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A Sequential Explanatory Mixed Methods Exploration of Practitioner Use, Development,  
and Satisfaction of Theoretical Paradigms in Sport Psychology

Christopher E. Bilder

A dissertation submitted to the Graduate Faculty of

JAMES MADISON UNIVERSITY

In

Partial Fulfillment of the Requirements

for the degree of

Doctor of Psychology

Department of Graduate Psychology

August 2019

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## Dedication

This dissertation is dedicated to my family. I would not have been given this opportunity, nor would I have gotten through this process, without you. I would like to thank my parents, Ruth and Paul Bilder, for their constant support and encouragement, and for instilling in me a passion to help others. I would also like to thank my brother, Matt, for his support and keeping me grounded. Finally, I dedicate this dissertation to my nieces, Mikaela, McKenna, and Marley. I hope you chase your dreams as far as they will take you.

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I truly am standing on the shoulders of giants, and I hope I can honor the mentorship I have been provided throughout my training. I would like to give a special thanks to my advisor and committee chair, Dr. Gregg Henriques, for his encouragement, support, and reassurance throughout this process. Without you I would have not gotten to where I am today. I also want to thank my committee members, Dr. Robert Harmison and Dr. Cara Meixner. You both have truly been shining examples in this journey, and I could not be more grateful for your support, guidance, and mentorship. I want to thank all of professors I have had at James Madison University, particularly the core faculty, Dr. Elena Savina, Dr. Anne Stewart, Dr. Craig Shealy, and Dr. Kenneth Critchfield. You all have taught me so much in my doctoral training, and I hope I can live up to the phenomenal education you have provided me. I also have to thank Mr. Carl Guerin and Mrs. Andee Henriques. You both have done more for me than you will ever realize, and I am truly in your debt.

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## Abstract

The purpose of this sequential explanatory mixed methods study was to identify the use, development, and perceived satisfaction of current theoretical paradigms by sport psychology practitioners. Participants for the quantitative portion of the study were 170 (95 women, 65 men) sport psychology practitioners.

Results of a frequency analysis revealed that most practitioners use an integrative paradigm type, and the most commonly used paradigms were CBT, ACT, and humanistic. A descriptive analysis revealed that theoretical paradigms are developed across all developmental levels. Independent between-groups ANOVAs indicated that primary training background significantly impacted the principles perceived to be necessary (i.e., sport science vs. psychology) in a theoretical paradigm for sport psychology. Frequency and descriptive analysis revealed that the vast majority of practitioners were satisfied with their theoretical paradigm. Contingency table analyses signified that the number of years practicing in the field positively impacted theoretical paradigm satisfaction, and that practitioners who perceived their theoretical paradigms addressed important concepts were more satisfied with their theoretical paradigms.

Participants of the basic qualitative portion of the study were four (2 women, 2 men) sport psychology practitioners who were at least somewhat satisfied with their theoretical paradigms. The within-case and across-case theme development revealed three meta-themes (i.e., “Depth and Complexity”, “Lifelong Learning”, “Client Impacts”) that spanned participants experiences of the use, development, and satisfaction with their theoretical paradigms. Twelve other themes emerged from the data analysis that aligned with the use, development, and satisfaction with theoretical paradigms. Four themes

diverged from the original research questions that pertained to the state of theoretical paradigms in the field of sport psychology: (1) “Shortcomings in the Field”; (2) “Shortcomings with Education”; (3) “Research on Paradigms”; and (4) “Ambivalence about Development of Paradigms.”

Overall, the findings of the present study suggest that practitioners are currently satisfied with their mainly integrated paradigms, but there is a noticeable need in the field to continue to improve and standardize the formal development of theoretical paradigms in graduate training. There is also a visible need for the development of a theoretical paradigm specific to sport psychology that includes both principles of psychology and sport science.

