulation and mental rehearsal. P2 shared having athletes identify how they want to feel during a performance and imagining that feeling. He described having athletes define whether they want to feel "amped or calm" before a performance and helping them identify strategies to create that feeling. Some of the strategies the athletes would use to create the emotions they wanted for performance included

breathing, self-talk, visualization, or listening to music. P5 shared having an athlete imagine the end of a successful performance and then having the athlete identify the emotions and physical sensations she would experience when she was there. He said having her imagine those emotions and physical sensations made her more prepared for how she needed to feel to perform well.

All the participants implemented formal and informal sessions when teaching mental skills. Formal sessions, which varied in length for participants, consisted of focusing on one topic and covering that topic with activities, discussion, and in some cases, videos or podcasts. P4 said his team engaged in formal sessions for approximately 15 minutes three times per week. P6 shared that his team participated in formal sessions once a week for one hour. P1's team also met weekly for approximately one hour in the preseason; during the season, sessions became informal. Informal sessions happened during practice and included the coaches asking athletes questions about their thoughts and emotions during a performance. They also described designing practices to include specific mental challenges related to topics they had covered in formal sessions. For example, P5 shared how he would develop a drill that he knew would make the athletes frustrated. After each round, he would ask them how they were feeling and what they were doing to manage their emotions.

Two of the participants in this study were sport psychology consultants themselves, one a CMPC®. Both of those participants implemented MST themselves with their teams. They both explained that an advantage to being the coach who implemented MST was that they were there all the time and saw everything. They contrasted this experience with hiring a CMPC who works with a team. They both agreed that they are advantages to having a different viewpoint from someone else, but they typically can't be there 100% of the time. Three of the participants were from the same school where the athletic department created a mental conditioning coach position

after seeing positive results in their athletic department from MST. The participants who had a mental conditioning coach shared how it was nice to have someone with more expertise about MST implement it. P6 also said that sometimes the athletes get tired of hearing from one person all the time, so having a mental conditioning coach in addition to the sports coach is a nice change for the athlete. P3 said that a mental conditioning coach brings a fresh set of eyes and a new perspective to what is happening with the mental part of the game, and he appreciated having access to one. One of the coaches implemented the training himself with the help of books that provided a guide for coaches to implement MST. He said that he would like access to a mental conditioning coach, but his school does not offer one. Table 3 includes the codes that emerged from the transcripts and document review, data supporting those codes, and this researcher's interpretative summary.

Table 3

Structure of MST and Topics

Codes	Data supporting the code	Researcher's interpretive summary
Combination of Formal and Informal	<p>“We do 15 minutes of sessions three times a week with our mental conditioning coach.”</p> <p>“In season, we address topics through practice design, on-course challenges, and conversations before, during, and after a competition.”</p>	Coaches held a combination of formal sessions and informal discussions
Goal-setting	<p>“We have a piece of paper we give them to write down their goals for each game. Then we help them break it down to something like how many touches you want versus I want to score like Alex Morgan.”</p>	Athletes need assistance in making their goals specific, measurable, and realistic. Without guidance, their goals are outcome-focused and outside of their control.
Self-reflection	<p>“I ask a lot of questions. What were you thinking? What happened on that last shot? What was your commitment level? How were you feeling?”</p>	Many of the coaches incorporated reflection into MST. Questions were used to guide the athletes to think about their performances.
Emotion Regulation	<p>“What's your end state? Do you need to be really amped up? Do you need to be kind of calm? Or do you need to be somewhere in the middle?”</p>	Strategies for managing activation levels and emotions were common, especially for game days. They would learn things like routines and breathing exercises.
Self-talk	<p>“We talk about the conversations in their head. Motor skill-wise, they can say this is what I did. I was doing everything right.”</p>	Self-talk was focused on accurate attributions.
Mental Rehearsal	<p>“They spend time imagining how they would actually go through a play.”</p>	Imagery was a skill utilized to better prepare for practices and games.

Theme 3: Perceived effects on physical performance. Findings for the perceived effects on physical performance arose from questions about the perceived benefits and challenges of implementing MST. It was the opinion of the coaches that one of the benefits of MST was the effect they observed on athletes' physical performance. Participants saw the increased individual performance of athletes, and in some cases, more wins they believed took place because they implemented MST. P4 shared how he watched a team advance much further in playoffs after implementing MST. He said that after the team worked with a mental conditioning coach, the athletes played with more confidence and advanced much further in the playoffs than in the previous year. P5 saw an athlete hit a personal record during a high-pressure game and attributed the athlete's success to MST. He said that he believed MST was the difference because the athlete struggled in high-pressure games in the previous season. He said that she had the physical capability, but having big crowds and media present in the higher stakes games seemed to get to her. P2 believed the reduction in personal fouls he observed was due to some of the mental training he was implementing with the athletes. He explained that his team received numerous personal fouls during games before implementing MST. After MST, he said that the team went from several personal fouls in a season to only one in the entire season after implementing MST with the team.

Participants also agreed that MST gave their athletes the competitive edge that they were looking for when implemented the training. P6 shared how opponents can be very equally matched skill-wise, especially when arriving at playoffs. He said that MST gave his team a few more tools that he believed other teams didn't have. P6 and P2 also shared how athletes improved their skills at a much faster rate after MST. They both shared how they saw quicker skill improvements, especially in younger players. P6 said that his freshman players were getting

better tactically at a faster rate, and he believed that MST played a big part in that. He said that when athletes can focus better and manage their energy better, then they can improve faster.

The participants credited the observed improvements to the athletes' ability to manage the mental components of games and practices, such as the ability to maintain better composure under pressure and to more accurately identify their weaknesses. P2 explained that there were times when he would pull athletes off the field, and when he asked them if they knew why they would say no. After MST, he said when he would pull them off, they would come to him first and tell him that they knew what happened and why they were coming off. He said that awareness led to them identifying their own mistakes and making plans to fix them. P6 stated the following about how his athletes performed, "They are more prepared for the mental challenges, so they enjoy the competition more. When they enjoy it more, they can play more relaxed and confident." He shared how athletes gain more confidence with they learn more tactics and get stronger physically and believed the same happened with MST. He gave the following example, "When athletes have a mental tool like breathing, they feel more prepared for handling a situation where they might be anxious." P1 observed better performance from athletes in high stakes games because of what he believed to be increased resilience. He provided the example of an athlete who fell behind in points during a tournament and then rebounded to win the state championship. He said that several players began demonstrating similar resilience in what he referred to as "big competition." Table 4 includes the codes that emerged from the transcripts and document review, data supporting those codes, and this researcher's interpretative summary.

Table 4

Perceived Effects on Physical Performance

Codes	Data supporting the code	Researcher's interpretive summary
Competitive Edge	"In the high school setting, our players are set up for success against equally skilled teams. MST puts them ahead of others."	Participants discussed the competitive edge frequently. When teams get to the higher levels of play, mental skills training gives them an additional tool to succeed.
Skill Improvement	"You see players advance their skills quicker compared to when we didn't have MST."	Coaches believed mental skills helped athletes focus on what they could control and set appropriate goals for skill improvement.
More Wins	"The first real improvement we saw was with our volleyball team's performance from one year to the next. Our mental conditioning coach worked with the team, and they played more relaxed and confident in the playoffs and advanced much further."	Coaches observed greater confidence and composure in their athletes' behavior, which they attributed to more wins.
Less Forced Errors	"We cover our weaknesses faster. We used to go on these bad runs, and now you can see them fight, just like zone in on what they need to do."	Athletes were making fewer mistakes that were within their control, both in games and practices.
Hitting Personal Records	"They use that mental training from our sessions and then by the state meet they were not necessarily in contention, but they were definitely PRing and placing higher in the meet than what they planned."	Coaches observed individual performance improvement even if it did not translate into more wins.
Composure	"When they are not playing well, they had demonstrated greater composure as well as the self-awareness to recognize when their concentration or self-talk lapsed."	All the participants discussed how they observed athletes perform better under game pressure.