## Chapter 1: Introduction and Overview

The focus of the current project is to review and evaluate the current status of theory in sport psychology. The field of sport psychology originates in the disciplines of psychology, exercise science (i.e., kinesiology), and physical education (Andersen & Williams-Rice, 1996). Sport psychology continues to be practiced by individuals who have been educated in psychology and/or kinesiology, and the philosophies within the field are formed from the insights of both disciplines. Given the interdisciplinary nature of sport psychology, questions arise as to how and what concepts and theories practitioners of sport psychology rely on to guide their work. This is relevant because it is crucial that a field be grounded in sound theory (Aoyagi, Cohen, Poczwardowski, & Metzler, 2018). A sound theoretical grounding allows for the development of a conceptual model that provides a foundation for the ethical practice of sport psychology, and offers a plan for questions to ask, proposed interventions, and interactions with clients, as well as a frame to guide research.

The role of theory in practice is pertinent because there are no theoretical paradigms (see Appendix A for Definition of Terms) developed specifically for sport psychology and performance enhancement (Aoyagi & Poczwardowski, 2011, 2012). Considering the importance of the use of theory in the ethical practice of sport psychology, it is strongly encouraged that individuals in the field of sport psychology be grounded in a theoretical paradigm to be able to systematically conceptualize athlete issues, as well as providing consistent theoretically and empirically supported treatment (Aoyagi, 2013; Aoyagi & Poczwardowski, 2011; Aoyagi & Poczwardowski, 2012; Keegan, 2014; Poczwardowski et al., 2004). However, the literature reveals little about

which theoretical paradigms are used, how they are developed in practice or practitioner satisfaction with them in the field. This dissertation examines the role of theory in sport psychology, and it explores which theories sport psychologists use to guide their work and how they do so.

Historically, the sport psychology literature and professionals within the field of sport psychology have most obviously tended to use paradigms from general psychology, most notably from theories of personality and social or behavioral psychology (Aoyagi & Poczwardowski, 2012; Poczwardowski et al., 2004). Although valuable, reliance on these models creates a number of obvious limitations. First, these insights generally fail to capture the principles of movement and kinesiology. One might presume that sport psychology practitioners are integrating theories of movement into the theoretical paradigms assimilated from general psychology, but there is limited information in the literature if this practice is utilized or how it is accomplished. In addition, given the needs of clinical and counseling psychologists, many paradigms in psychology emphasize psychopathology and dysfunction rather than optimal performance. Principles of positive psychology, which is the “scientific study of positive human functioning and flourishing” (Seligman & Csikszentmihalyi, 2000, p. 5), may be utilized to address this issue. Again, however, there is little known about whether or how this is done. These limitations in theory lead scholars and practitioners to formulate their own ways of bridging these gaps. Given the lack of a theoretical paradigm specific to sport psychology, Poczwardowski et al. (2004) suggest that a “theoretically eclectic” approach may be the most effective option for applied practitioners in the discipline. They posit, through Boutcher and Rotella (1987), that no single mental skill or strategy fits for every athlete, and, through

Simons and Anderson (1995), there is no one single method for mental skills training. Similar to Williams Rice (1996), Poczwadowski et al. (2004) argue that the interdisciplinary nature of the field calls for an interdisciplinary model of practice. Given that an empirically supported interdisciplinary theoretical paradigm has yet to exist, an eclectic sport science model might be optimal for sport psychology practitioners given the current state of the field.

Although the use of a sound theoretical paradigm that aligns with one's philosophy and guides intervention goals and techniques is considered best practice within the field of sport psychology (Aoyagi et al., 2018; Aoyagi & Poczwadowski, 2012; Hanrahan & Andersen, 2010; Hill, 2001; Keegan, 2014; 2016; Poczwadowski et al., 2004; Winter & Collins, 2016), there has been little research on the use, development, and practitioner satisfaction of theoretical paradigms utilized in the field. Only one study has been conducted to examine the use of theoretical paradigms in sport psychology (Rosen & Lipkins, 2016). This study examined practitioners' primary theoretical orientations and found that a majority of practitioners identify as utilizing more than one primary theoretical orientation. However, these orientations were not delineated.

Although useful in getting an idea of the different theories in use, the authors failed to clearly delineate what is actually being used by individual practitioners.

The literature on the development of theoretical paradigms in sport psychology is only slightly more robust (e.g., Aoyagi, 2013; Keegan, 2014; 2016; Tod, 2007; Tod et al., 2009; Tod & Bond, 2010). However, this research has primarily taken a case study or qualitative route (e.g., Keegan, 2016; Tod et al., 2009; Tod & Bond, 2010), and has primarily focused on advanced student and early practitioner general development. Aside

from these few studies, little is known about the actual development and utilization of theoretical paradigms in the field of sport psychology. In a similar vein, the satisfaction of academics and practitioners with the existing theoretical paradigms in sport psychology has only briefly been alluded to in the literature (e.g., Aoyagi et al., 2018; Poczwardowski et al., 2004; Tod & Bond, 2010), and no studies were found that explored this area explicitly. It is worth noting that this lack of analysis exists in contrast to other aspects of attitudes and beliefs held by sport psychologists pertaining to the field and their practice. Utilizing Poczwardowski et al.'s (2004) model, personal core beliefs and values of practitioners, models of practice (e.g., Sean McCann's CBT model, Artur Poczwardowski's eclectic model, Integrative Model of Athletic Performance), intervention goals, and intervention techniques have all been widely studied in the sport psychology literature.

The problem is that there is a gap in the literature regarding theoretical paradigms, and the methods through which theoretical paradigms have been studied in the scant literature that has been produced on the topic. A better understanding of these areas within the field would allow for better didactics in undergraduate and graduate training, more thorough and deliberate selection of theoretical paradigms for sport psychology practitioners, and ultimately better service to clients.

The purpose of this mixed methods study is to identify the use, development, and perceived satisfaction of current theoretical paradigms by sport psychology practitioners. Specifically, the study sought to address the following questions:

1. What are the theoretical paradigms utilized by current practitioners of sport psychology?

2. How are theoretical paradigms developed in sport psychology?
3. Are practitioners satisfied with the current theoretical paradigms in use in the field of sport psychology?

This was accomplished by obtaining quantitative results from a survey of current practitioners and graduate students practicing in the field of sport psychology, and then following up with purposefully selected individuals to explore those results in more depth through basic qualitative inquiry.

The following chapters provide an overview of the current literature, further illuminate the research questions, and the methods used to explore them. Quantitative and qualitative results are explored, and both sets of data are integrated to provide a holistic view of theoretical paradigms in sport psychology. Finally, implications for professionals within the field and future directions for this research are discussed. Chapter 2 engages in a review of the relevant literature that includes: 1) the interdisciplinary history of the field of sport psychology, 2) definitions of sport psychology, 3) a clarification of the terminology surrounding theory, 4) professional philosophies in sport psychology, 5) the development of philosophy and theoretical paradigms, 6) psychological theories adapted to sport psychology, 7) models of sport psychology, and 8) a job task analysis and the current research on the use of theoretical paradigms in sport psychology. This review will not only highlight the relevant literature, it will also elucidate the need for this research on the use, development, and practitioner satisfaction of theoretical paradigms in the field of sport psychology.

Chapter 3 describes the methodology utilized in the study. The chapter begins with a description of, and rationale for, utilizing a mixed methods approach. The



sequential explanatory design of the study is covered in the next section, and both data priority and a visual model for the mixed-methods sequential explanatory design are provided. Both quantitative and qualitative participation selection and sampling is covered in the following section. The *collection and analysis* section provides an overview of the cross-sectional online survey utilized, as well as a description of the statistical tests used to analyze the quantitative data (i.e., frequencies, non-parametric tests, ANOVA). This section includes a description and explanation for the *basic qualitative* (Merriam & Tisdale, 2016) framework employed in the study, and the method for qualitative data collection. The section also provides the protocol for qualitative collection. The *collection and analysis* section ends with an overview of the coding procedures for the qualitative data. The rigor of the proposed study is addressed through an overview of proposed validity and reliability checks (e.g., piloting the survey, theory evidence) for quantitative data, and checks of trustworthiness (e.g., member checks, researcher-as-instrument statement, peer review) for qualitative data. Lastly, the methods section concludes with an overview how the quantitative and qualitative data were integrated.