Theme 4: Perceived effects on life skills. Data from interviews and the focus group questions about the benefits and challenges of MST resulted in the theme of perceived effects on life skills. During the in-depth examination of their experiences, the participants shared many examples of changes they observed in their athletes' behavior following MST implementation. Effects on life skills was selected as a theme for the resultant codes; researchers define life skills as characteristics developed through sport and transferred to non-sport settings (Gould & Carson, 2008). The examples participants shared arose from observations of athletes' behavior in practices and games. They also discussed how they believed those skills transferred into other areas of the athletes' lives, again by observing the behavior of the athletes.

Leadership was one skill that several participants felt improved after implementing MST. P2 explained how the seniors on his team started changing the way they addressed younger players as he taught mental skills, and they became better leaders as a result. He said before MST, the senior level athletes had difficulty managing their own emotions, so they were not good at communicating with other players. He said once they were better able to manage their feelings, they could more effectively communicate with other players on the team. P6 believed that leadership also improved along with cohesion in his team. He said that as players became better leaders, team bonding grew. P1 shared how he saw players demonstrate better resilience in higher stakes games. He said that they were better able to bounce back from the challenges that arose during high-pressure games. P4 explained how he saw players playing more relaxed and confident, especially during playoff games.

The participants also believed those skills transferred into the classroom. P6 said that as a teacher, he has some of his athletes in class and noticed the improvements in areas such as confidence transfer. He observed athletes taking on more challenges in school and speaking up

for themselves more. P1 shared how athletes would give examples of how they used breathing skills before a big exam and self-talk before a driving test. P2 said that before MST, his team was having behavior problems in the classroom, and after MST, there was only one behavior problem reported for the year. He believed that the reduction in behavior problems was due to better emotional control, a skill they worked on in MST. P3 said he thought that the athletes who embraced MST also did better beyond high school. He said that he stays connected with athletes after high school, and the ones who were handling the challenges of college and jobs were the athletes who practiced the skills learned in MST. Table 5 includes the codes that emerged from the transcripts and document review, data supporting those codes, and this researcher's interpretative summary.

Table 5

Perceived Effects on Life Skills

Codes	Data supporting the code	Researcher's interpretive summary
Greater self-awareness	"They are more attuned. When they have a mental breakdown, they can recognize, this is where I struggle."	Self-awareness was identified as the athlete's ability to recognize what was happening internally.
Increased confidence	"Challenges aren't as difficult when they have the right mental tools to handle it, and that makes them more confident."	Coaches believed the athletes were better prepared because of the mental skills, and that made them more confident when approaching challenges.
More resilient	"I have seen MST prepare young adults for life after high school. The ones who have embraced MST do much better in overcoming challenges they are faced with in life."	Resilience was discussed as bouncing back from setbacks. Several participants observed this on and off the field.
Skill Transfer	"Athletes have shared the use of breathing prior to tests or presentations, the use of goal setting in class, using imagery to prepare for a presentation, keeping a good attitude despite family challenges."	Coaches observed skills successfully transfer into the academic environment.
Greater self-regulation	"They manage stressors better both on and off the field. You can see that they are more in control of their own bodies and thoughts."	Athletes demonstrated greater self-regulation of thoughts and emotions.
Better Leadership	"Some of the seniors straight up just weren't good leaders. But as they started to maintain their composure, they would then start to take moments where they would normally get frustrated and yell at someone and start to teach instead."	Since athletes were more in control of their own emotions, they were better equipped to help their teammates.

Theme 5: Support. Data from questions regarding perceived challenges to MST implementation gave way to the final theme of support. Participants explained the level of openness to MST from athletes and parents varied for different reasons. It was the opinions of the coaches that MST was new to parents, but once they learned about how it benefits athletes, they were supportive. P6 said that if parents believe that MST will give their athletes an edge, then they are on board. P3 noted that parents could be unsure about MST initially because they do not know what it is and how it works. He said that once they see improvements in their athletes, they are supportive, as long as it does not interfere with technical and tactical training. P1 discussed how there are different levels of engagements from athletes on MST. He said the athletes that were more serious about improving were more open. P2 believed that some athletes needed to see evidence that the skills improve performance before they would become engaged. P6 thought that athletes are similar to parents when it comes to the support of MST. He said that MST is new to them, and in his experience, his athletes are getting exposed to MST for the first time when they join his team, so they want to know what it is and how it works.

Four of the participants received support from the school for MST implementation, while two participants did not receive any resources. School support included hiring a coach with a sport psychology background and creating a mental performance coach position all teams could access. P4 stated that the administration must be on board to provide the right resources for coaches. He said that if the administration does not support a budget for MST, then coaches are left to do it on their own or not at all. He shared that coaches who understand the benefits of MST will probably take steps to implement the training even if they do not have administrative support. Coaches who are unaware, however, will miss out on the benefits of MST for their athletes. P5 said that he implemented MST on his own after working with a coach at a previous

school who also applied MST himself. He observed the benefits for athletes and studied how to implement MST so that he could use it with his teams. P5 also stated many coaches are unaware of MST, and they need the administration to bring it to their attention; otherwise, they may never become aware of it. P2 spoke about how it can be challenging to prove that MST leads to the benefits that he observes as a coach, but he thinks he needs to find a way to show that link to get more support from athletes, parents, and administration. P6 also described how he would like to pay for more MST resources, but he has to have hard evidence that it is worth the money to show his administration. He said his observations of the benefits are helpful, but when he asks for resources, he said he has to show his administration something more than his impressions. Table 6 includes the codes that emerged from the transcripts and document review, data supporting those codes, and this researcher's interpretative summary.

Table 6

Support

Codes	Data supporting the code	Researcher's interpretive summary
Time constraints	“Designing time in for MST is really something I found valuable, and it pays dividends. It’s just hard to justify 15 to 20 minutes of sitting to the athletes with the shortness of practice time we have.”	All the participants discussed balancing MST with physical practice. They find it worthwhile, but they are also looking for ways to design the skills into practice more.
Measurement	“One of the most difficult things is how to measure its effectiveness.”	It is hard to identify MST as the cause of improvements that coaches see. Proving its effectiveness to administrators is necessary to validate paying for it.
Parent support	“Mental skills training at the high school level is new to most parents. As they learn of our offerings, they are very appreciative. I believe support will increase as they learn more about it.”	Parents are supportive if they understand how it helps their athlete’s performance.
School support	“The level of support from our school has been outstanding. Having a mental coach to help work with our program is a tremendous benefit. Very few schools have this as a resource.”	School support varied for the coaches involved.

Presentation of Data and Results

This section presents an in-depth examination of the participants’ experiences with MST implementation. The participants’ perspectives and opinions of MST guide the presentation of the data and results. Discussion includes verbatim responses that provide a thick, rich description and explain how and why the participants implemented MST at the high school level. While there were shared experiences among the six participants, each coach had unique perspectives

concerning the research questions. The data from the interviews and the focus group are organized around the research question and subquestions. Not all participants had information to share for each interview question, and responses presented in this section include those from participants who answered questions related to the research question and subquestions. Table 7 highlights the research questions and participant responses derived from the coding process.

Table 7

Analysis of Research Questions

Research Questions	Participant Responses
Primary research question. How do high school sports coaches perceive the benefits and challenges of implementing an MST program?	Worth the time Need administrative support for more straightforward implementation
Subquestion 1. How are high school sports coaches implementing MST?	Taught by coach or a sport psychology consultant Formal and informal sessions Combination of skills throughout the season
Subquestion 2. How do high school sports coaches perceive the effects of MST on performance and life skill development?	Individual and team performance improves Athletes handle pressure better Gives a competitive edge Increased psychosocial skills Skills transfer outside of sport

Research Questions

The primary research question was, “How do high school sports coaches perceive the benefits and challenges of implementing an MST program?” Based on the data gathered through interviews, one focus group, and document review, participants experienced similar benefits and challenges. Participants frequently discussed perceived benefits to athlete performance and life skills development. P2 observed benefits to both when asked about effects on performance and life skills. He said:

After inheriting a soccer team that was prone to yellow cards from lack of self-regulation, there was a dramatic decrease in yellow cards as the season progressed. Reducing from an average of two to three in the first four games to one per game for the final 14 games. I began to notice the seniors changing their leadership styles and the way they addressed younger players on the team as the mental skills were taught.