Chapter 4 describes quantitative and qualitative participants and results. The chapter begins with a review of the demographic information of the quantitative participants. The results of the frequency analyses, contingency table analyses, ANOVAs, Kruskal-Wallis test, and the simple linear regression are presented via the broad research questions (e.g., what are the current theoretical paradigms utilized by sport psychology practitioners?) and sub-questions (e.g., if practitioners are using integration, what types of integration are they using?) to answer the broad research questions more specifically. The

chapter then reviews the qualitative participant pool and the demographic information of the final qualitative participants. Next, the participants and results chapter provides a review of the higher order qualitative themes, organized by the quantitative results, generated from axial coding, the themes generated from focused coding of each higher order theme, and prototypical quotes that provide insight into the research questions. This section also includes qualitative themes that were dissonant or divergent from the quantitative results. Finally, the chapter offers the integration of the quantitative and qualitative results.

Chapter 5 offers a discussion of the results. The chapter begins with an interpretation of the integrated results regarding the state of theoretical paradigms in the field of sport psychology, as well as how the integrated results are aligned with or diverge from the previous literature on the use and development of theoretical paradigms in sport psychology. The chapter then highlights strengths and limitations of the study, and implications for the education on theoretical paradigms in sport psychology and the practice of sport psychology. Next, the chapter addresses future directions for the research on theoretical paradigms in sport psychology. Lastly, the chapter closes with final conclusions from the study.

## Chapter 2: Literature Review

To understand the current nature of theoretical paradigms in sport psychology, one must look to the interdisciplinary history of the field, and the issues involved in defining both the field and its practice. Toward that end, this chapter provides an overview of history of the field, and the definitions that have been used to describe the field and practice of sport psychology are examined. It also clarifies the terminology regarding *theory*, which could potentially refer to several concepts (e.g., scientific underpinnings behind interventions, model of practice, grand abstract system that explains behavior) (Aoyagi & Poczwardowski, 2012). Poczwardowski et al.'s (2004) hierarchical structure of professional philosophy, which provides a conceptual structure in which theoretical paradigms can be adequately placed in a broader framework, is explored to provide the context for the utility and importance of establishing a sound theoretical paradigm. Once the history, definitions, and conceptual framework are in place, a review on the literature on the development and use of theoretical paradigms can be better understood. Thus, the different ways in which theoretical paradigms can develop is further reviewed, as well as the theoretical paradigms that have been promoted for use within the field. Due to the fact that virtually all of the theoretical paradigms in use by practitioners of sport psychology have been adapted from the field of psychotherapy, it is useful to highlight how these paradigms are being utilized by practitioners. Therefore, an overview and critique of three known models in use within the field is provided. Finally, the literature review concludes with an exploration and critique of the theoretical orientations section of the recent Job Task Analysis (JTA)

completed by Rosen and Lipkins (2016) for the Association of Applied Sport Psychology (AASP).

Little empirical research has been conducted on the actual use of theoretical paradigms within the field of sport psychology, and the majority of the work on the topic within the field has been conceptual in nature. This review aims to provide an overview of proposed standards within the field, as well as the limited literature on how theoretical paradigms are developed and what is actually being utilized by practitioners.

### **The Interdisciplinary History of Sport Psychology**

The field of sport psychology is rooted in the disciplines of psychology and physical education, which is now referred to as kinesiology (Poczwardowski et al., 2004). The first documented occurrence of psychology and physical education interacting regarding the psychological aspects of sport occurred at the ninth annual meeting of the Association for the Advancement of Physical Education at Yale University in April of 1894 (Goodwin, 2009; Kornspan, 2007). At the meeting, E. W. Scripture, the researcher credited with the first psychological study on athletes, presented his groundbreaking research conducted on elite fencers' reaction times and muscle-movements at the Yale psychology laboratory, as well as the laboratory's research on reaction time and time-memory of gymnasts. During the presentation, Scripture spoke to the lack of research on the psychological aspects of sport, and he implored physical educators to conduct research in psychological laboratories (Kornspan, 2007). Scripture (as quoted in Kornspan, 2007) went on to say:

You might ask me why psychologists do not work out the psychology of exercise.

I must answer that we are far too busy investigating the fundamental laws of

mental life to have any time to spend on practical applications. We are scientists, not technologists, and our duty ends when we have invented methods, and discovered facts. It is your business, as practical people, to take up the matter where we leave it: we will furnish the rough metal, but you must shape it for practical service. (p. 158)

Scripture's call to action was the first documented instance of the intersection between psychology and physical education regarding the psychological aspects of sport (Goodwin, 2009; Kornspan, 2007).

The United States did not have a monopoly on the interest in the psychological aspects of sport, and it was not the only country that experienced a connection between the fields of psychology and physical education. The International Congress of the Psychology and Physiology of Sport was held at the fifth Olympic Congress in Lausanne, Switzerland from May 8 to May 10, 1913 (Kornspan, 2007b; Kornspan, 2012). The Congress was organized by Pierre de Coubertin, the organizer of the modern Olympic Games and president of International Olympic Committee from 1896 until 1925 (Kornspan, 2007b).

Coubertin, a native of Paris, France, published over 1,300 articles, 30 books, 50 pamphlets, and 30 posters and leaflets in his lifetime (Müller, 2000). Over the course of his career, Coubertin published several articles that pertained to the psychological aspects of sport, and it has been suggested that he was the first individual to use the term sport psychology when he published the article "La psychologie du sport" in *La Revue des Deux Mondes* in 1900 (Pereira, 2004). Coubertin studied educational reform in England in the 1880s, and he developed a philosophy of the importance of character building

through sport during this time (Kornspan, 2007b). During the late 1880s, Coubertin was asked to create a world sports association by the French Government. Coubertin also traveled to the United States in the latter part of the decade to study American colleges and universities and the field of physical education. Coubertin's work to create a world sport association culminated in 1894 when he invited individuals throughout the world to attend the first Olympic Congress in Paris. It was at this congress where Coubertin proposed the revitalization of the Olympic Games, and the Games followed soon after in 1896 in Athens, Greece. Along with promoting and organizing the Olympic Games, Coubertin also promoted the idea that the Olympic Games should include an educational purpose and the International Olympic Committee should aspire to be more than an organization that only governed sporting events. Thus, future Olympic Congresses were organized to study educational and moral aspects of sport (i.e., hygiene, pedagogy, literature, art, physiology, physical education, psychology). Two Olympic Congresses included a focus on the psychological aspects of sport—the second Congress in Le Havre, France in 1897 and the fifth in Lausanne, Switzerland in 1913—but it was at this fifth Congress where the psychological aspects took center stage. Coubertin stated, “The Lausanne Congress was held for the purpose of launching a brand new science or, more precisely, a brand new branch of sport science: sports psychology” (Olympic Review, 1968, p. 358).