Coaches were able to recall specific moments of athlete gains. P1 recalled the following,

I have witnessed several individuals demonstrate considerable resilience and/or high achievement in “big” competition. The particular high that comes to mind is a senior who made 13 on the 4th hole of the state tournament yet rebounded to win the state championship. She played the final 32 holes at 11 under par.

There were shared challenges reported by the coaches when it came to implementing MST. Participants consistently mentioned time constraints. Practice time for high school athletes is limited, and many coaches struggled to find the right balance between MST and physical practice to optimize training. The participants in this study believe that preseason is a good time for MST if coaches have access to the athletes during that time. Different states have different rules for how much time a coach can spend with athletes, so not all coaches have the same access to players. During the season, several participants reported it was best to spend a few minutes on a topic and then integrate that topic into practice. They believed that it was the best way to maximize practice time. P3 gave the following example:

Just trying to balance what you think is beneficial for them from a mental perspective, but also balancing what we need to do on the field. Planning both is a lot, so I try to make it so that they facilitate each other. So we’re going to talk about this skill, and the practice is going to be designed to target that skill.

While balancing the time spent on physical skills and mental skills was a challenge for the coaches, they all agreed that it was worth the effort. P5 stated, “I wish I had planned more time for it.” P6 said they scheduled in extra time for MST so that the athletes were getting full physical practice time as well as MST. He said, “It uses the athlete’s free time in a way, but they start to appreciate it because they know not everyone gets that kind of training.” P4 saw the benefit of putting the time in for the mental component and stated, “They do shorter mental skills training about three times per week.” Four of the participants who received administrative support from the athletic department and school talked about the importance of their support to incorporate MST more easily. The two participants who did not receive any help from the school said that it would be beneficial if they had some resources provided to implement MST because they would not have to spend extra time finding their own. P4 gave the following example of how his school supports MST:

Being in charge of our athletic department is a big advantage as I’m a believer in what mental skills training can do. After multiple years of raising a few funds to support increased mental skills training, we proposed and got a stipend put in place that is paid out to our mental conditioning coach, very similar to that of one of our sport coaches. Additionally, we have our mental conditioning coach and director of performance (strength and conditioning) spend time together and look for opportunities to incorporate mental skills training into our performance training. This past year, we started having our Mental Conditioning Coach attend preseason parent meetings to talk about mental skills training and also talk to the parents about how they can best support the performance of their kids.

There were clear and common challenges participants reported about MST implementation, but all the participants shared how they found ways to handle those challenges. In the opinions of the participants in this study, benefits to athlete performance and life skill development far outweighed the difficulties which, according to their perceptions, were mostly logistic. All participants agreed that they believe MST is worthwhile for high school athletes. They each discussed how they want to find better ways to incorporate the training more. The following statements were made by each participant about the time spent on MST:

P1: I believe it is worthwhile. In the short-term, it is a way to gain an edge on our competition. While most high school athletes will not play in college, the skills they learn are transferrable to any type of performance. They will be valuable in job interviews, standardized testing, public speaking, and even interpersonal relationships.

P2: Mental skills are vital for athletic performance. The best of the best use the same skills and the extra time taken to provide mental skills to my team gives them the extra edge. It provides more efficient and effective training sessions when on the field since the team is mentally prepared for each game and practice.

P3: I have seen the difference it makes in players moving on to the next level. I have also seen it help prepare young adults for life after high school. The ones who have embraced the mental skills training do much better in overcoming the challenges they are faced with in life. I have seen players who use the mental skills training graduate early, deal with injuries both serious and minor, and communicate in a more positive manner with their coaches when frustrated.

P4: Mental skills training for us is certainly worthwhile. We're trying to train kids and help them continually improve to be the best they can be. If we are doing that, we see

training the mental side as an important component. We also believe if we train better in that area than others, it could help us gain an advantage very similar to if you train better than someone physically, you have an advantage.

P5: I wish I had planned a lot more time for it. Designing the time in for mental skills training is really something that I found valuable, and it pays dividends.

P6: Mental skills training is especially important in the high school setting. Our players are set up for success against equally skilled teams. They are also more prepared for handling the challenges that they face outside of sport.

Subquestion 1. The first subquestion was, “how are high school sports coaches implementing MST?” Participants incorporated both formal and informal sessions. P1 gave the following example of a formal session:

My team meets weekly during the preseason for 45–60-minute sessions. During that time, you would see a combination of activities, video clips, group discussions, and individual reflection. All of these are targeted towards a specific need identified by the coaching staff as well as reinforcing the core values of the team.

P1 contrasted the formal session example with an informal session example:

During the season, mental skills take on a more organic approach. For example, athletes may be asked to set process and performance goals prior to practice and competition. Following the round, athletes reflect on their round by considering what they did well, what could have been better, how they will do it better, and what they enjoyed about the round.

Coaches implemented combinations of formal and informal sessions, the exact structure for the coaches varied. P4 said, “Our teams have different levels of involvement. Some are doing

little things for 5 minutes almost every day. Then, they may have a longer MST session once a week.” In response to a question about what MST looks like P2 said, “You would see myself giving instruction and allowing for discussion for 15 minutes, followed by the practice session so that the players were able to apply what they just learned.” For the participants in this study, the formal and informal sessions were taught by the coach or by a sport psychology consultant. P2 said the athletic director hired him as a coach because of his sport psychology background. He said, “I know that was something that the athletic director liked as far as a resume standpoint.” P1 is a CMPC® and coach who works with his teams and other sports teams at the school. P3 and P4 have the CMPC® at their school to work with their teams. P6 also had a CMPC® implement MST, and he sought the individual out on his own.

All the participants agreed that it could be beneficial to have a separate mental skills coach for the team. P3 said, “It’s good to get a different voice at times. If all they’re hearing is you, sometimes they just don’t hear it anymore.” P6 said, “It brings in a fresher view and topics that I don’t know as much about. It is also nice for my team because they get tired of listening to just me all the time.” Not all the coaches had access to a CMPC®. P5 implemented the MST on his own by using books such as *Sport Psychology for Coaches*. Participants who applied MST without the help of a mental conditioning coach found benefits to holding both roles, such as time and rapport with the athletes. Those participants shared that they could also see the advantages of having a separate mental conditioning coach work with their teams. P6 said that one advantage would be managing the time and workload. He said that being the tactical coach and mental coach can be a lot for one person. There were some variations in the topics that coaches included in the formal and informal sessions, but there were some skills common among the MST. Those skills were goal-setting, self-talk, emotion regulation, self-reflection, and mental

rehearsal. Overall, participants provided athletes with a variety of skills both formally and informally.

Subquestion 2. The second subquestion was, “How do high school sports coaches perceive the effect of MST on performance and life skill development?” All the participants reported they observed improvements in performance and life skills development that they felt were a result of MST. The shared experiences the coaches perceived were improvements in self-awareness, confidence, resilience, self-regulation, leadership, transfer outside of sport, and more wins. P2 said he observed what he believed to be an increase in confidence as the season progressed. He said, “I would start to see them actually take on players rather than give the ball away or have that panic mode where they do not know what to do.” Coaches reported they thought the increases they observed in confidence, self-awareness, and self-regulation resulted in more wins and personal records.

Participants saw marked improvements in performance they believed resulted from the implementation of MST. P5 said, “We started beating teams that on paper we should not be beating.” P4 said, “Our mental conditioning coach helped me to consistently reinforce and talk about the process as opposed to the outcome. This focus helps with consistency in my program.” P1 discussed noticeable improvements in athletes’ ability to handle the pressure of games better and place better as a result of that improved ability. Participants stated that athletes were able to demonstrate better composure, one reason why they believed their teams had the edge over their competition. Coaches also believed their athletes handled setbacks much better after working on mental skills. A common challenge for athletes participants reported was handling situations that were an obstacle, like not getting playing time. P3 said, “If your goal is to make varsity and you end up on junior varsity, how do you mentally overcome that?” P5 and P6 talked about athletes

who must ride the bench because there are other players on the team who are better. P6 said, “We have a really good pool of athletes, and so a player can be good and still not make the cut, and they have to handle that. Giving them some mental tools to work through those challenges helps them to stick with it and not quit.” P5 also shared how to help kids deal with not getting playing time or not making the team. He said, “It’s hard to coach a kid through a setback like that, so we have to help them rearrange their goals.”