The fifth Olympic Congress' lectures were divided into three main areas: a) the *Origin of Sporting Activity*, b) *Continuity and Methods*, and c) *Results* (Kornspan, 2007b). The *Origin of Sporting Activity* lectures began with a reading of a paper written by the 26<sup>th</sup> president of the United States, Theodore Roosevelt. The paper, which was

written specifically for the Congress, described the positive benefits he received through participation in boxing. Other notable highlights from the Congress included lectures on how sport could provide an outlet for nervous energy, and how autosuggestion, which was a term used in the 1900s for saying positive thoughts to oneself (i.e., positive self-talk), could help high level athletes overcome fatigue and control emotions. Perhaps the most influential presentation at the congress was given by Dr. J. Philippe, who worked at the Psycho-physiological Institute of Paris. Philippe advocated for studying sport in a laboratory (Kornspan, 2007b), much like E. W. Scripture's call for physical educators (Goodwin, 2009). Philippe's presentation spoke to his research on fencers, runners, and tennis players, and he suggested that it was the mental properties rather than reaction time that separated one athlete from another (Kornspan, 2007b). The presentation was lauded by an evaluator of the Congress, philosophy professor Millioud of the University of Lausanne, and reported that Philippe's ideas needed to be given further attention.

Despite the apparent success of the fifth Olympic Congress in introducing the Olympic community to the psychology of sport, it does not appear that Coubertin's work directly influenced the development of sport psychology, as it is known today, or the present connection between kinesiology and psychology within the field. Despite groundbreaking work by Scripture and Coubertin, as well as other important sport psychology historical figures like Norman Triplett and Coleman Roberts Griffith, the current iteration of the field of sport psychology in the United States did not rise until the 1960s.

### **Modern Interdisciplinary History of Sport Psychology**

The rise of the modern study and practice of the psychological aspects of sport began in the 1960s, and it began concurrently in physical education and psychology. Several antecedents played major roles in the rise of the field, most of which were linked to war and global sociopolitical events. Central to this development was the Servicemen's Readjustment Act of 1944, more widely known as the GI Bill, which provided a range of benefits for returning World War II veterans (Green & Benjamin, 2009). One of the benefits of the GI Bill was that it allowed veterans of the war to attend college, many of which would have not been afforded the opportunity if not for the Bill. This led to the rapid expansion of postsecondary education.

The socio-political climate of the post-World War II (WWII) United States also played a key role in the origin story of sport psychology in physical education. Toward the end of the 1940s, as the Cold War between the United States and the Soviet Union (USSR) began to surface, the United States government began to spend immense amounts of money on scientific research. Although the recipients of the majority of the influx of money went to funding projects with immediate application for the military, the flood of money also made its way into a variety of other disciplines (e.g., sociology, anthropology, linguistics, psychology). Physical education, which had not been expected to be primarily engaged with research in the first half of the twentieth century, now needed to adapt. The field of physical education chose to focus their energy on the Olympic Games.

In 1948, Russia had won no medals at the Olympics. In eight short years, the newly founded USSR had passed the perennial powerhouse United States to finish first in



the medal count, and four years later, in 1960, the Soviets had extended their lead over the Americans. The field of physical education saw this as the perfect place to demonstrate its worth to not only academia, but also the American public. It was during this time that coaches and physical educators in the United States began to learn about the mental preparation Soviet sport psychology professionals used to train Soviet athletes (Kornspan, 2012).

One of the major contributions to the newfound American knowledge of Soviet sport psychology was Avksenty Cezarevich (A. C.) Puni's (1963) article "Psychological Preparation of Athletes for a Competition" (as translated in Ryba, Stambulova, & Wrisberg, 2005). A. C. Puni was born in Vyatka, Russia in 1898 (Ryba et al., 2005). Puni received both undergraduate and graduate degrees from the Lesgaft Institute, and during his time there he was involved in studies that examined how psychological issues pertained to performance in sport. After WWII, where he worked as a physiotherapist in several hospitals in Leningrad, Puni returned to Lesgaft Institute to resume his work in sport psychology. In 1946, he formalized the discipline when he launched the sport psychology department at Lesgaft. Puni was the first chair of the department, and he served in that role for 30 years.

During his time as the chair of the sport psychology department at Lesgaft, Puni received his second doctoral degree in 1952 when he defended his thesis "Sport Psychology" (Ryba et al., 2005). According to Ryba et al., (2005), the successful defense was the marking of the official recognition of sport psychology as a separate discipline in the USSR. It was in that same year that the Soviet National Team earned 71 medals and finished only five medals short of the first place Americans (Olympian Database, n. d.).