In addition to the observations made on the field, participants believed the athletes transferred the skills they learned into other areas of their lives. P5 said,

The confidence increases both on the field, in practice, and then you even see it in school. Once they know how to self-diagnose and think about their own thoughts and emotions, their performances in other areas really improve.

P6 stated, “Once they learn the mental skills on the field it is easier for them to use it in the classroom. You even see them become more confident in their relationships.” P2 said that after incorporating mental skills training, his team was able to improve their self-regulation on the field and in the classroom. He said there were multiple behavior problems being reported in the classroom; after implementing MST only one issue was reported in the classroom for the year. Participants observed a noticeable improvement in performance and life skills development after implementing MST.

Summary

This chapter highlighted the perspectives of six high school sports coaches who have implemented MST with their athletes. Through the lens of constructivism theory, this multiple case study explored participant experiences. The theory provided a framework for understanding how learning from the benefits and challenges of implementing MST influenced the perceptions

of the participants. The data collected from interviews, the focus group, and document review helped to answer the research question and subquestions. Analysis of the raw data revealed that the high school coaches in this study who implemented MST observed benefits to athletes' physical performance and life skills development they believed resulted from MST. Even though coaches experienced challenges, the findings shared here highlight that they believe MST to be worthwhile for high school level athletes.

Chapter 5: Discussion and Conclusion

Introduction

The purpose of this qualitative multiple case study was to understand the benefits and challenges of implementing a MST program from the perspective of the high school sports coach. High school sports coaches are in charge of their athletes' training and therefore play an important role in providing student-athletes with opportunities to learn skills that can help their performance and life skills development. With over half of all high school students participating in organized school sports, coaches have the opportunity to reach many students and provide them with development opportunities. The coaches in this study have provided valuable perspectives about the utility of MST at the high school level. The perceptions shared here about the effects of MST is of utmost importance to discovering a viable method for conducting MST in high school sports.

As a Certified Mental Performance Consultant (CMPC®) with experience implementing MST programs in elite sport and military settings, this researcher is interested in whether high school sports coaches consider MST worthwhile to implement in the high school setting. This researcher undertook this qualitative multiple case study to examine the experiences of high school sports coaches who have experience implementing an MST program with high school athletes. In this study, this researcher used one-on-one interviews and a focus group discussion to explore how coaches perceived the benefits to athlete performance and life skills development and the challenges they experienced with implementation. This chapter provides a summary of the results and a discussion of the findings related to the literature. The limitations of the study are described, followed by the implications of the results for practice and policy. This chapter concludes with recommendations for further research.

Summary of the Results

This researcher began this study to explore the subjective experiences of high school sports coaches who implemented an MST program with high school athletes. There is limited research on perceptions of the benefits and challenges of MST and almost no studies examining the perceptions of high school sports coaches. To fill the gap in the literature on high school sports coach perceptions, this researcher carried out interviews and a focus group discussion to identify reasons high school sports coaches decided to implement MST, how they implemented the program and their opinions about the benefits and challenges they experienced. Through this qualitative multiple case study, this researcher sought to understand the perspectives of the high school sports coaches through the lens of constructivism theory, emphasizing that experiences create knowledge (Fosnat, 1996). Through that lens, the goal of this research was to rely on the exact words of the participants as much as possible to accurately capture their experiences. The constructivism lens guided the selected methodology and the analysis of the data.

Six high school sports coaches from four schools participated in this study. The coaches in this study were all male and represented three types of sport: soccer, golf, and basketball. Each member of this study had implemented an MST program themselves or with the help of a CMPC® for one full athletic season. The participants contributed to the central research question about high school sports coaches' perspectives on the benefits and challenges of MST implementation and their opinions about the overall utility. Participants also contributed to the subquestions about how they implemented MST and their perceptions of the effects of MST on athlete performance and life skills development.

Chapter 2 of this study outlined several topics relevant to this study, including life skills development in sport, types of MST programs, and college- and elite-level coach, administrator,

and athlete perceptions of MST and sport psychology. These studies provided a summary of information related to the present examination of high school sports coaches' experiences with implementing MST. The literature contributed to this researcher's knowledge about life skill development in high school sports, general perceptions of MST and the benefits and challenges typically experienced with implementation in college and professional sports settings.

The results of the current study highlight the practitioner's perspective of MST at the high school level, an area currently missing in the literature. This researcher took on this study to begin to fill that gap in the literature by uncovering the personal experiences of high school sports coaches who have implemented MST. Since beginning this study, NFHS has launched an online elective course coaches can purchase for 30 dollars about mental training. The course includes sections on why MST is needed, goal-setting, self-talk, and energy management. Sport psychologists from the United States Olympic Committee (USOC) designed the course; the following description provides the course purpose, "Learn how to sharpen your athlete's mental game to impact performance and gain a competitive edge" (NFHS, 2019, para. 1). The availability of this course could have a direct effect on MST application in high school sports, making the perspectives shared in this study particularly relevant to other high school sports coaches who are considering taking the course.

An analysis of the findings resulted in five major themes: (a) reasons for implementing MST, (b) structure of MST and topics, (c) coach opinions of effects on athletic performance, (d) coach opinions of effects on life skills, and (e) support. This researcher read through the transcripts of the interviews and the group discussion to familiarize herself with the data. During that process, this researcher highlighted portions of the data that stood out as part of the pre-coding process. After pre-coding, this research coded participant responses from the interviews

and focus group to assign summative words and short phrases to portions of the data (Saldaña, 2016). The first cycle of coding was In Vivo, followed by focused coding in the second cycle. These coding methods were selected because they allowed this researcher to rely on the exact words of the participants to develop codes. To verify the accuracy of the codes, this researcher ran the data through a Computer Assisted Qualitative Data Analysis Software (CAQDAS) called NVivo. The resultant codes led to the development of the five themes.

Participants in this study reported a lack of mental tools, choking among athletes, lack of consistency in performance, a need for more cohesion, and a desire for a competitive edge as their reasons for implementing MST. They shared examples about how they felt ill-equipped to help their athletes who needed a mechanism for managing the mental challenges of sports. The coaches turned to MST to give their athletes the tools they sensed were missing to help them manage those challenges. They also explained that MST was helpful for their coaching because they now had the right tools to teach the athletes. Participants shared the structure of their MST programs, which included a mixture of formal and informal sessions with the athletes. Formal sessions consisted of time reserved for mental training and included discussion, exercises, videos, and sometimes podcasts about a particular topic. Informal sessions included reflective questioning and designing practices to work on a specific topic. Both types of sessions incorporated goal-setting, self-reflection, cohesion, emotion regulation, self-talk, and imagery/mental rehearsal.

The participants in this study discussed their positive opinions about the effects of MST on athlete performance and life skill development. They believed MST contributed to more wins, more personal records, quicker skill improvement, more composure in pressure situations, less forced errors, and a competitive edge over opponents. Participants also concluded their athletes

demonstrated greater self-awareness, self-regulation, confidence, resilience, and leadership following MST. They also had confidence those skills transferred into the classroom and other areas of the athletes' lives. A full discussion of the findings continues in the next section.

Discussion of the Results

The primary research question and subquestions drove the review of literature and collection of data for the present study. This researcher framed this multiple case study through the lens of constructivism theory, which states that knowledge is created through experiences (Fosnat & Perry, 1996). Through that lens, this researcher relied on the words of the words as much as possible as they described their experiences. The data in this multiple case study revealed the unique perspectives of the participants' experiences with MST implementation. While the observations shared in this study are individual to each participant, they are relatable to others who plan to execute mental training as all six coaches shared similar experiences. The six high school sports coaches in this study detailed how they implemented an MST program, and they discussed benefits and challenges related to those reported in the literature around perceptions of MST. This researcher organized the participants' responses to the research question and subquestions using their actual words.

The primary research question for this study was, "How do high school sports coaches perceive the benefits and challenges of MST implementation?" Findings from this study indicate the participants think MST is worthwhile to implement in high school sports. The perceptions shared here were that the observed benefits outweighed the challenges they experienced. The data from the interviews and focus group discussion with the six high school sports coaches led to the identification of five themes, each of which relates to the primary research question. The five themes included: reasons for implementing MST; the structure of MST and topics;

perceived effects on athlete performance; perceived effects on life skills development; and support.

The high school sports coaches in this study stated they decided to implement MST to give athletes tools they believed the athletes were missing to manage the mental challenges experienced in their sport. Participants shared how they would train athletes both physically and tactically, but doing so did not help them handle the pressure of performance any better. The coaches in this study also discussed how they were not sure what to do to help athletes with the game, and they turned to MST to get that help. Additionally, they wanted more consistency in their athletes' performances and desired a competitive edge over opponents. The coaches in this study shared examples of how athletes would perform well some days and poorly at other times. They hoped that implementing MST would help their athletes perform up to their potential more frequently.

The members of this study were able to incorporate a variety of mental skills in both formal and informal ways. Participants provided examples of better performance they observed in their athletes, such as skill improvement, winning more games, less forced errors, and improvements to personal records. The coaches also shared examples of life skills development, which included more confidence, resilience, better self-awareness, self-regulation, and leadership. The theme of support included most of the challenges the coaches reported experiencing, primarily in the form of time and resource constraints. They also observed some initial stigma from athletes because of a lack of familiarity with MST. The participants explained that MST is new to athletes, so there can be initial uncertainty about the purpose. They shared that once athletes embraced the mental skills and started to see the benefits, the initial stigma faded.

When asked about support from parents of the athletes, the coaches said parents are generally in favor of anything they thought would give their athlete an edge and did not present any significant challenges beyond initial unfamiliarity with the purpose of MST. Administrative support was one area that participants agreed was necessary for successful implementation. Participants agreed administrative support was essential for ease of MST implementation; this is also consistent with previous research about perceptions of MST (Wrisberg et al., 2012). They shared that financial support from the athletic department and being provided with either a mental coach or resources for how the coaches can incorporate MST into sports themselves would make it easier to implement MST with athletes. They also believed that administrative support was necessary for more athletes to experience MST because many coaches are unaware of the training, and they would need the administration to bring it to their attention and offer MST to all sports.

The observed improvements to both athletic performance and life skills development that participants believed resulted from MST contributed to the positive perceptions shared by the coaches in this study. Participant 3 stated the following when asked if MST is worthwhile, “100% yes! When a coach is in it to help improve a player both on and off the field, MST is one area that will make a long-term positive difference.” The participants said they would like to figure out how to incorporate even more mental training into practices. Their shared opinion is that greater support from the athletic department is necessary to provide them with MST resources to accomplish that goal. Several of the coaches reported they think all athletes should have access to mental training; they wish more coaches would implement it because of the benefits they observed for athletes.

The first subquestion focused on how the participants implemented MST with their athletes. The second and fifth themes about the structure of MST and support addressed this question. Participants reported they employed both formal and informal MST sessions. Coaches centered formal sessions on a specific topic, for example, self-talk, and included discussions, videos, podcasts, and activities. The participants explained that informal sessions took place primarily during practices and involved drills designed to target a specific mental skill and self-reflection. P6 gave the example of having athletes complete a drill that would be challenging and giving them time in between the drills to talk about their goals and how they mentally approach the next round. He also shared how he would ask them questions about what they were thinking about following a drill.

All six coaches incorporated a variety of commonly implemented mental skills in their formal and informal sessions, such as goal-setting and self-talk strategies. Participants explained their reasons for covering specific topics with athletes and disclosed that skills such as goal-setting are essential from their perspectives because those are areas they feel the athletes struggle the most. Several participants shared how athletes tend to create goals that are unrealistic and outside of their control. For example, P5 shared how athletes will say their goal is to win state and play in college, but they do not focus on the steps needed to make that happen. He said, “Coaching them through how to write process-focused goals that are more specific, measurable, and realistic helps the athletes to create more attainable goals.” The participants provided similar examples for the other skills taught through MST. The participants shared how high school athletes need to be coached on how to use mental skills effectively. They believe the mental skills they included in MST are those high school athletes can benefit from the most.

The coaches in this study implemented MST on their own or with the help of a mental skills coach. One of the participants in this study has a degree in sport psychology and stated that the athletic department supported him incorporating MST. He said the athletic director who hired him showed interest in his resume because of his experiences with MST. One coach was a CMPC® who implemented MST with his team and with other sports in his school after the athletic director created a position for him as a mental coach. A third participant was a member of the athletic department that created a mental coach position made available to all sports. The fourth participant was an athletic director who hired a CMPC® as the mental coach for their athletic department. He created the position after the CMPC® approached him about MST and implemented the program with his basketball team. He obtained funding for this position by including it in his budget proposal to the school board. Two coaches in this study did not receive any support from their athletic department and sought out resources for MST on their own time and within their budget.

The two themes about the perceived effects of MST on athlete performance and life skills development directly addressed the second subquestion in this study. Participants observed improvements in both areas they believed were a result of the MST. The coaches stated that after implementing MST, they saw their teams win more games and beat teams who had better statistics than their team. They also observed athletes hitting personal records, a personal best in a given sport. The participants felt that even though they were not statistically measuring how MST was improving performance, it was their opinion MST was the primary factor. Several of the participants shared how they would like to start measuring how MST may be the source of the benefits they have observed. They believe that evidence of the effects of MST is necessary for gaining administrative support.

The coaches in this study also credited MST for the observed improvement to athletes' life skills. They described what they believed to be increased self-awareness, confidence, resilience, and self-regulation. For example, P2 observed his team getting fewer fouls during games because the athletes could control their emotions better. He also shared that before implementing MST, athletes were unable to identify how they were playing in games, but after MST, they could accurately identify what they had done well or not well and verbalize their observations to the coach. The high school sports coaches in this study also provided examples of how the athletes used skills they learned through MST in the classroom. For example, P1 shared how athletes stated they used breathing exercises to keep calm before a big test. All of the coaches in this study were able to describe observations of life skill development.

Discussion of the Results in Relation to the Literature

This study explored the perceived benefits and challenges high school sports coaches experienced when implementing MST. The literature surrounding perceptions has targeted college- and elite-level athletes, coaches, and administrators, and the researchers in those studies explore opinions of MST and sport psychology practitioners. Researchers examining perceptions of MST and sport psychology practitioners have also employed primarily quantitative methods. There is a need for more qualitative studies surrounding perceptions of MST to understand how and why coaches are implementing the training, and what their experiences are with implementation. A goal of this qualitative multiple case study was to gain a deeper understanding of how high school sports coaches perceive the benefits and challenges of MST implementation. This study begins to fill a gap in the literature surrounding high school sports coaches' perceptions of MST.

There is an expectation from NASPE and the SHAPE America, the national authority on all physical education, for coaches to incorporate mental training into sports. Their recommendation warrants an examination of how and why some high school sports coaches are following through on this expectation. There is also a need to understand why high school sports coaches are not incorporating mental training into sports. This section addresses how the results of this study relate to the literature and the broader community of practice and scholars. The results identify how the participants in this study viewed the effects of MST on athletes, how and why they implemented MST, the amount of support they received from the community, and whether they believed MST to be worthwhile to high school sports.

Discussions with the participants in this study led to the development of a theme about how the coaches believed MST affected life skills. Life skills are defined by Gould and Carson (2008) as personal assets that include a variety of measures such as emotional control and self-confidence. They can be developed in sport and applied to non-sport settings such as the classroom. It is a common assumption of parents and many coaches that high school sports participation leads to life skills development (Camiré, 2014). However, the research on whether the development of life skills occurs as a result of high school sports participation is mixed. Recent research does not support a direct link between transferable life skills and sport participation (Pierce et al., 2018). For life skill development to occur, contributing factors must exist, such as deliberately teaching skills to athletes (Gould & Carson, 2008).

The participants in this study did not observe behaviors that led to the idea that merely participating in sport builds an athlete's life skills. Several participants in this study reported that athletes sometimes know how to set goals or control their emotions, but many do not, especially when pressure ensues. The findings in this study are consistent with those reported by Pierce et

al. (2018). In their research, 12 teacher-coaches shared they are unsure that the transfer of life skills occurs in sports. The teacher-coaches explained how they want life skills to be developed and transferred, but they could not be guaranteed that it happened. The participants in the present study described how they felt MST gave athletes the tools they needed to build life skills. P5 shared an example of how athletes do not know how to set effective goals. He said that initially, they would focus purely on the outcome and on goals that may be unattainable or outside of their control. After MST, he said athletes focused more on what they could control. Several other participants shared similar examples of goal-setting and other skills. Self-talk, for example, P6, shared how athletes are often unaware of how they talk to themselves and the effect that it can have on how they feel. Their observations aligned with research around skills such as goal-setting and self-talk, and the relationship to self-regulated learning. Kitsantas et al. (2004) found that goal-setting improves self-regulated learning by guiding individuals to focus on factors within their control. When they learn to focus on what they can control in sport, then they can also focus on what they can control in other domains such as school (Gould & Carson, 2008).

The coaches in the present study explained how it is just as necessary to provide athletes with mental training instead of just assuming they will develop the mental skills on their own. P6 reported that coaches do not expect athletes will gain the physical strength they need to perform in sport on their own, so they provide athletes with physical conditioning. He said he believes coaches should take the same approach with mental conditioning. In a recent study, Golby and Wood (2016) built on previous work by Sheard and Golby (2006) and examined how MST affected student-athlete mental toughness, defined as a measure of individual resilience, and well-being. The results of their quantitative study indicated that teaching psychological skills to athletes positively impacts their mental toughness and well-being. The high school sports

coaches in this study observed similar benefits. They shared how they saw athletes displaying more confidence, resilience, self-awareness, and self-regulation during practices and games. Participants also shared how they observed athletes applying the same tools they learned in MST to the classroom setting. Their perspectives on the transfer of skills learned through MST are vital to note because researchers report the transfer of skills developed through sport as a necessary component of life skills development (Gould & Carson, 2008).

Researchers have studied the effects of MST on the physical performance of athletes and have repeatedly reported measurable improvements (Golby & Wood, 2016; Mamassis & Doganis, 2004; Sheard & Golby, 2006; Thelwell & Greenlees, 2003; Thelwell et al., 2006). The participants in this study shared examples of more wins, athletes hitting personal records, increased composure, greater self-awareness, and more confidence among their players after implementing MST. The coaches expressed they felt more equipped to assist their athletes with mental challenges they observed, such as choking under pressure. The participants explained how they believed MST was a resource for giving their athletes a competitive edge. P4 reported that with MST, athletes train their brains the same way they train their muscles to get better and gain a competitive advantage. Coaches in this study each implemented a unique set of skills, but consistent among each case were strategies surrounding self-talk, goal-setting, self-reflection, imagery, and emotion regulation. The majority of the strategies reported by the coaches in this study were consistent with those in the literature surrounding improved performance (Kolovelonis et al., 2012; Lochbaum & Gottardy, 2015; Ruiz, Raglin, & Hanin, 2017; Weinberg & Williams, 2001; Wright et al., 2016).

Self-reflection was a strategy that the participants in this study reported including in their MST programs, but it was not one of the skills included in the literature surrounding

comprehensive MST programs. After reviewing the findings, this researcher searched the literature for research surrounding reflection as a skill utilized by athletes. Some research has highlighted the importance of reflection as a self-regulatory skill for athletes (Jonker, Elferink-Gimser, & Visscher, 2010). In their study, Jonker et al. (2012) measured the self-regulatory skills of 222 junior athletes and discovered that international level athletes widely used the skill of reflection compared to national level athletes. In a study of 52 youth athletes, researchers found that athletes who scored highest in reflection achieved senior internationals while those who scored lower only achieved senior national status (Jonker, Elferink-Gemser, & Roos, 2012). While skills such as goal-setting, currently found in comprehensive MST programs, have shown to improve self-regulated learning, the findings in this study, along with research on reflection in sports, highlight the potential value of including reflection as a skill in MST programs (Zimmerman & Kitsantas, 1996).

Participants in this study expressed the need for athletic departments to be supportive of MST programs so coaches can more easily manage time and resource constraints that occur at the high school level. They noted the importance of having appropriate funds and time to allocate to MST for successful implementation; they believed it would make it easier for coaches to implement MST. Woods et al. (2015) revealed positive perceptions of mental training from athletes' perspectives but found athletes were not provided resources to obtain mental training, and they were left to seek out resources on their own. The results of that study indicated that athletes believe that the coach or organization should provide them with mental training (Woods et al., 2015). Three participants in this study were part of an athletic department that provided resources for mental training. P4 stated that the athletic department must include MST in the budget; if the administration does not provide support for high school sports coaches, he does not

think coaches can successfully implement MST long-term. Several participants also discussed that many coaches do not know about MST, and if they do, finding the time and money to allocate towards it is difficult without administrative support. They agreed that to gain support from the athletic department, they would need to prove the benefits of MST for athletes.

Participant perceptions surrounding support for implementing MST were consistent with those documented by college coaches and administrators (Neelis et al., 2012; Wrisberg, Withycombe, Simpson, Loberg, & Reed, 2012).

The six high school sports coaches in this study shared valuable opinions about how and why they implemented MST and why they will continue to offer the training to their athletes. Their experiences provide a look into why it may be beneficial for more high school sports coaches to follow through on NASPE and SHAPE America's standard about including mental training in sports. The findings also illustrate how some high school coaches are implementing mental training. With researchers like Gee (2010) reporting variations in MST as a factor that leads to misconceptions about the purpose of mental skills, the findings in this study are relevant because they tell us what some coaches are doing. P1 shared that he is interested in seeing what other coaches are doing at the high school level because there were no guidelines to follow when he started. The participants in this study have shared the steps they took to implement MST and how they structured their training. The information is valuable to other coaches who may not know where to start. The findings can also be useful to organizations such as NASPE, who can make resources such as MST guidelines available. The online training course launched by the NFHS about mental training for performance is now available for high school sports coaches. Section 2 of the course includes an article called "make it work." The perceptions shared by the

participants in this study can be valuable to coaches considering taking the course and looking for real-life examples of how to make it work in the high school setting.

Limitations

Certain limitations exist for this research. The first limitation is the researcher's current role as a CMPC®. This researcher has implemented MST programs, and that experience creates a bias. While this researcher separated her understandings from this study through reflexive note-taking, previous familiarity with MST could have affected her perceptions about the benefits and challenges the high school sports coaches reported. The researcher, as the primary source of data collection, is also a limitation in this qualitative case study due to researcher bias potentially impacting the findings (Yin, 2004). Merriam and Tisdell (2016) stated that the rigor of a qualitative study does not lie in the methods or design, but in the ethics of the researcher. The individual values and ethics as the researcher for this study guided the collection of data.

Another limitation of this study is the small number of participants. While not a limitation for qualitative research, the small number of participants will make the ability to generalize the data impossible. Data collection for this study included interviews, an online asynchronous focus group, and document review gathered from six participants. Despite the benefits of triangulation, there are also limitations (Merriam & Tisdale, 2016). For example, this researcher did not statistically calculate the results of this study, and the sample size was small. For these reasons, generalizability is low, and the data presented in this study should not be used to make predictions about MST implementation. Another limitation of this study is the participants were all male and only represented three types of sport. Therefore, this study does not represent a full depiction of the high school coaching population. A more expanded sample selection could have resulted in a broader range of perceptions. For example, differences in

gender, type of sport coached, and years of coaching experience could have presented a more extensive range of findings.

Retrospective reporting by participants is another limitation of this study. The participants were asked to recall how and why they implemented MST, which for some coaches, was many months before the data collection. Only one participant in this study worked with a mental coach provided by the school's athletic department. The other five participants either had experience implementing MST, or they worked with a previous coach who applied MST. They each took steps on their own to execute MST with their athletes, which could have created a positive bias on their perceptions. This researcher assumes the participants provided honest responses in the interviews and the focus group discussion. However, the participants' willingness to implement MST could have caused them to view the benefits and challenges more positively. If the majority of participants had been offered MST from the athletic department, the data reported in this study might have been different. If coaches did not seek out MST on their own, and instead had been offered resources through their athletic department, reported findings may have been less favorable. When people seek out resources, they are more susceptible to a confirmation bias about the utility. That bias may less effect coaches who are offered MST and do not seek it out on their own.

Implications of the Results for Practice, Policy, and Theory

The main goal of this study was to address the lack of research surrounding high school coach perceptions of MST in literature. This multiple case study took a deep dive into the perceptions of the participants with various data collection tools. One-on-one interviews, a focus group discussion, and document review allowed this researcher to examine the practitioner's perspective of implementing MST in high school sports. With recommendations from

organizations such as the NASPE and the SHAPE America program to incorporate mental training into high school athletics, NFHS offering a new online mental training course to high school coaches, the data presented in this study is relevant. The results of this study provide a much-needed examination of how and why some high school sport coaches are incorporating mental training and whether or not these coaches think it is worthwhile for high school athletes.

The findings provide information and perspectives for other high school coaches and administrators, considering MST implementation. The coaches who participated in this study wanted to provide MST so their athletes would have the tools to manage mental challenges such as choking under pressure. They also believed MST helped their athletes perform more consistently and gain a competitive edge. While some participants received administrative support, and some did not, all participants agreed having the administration provide resources would make MST easier to implement. One participant shared how he presented a position for a mental skills coach in the athletic budget for the year and thought other schools could do the same. In addition to teaching skills typically included in MST, such as self-talk, goal-setting, imagery, and emotion regulation, participants in this study also divulged teaching additional mental skills, such as cohesion, and a skill several participants referred to as self-reflection. The results from this study can be used to help other coaches who are planning to incorporate MST decide how to integrate it into their sports. The data presented here can bring awareness to the potential benefits and challenges of implementing MST with high school sports. This study may also be valuable to high school administrators who are interested in allocating funds for MST.

The literature reviewed for this study described the potential benefits of MST to athletes' performance, self-efficacy, and self-regulated learning, and challenges such as budget, stigma, and proving MST leads to positive results. Framed through the lens of constructivism theory, this

researcher relied on the views of the participants as much as possible when reporting the data. The questions posed to participants in both the interviews and focus group explored how the benefits and challenges of implementing MST formed their perceptions. Participants shared perceived challenges consistent with those recounted by researchers of sport psychology perception studies conducted in varied sport settings. Those challenges included time and resource constraints, and the need for administrative support (Barker & Winter, 2014; Fortin-Guichard et al., 2017). The participants also reported a lack of knowledge surrounding the purpose of MST among their athletes that led to some initial stigma (Martin, 2005). The stigma, however, was not long-lasting, and participants thought the majority of the athletes applied the skills they learned in their sports and in the classroom. Participants assumed that once athletes started to experience the benefits personally, they embraced their mental skills.

The benefits to athletes the participants described in this study aligned with benefits researchers have revealed with quantitative studies of MST (Gilbert & Lewis, 2013; Golby & Wood, 2016). The participants believed advantages athletes gained included better performance on the field, enhanced life skills, and transfer of those skills into the classroom environment. Participants recounted situations where they observed athletes displaying what they continually referred to as confidence in high-pressure games, and their descriptions are consistent with the definition of self-efficacy. The participants in this study also thought athletes improved their ability to manage their thoughts, emotions, and behaviors better, which is a component of self-regulated learning. Additional perceived benefits were also identified, such as greater self-awareness, more resilience, and better leadership from the athletes. The results presented in this study suggest other benefits and challenges to MST implementation as perceived by the high

school sports coach. The results from this study will add to the limited body of research surrounding perceptions of MST in the high school setting.

Practitioners in sport identify the importance of athlete well-being, but interventions to ensure well-being occurs are not well-documented (Golby & Wood, 2016). The NFHS states on their website that high school athletics develop leadership and life skills, but research does not support that claim (Pierce et al., 2018). Exploring interventions that develop life skills is needed. The findings in this study suggest MST is an intervention worth further investigation. The perceptions shared here also highlight the need for more resources on mental training for high school sports coaches. Recently, the NFHS has launched an online mental training course for high school sports coaches. The opinions shared here indicate that organizations like the NFHS should provide more resources like the online course to high school sports coaches.

Recommendations for Future Research

The results of this study focused on high school sports coach perceptions of MST implementation. The first recommendation is to apply this study to future research to explore a larger population of coaches representing a wider variety of sports, and more equally represented genders. Expanding the sample will provide a more accurate representation of high school sports coaches. A questionnaire developed to assess the benefits and challenges of MST reported in this study can be distributed to a larger sample of high school sports coaches. A quantitative study with a larger sample can provide more generalizable data.

A second recommendation for future research is to examine the perceptions of high school sports coaches who have taken the NFHS online mental training course. The launch of the course opens the door for more potential participants who represent a more general population of high school sports coaches. An in-depth case study can explore the perceptions of coaches who

complete the course and apply the strategies with their athletes. The research question and subquestions from this study can be applied, and results compared to the data presented here.

The participants in this qualitative multiple case study frequently spoke about how the variety of skills in MST support high school athletes, and they believe all high school athletes should receive MST. They also discussed how administrative support is necessary for more straightforward implementation, but administrators want to know the value of MST. Based on the shared experiences of the participants in this study regarding demonstrating the value of MST, the third recommendation for future research would be to replicate the methodology of Simonsmeier and Buecker (2017). The researchers explored whether imagery use, imagery ability, and the interaction of imagery use and ability predicted the performance of athletes ages 7 to 16. Imagery is a skill practitioners commonly include in MST programs. The researchers were interested in how to support the mental training of young athletes who are still in their development phase.

Future research should examine the relationship between mental skill use, mental skill ability, the interrelation of the two constructs, and athletic performance of high school athletes. Researchers like Gilbert and Lewis (2013) have examined mental skill use in high school athletes following an MST program, but there is virtually no research in the high school setting on the relationship between mental skill use and ability, and the product of this relationship. This information can add statistical data to the perceptions reported in this study about the effect of MST on athlete performance. The data can be valuable to high school administrators who are considering funding MST implementation.

A fourth recommendation is to conduct quantitative studies examining the effect of MST on the life skills development of high school athletes reported by the participants in this study.

Currently, researchers have identified that different factors can help or hinder the transfer of life skills into the classroom (Pierce et al., 2018). The participants in this study believed MST is a factor that helps the transfer of life skills into non-sport domains such as the classroom environment. Researchers should assess changes to athlete self-awareness, resilience, self-regulation, and leadership following an MST program. Doing so could provide more objective data to support the perceptions of the participants in this multiple case study.

Conclusion

This research provided a better understanding of high school sports coaches' perceptions of MST implementation. Six high school sports coaches shared their experiences regarding how and why they implemented MST and the perceived benefits and challenges. Through interviews, a focus group discussion, and document review, this researcher sought to answer the primary research question and subquestions: (a) How do high school sports coaches perceive the benefits and challenges of implementing an MST program?; (b) How are high school sports coaches implementing MST?; and (c) How do high school sports coaches perceive the effects of MST on performance and life skills development? Data from the interviews and one focus group were coded and categorized into themes to help answer the research question and subquestions.

The results of this study indicate the six participants believe MST is worthwhile to implement in high school sports. Participants shared their opinions about how athletes performed better on the field and improved their life skills following MST implementation. The challenges shared by the participants indicate administrative support is necessary to enable more high school sports coaches to implement MST, something the participants agreed should happen. Participant 4 stated the following, "We're trying to train kids and help them continually improve

to be the best they can be. If we are doing that, we see training the mental side as an important component.”

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Appendix A: Email

Subject Line: Looking for high school sport coaches

Greetings List members,

My name is Arlene Bauer, and I am a doctoral student in the College of Education at Concordia University. I am currently conducting a study for my dissertation exploring high school sport coach perceptions of Mental Skills Training (MST) programs. I am looking for high school sport coaches to participate in this study. I am interested in knowing whether high school sport coaches are familiar with MST, and for those who are familiar whether they have implemented MST. I would like to gather participants from those who have implemented MST themselves, or who have worked alongside a CMPC to implement MST. Initial participation in the study involves completing a survey that will take approximately 5–10 minutes to complete. Questions will be focused on demographic information and knowledge of MST. If participants complete the survey and are interested in sharing their perceptions of MST, they can be considered for an e-interview with the researcher, and an online asynchronous focus group.

Also, if you are currently know any high school sport coaches who would be willing to complete the survey please be willing to forward the following message to them. Thanks a lot! I invite you to participate if you are (a) at least 18 years of age; (b) a high school sport coach. If you would like to participate in our study, please click on the link below and you will be directed to the online survey: Link will be here. Please feel free to share with others who may fit the criteria. Thank you very much for your time!

If you have any questions about this research, please contact the principal investigator or faculty advisor Dr. Julie McCann at the email or phone number listed below. This research has been approved by the Concordia University Institutional Review Board.

Arlene Bauer, M.S., CMPC
[contact information redacted]

Julie McCann, Ph.D.
jmccann@cu-portland.edu

Appendix B: Recruitment Survey

Age:

Race/ethnicity:

Sport currently coaching:

Number of years coaching:

Are you familiar with Mental Skills Training Programs (MST) that typically include strategies on self-talk, goal-setting, imagery, and emotion regulation?

Have you implemented this type of MST with your athletes?

Would you be interested in sharing your perceptions of MST with the researcher?

If yes, please include your preferred method of contact information.

Appendix C: Semistructured e–interview questions

Name of Interviewer:

Identifier of Interviewee:

Time and Length of Interview:

Date and Location of Interview:

Semistructured Interview Questions:

Description of MST

- How would you describe the structure of the MST program you implemented?
 - o Did you teach the program yourself or did someone else?
- If I attended one of the MST sessions what would I see?
- What lead you to implement MST with your athletes?
 - o Were there life skills already being developed before implementing MST? If yes, how did MST help or hinder?
- What steps did you take to implement MST?
- How would you describe your experience with the MST program you implemented?

Perceived Benefits

- How do you perceive the effects of MST on your athletes' physical performance?
 - o Can you describe any statistical improvements in individual and team performance?
- How do you perceive the effects of MST on your athletes' self–confidence (efficacy)?
 - o Can you describe any changes in how they described their own performance?
 - o Can you describe any changes in the amount of effort that was put in at practice and games?

- How do you perceive the effects of MST on your athletes' goal-setting process (self-regulation)?
 - o Can you describe any changes in how athletes set goals?
 - o Can you describe how athletes evaluated their own progress towards their goals?
- Can you describe any changes to academic performance?

Perceived Challenges

- What challenges did you experience when implementing MST?
 - o Can you describe the level of support from the school?
 - o Can you describe the level of support from parents?
 - o Can you describe the level of openness of the athletes to participate?
 - o Can you describe how finances influenced your implementation of MST?

Closing

- Can you describe whether MST was worthwhile for your athletes?
- Closing question: Is there anything else you would like to add?
- Closing statement: Please remember your responses are confidential and will not be reported as a response tied to your name. You will receive an e-mail of the transcript of your interview for you to approve.
- Thank you for your participation.

Appendix D: Focus Group Questions

Description of MST

- How would you describe the structure of the MST program you implemented?
- How would you describe your experience with the MST program you implemented?
- Was life skill development taking place before the implementation of MST? If so what did it look like? Did MST help or hinder any development that was currently taking place?

Perceived Benefits

- How do you perceive the effects of MST on your athletes' physical performance?
- How do you perceive the effects of MST on your athletes' self-confidence (efficacy)?
- How do you perceive the effects of MST on your athletes' goal-setting process (self-regulation)?
- Can you describe any changes to academic performance?

Perceived Challenges

- Can you describe the level of support from the school?
- Can you describe the level of support from parents?
- Can you describe the level of openness of the athletes to participate?
- Can you describe how finances influenced your implementation of MST?

Closing

- Can you describe whether MST was worthwhile for your athletes?
- My goal in this research is to understand high school coach perceptions of MST programs. Is there anything you would like for me to know and understand about your perceptions?

Thank you for your participation.

Appendix E: Informed Consent

Research Study Title: HIGH SCHOOL SPORT COACH PERCEPTIONS OF MENTAL SKILLS TRAINING PROGRAMS

Principle Investigator: Arlene Bauer

Research Institution: Concordia University–Portland

Faculty Advisor: Julie McCann, Ph.D.

Purpose and what you will be doing: The purpose of this research is to explore coach perceptions of Mental Skills Training (MST) programs. High school sport coaches will be interviewed for their interpretations and input on MST and participate in a focus group. No one will be paid to be in the study.

To be in the study, you will be asked to:

- Read and sign a Consent Form for participation in the research study.
- Participate in one semistructured interview scheduled by you to answer questions about MST.
- Answer questions in an online asynchronous focus group that can be done at any time during a one–week period.
- Allow the researcher to review documents such as MST training plans and schedules.
- Be available for follow–up questions and member checking to review interpretations and conclusions about the research study.
- Inform the researcher at any point if you would like to withdraw from the study.
- Doing these things should take approximately three (3) hours or less of your time.

Risks: There are no risks to participating in this study other than providing your information. However, we will protect your information. Any personal information you provide will be coded so it cannot be linked to you. When we or any of our investigators look at the data, none of the data will have your name or identifying information. We will not identify you in any publication or report. Your information will be kept private and then all study documents will be destroyed 3 years after we conclude this study.

Benefits: Information you provide could be beneficial to high school sport coaches and athletic directors. The results of this research can be used as rationale for implementing MST in a more formal across high schools.

Confidentiality: This information will not be distributed to any other agency and will be kept private and confidential. It will be published in my dissertation.

Right to Withdraw: You are free at any point to choose not to engage with or stop the study. You may skip any questions you do not wish to answer. This study is not required and there is no penalty for not participating.

Contact Information: You will receive a copy of this consent form. If you have questions you can talk to or write the principle investigator, Arlene Bauer at e–mail [redacted]

Appendix F: Statement of Original Work

The Concordia University Doctorate of Education Program is a collaborative community of scholar-practitioners, who seek to transform society by pursuing ethically-informed, rigorously- researched, inquiry-based projects that benefit professional, institutional, and local educational contexts. Each member of the community affirms throughout their program of study, adherence to the principles and standards outlined in the Concordia University Academic Integrity Policy. This policy states the following:

Statement of academic integrity.

As a member of the Concordia University community, I will neither engage in fraudulent or unauthorized behaviors in the presentation and completion of my work, nor will I provide unauthorized assistance to others.

Explanations:

What does “fraudulent” mean?

“Fraudulent” work is any material submitted for evaluation that is falsely or improperly presented as one’s own. This includes, but is not limited to texts, graphics and other multi-media files appropriated from any source, including another individual, that are intentionally presented as all or part of a candidate’s final work without full and complete documentation.

What is “unauthorized” assistance?

“Unauthorized assistance” refers to any support candidates solicit in the completion of their work, that has not been either explicitly specified as appropriate by the instructor, or any assistance that is understood in the class context as inappropriate. This can include, but is not limited to:

- Use of unauthorized notes or another’s work during an online test
- Use of unauthorized notes or personal assistance in an online exam setting
- Inappropriate collaboration in preparation and/or completion of a project
- Unauthorized solicitation of professional resources for the completion of the work.

Statement of Original Work (Continued)

I attest that:

1. I have read, understood, and complied with all aspects of the Concordia University–Portland Academic Integrity Policy during the development and writing of this dissertation.
2. Where information and/or materials from outside sources has been used in the production of this dissertation, all information and/or materials from outside sources has been properly referenced and all permissions required for use of the information and/or materials have been obtained, in accordance with research standards outlined in the *Publication Manual of The American Psychological Association*.

Arlene Bauer

Digital Signature

Arlene Bauer

Name (Typed)

2/23/2020

Date