The sport sciences, including sport psychology, were accredited with much of the success of the USSR athletes at the Games, which led to an increase in both research and applied education in the area (Ryba et al., 2005).

Puni would write “Psychological Preparation of Athletes for a Competition” in 1963, and in the article, he highlighted several themes representing important characteristics of sport psychology in the USSR (e.g., the importance of competition in self-improvement, psychological preparation for a competition is the development of psychological readiness to perform under the conditions of competition, goal setting and motivation are important components of psychological preparation) (as translated in Ryba, Stambulova, & Wrisberg, 2005). The Soviets would reach their pinnacle at the 1976 games when they won 125 medals compared to only 94 for the Americans. (Stambulova, Wrisberg, & Ryba, 2006). Puni would also go on to publish a groundbreaking model of “Psychological Preparation for a Competition (PPC)” (see Stambulova et al., 2006, p. 174) in 1969, which was based on a theoretical analysis of existing literature and results from Puni’s empirical studies (Stambulova et al., 2006). The model’s complexity and elegance would not be rivaled in the United States until the late 1980s.

The success of Soviet sport psychology, as well as the push for more research in the discipline of physical education, allowed for a path to study the psychological aspects of athletic performance in the 1960s (Green & Benjamin, 2009). Physical educators soon began publishing work on the connections between performance and the mind, and they began calling their work *sport psychology* due to the examination of the mind’s role and effects on athletic performance (Aoyagi & Shapiro, 2011).

Concurrently, psychologists began working systematically with athletes to resolve mental health issues, and also began to refer to themselves as sport psychologists (Aoyagi & Shapiro, 2011). The most notable psychologists to work with athletes during this time period were Bruce Ogilvie and Thomas Tutko (Stambulova et al., 2006). Ogilvie, known as the *father of North American sport psychology* (Weinberg & Gould, 2007), and Tutko primarily utilized a psychotherapeutic approach when working with athletes. They identified problems athletes were having (e.g., anxiety, depression) and assisted the coach in treating those problems (Stambulova et al., 2006). They accomplished this through utilizing paper and pencil tests then interpreting the results. Ogilvie and Tutko (1966), however, may be most well known for their book *Problem Athletes and How to Handle Them*. They received heavy criticism from the academic sport psychology community for acting as agents of the coach rather than the athletes, and for the money they sought for their assessments and treatment (Landers, 1995). Ogilvie and Tutko were also criticized for the lack of validity and reliability in the results of their assessments. Nevertheless, Ogilvie and Tutko left an indelible mark on the field of sport psychology, and the American Psychological Association's (APA) Division 47—the Society for Sport, Exercise, and Performance Psychology—annually recognizes outstanding service delivery with the Bruce Ogilvie Award for Professional Practice (APA Division 47, n. d.).

The field of sport psychology has continued to grow in the United States since its modern inception in the 1960s including the formation of organizations dedicated to sport psychology, peer reviewed journals, and graduate programs. The North American Society for the Psychology of Sport and Physical Activity (NASPSPA), which was formed in

1967, was the first organization in the United States dedicated to sport psychology (Singer, 1989). The formation of NASPSPA was a direct result of the creation of the International Society of Sport Psychology (ISSP) two years prior in Rome, Italy. Since its inception, NASPSPA has included several special interest groups which represent its roots in physical education and psychology including sport psychology, motor learning and control, and motor development. The organization created the first journal in the field in 1979 called the *Journal of Sport Psychology* (now *Journal of Sport and Exercise Psychology*) (Weinberg & Gould, 2015). The Association for the Advancement for Applied Sport Psychology (AAASP), which is now known as the Association for Applied Sport Psychology (AASP), was formed in 1985 to specialize exclusively in applied sport psychology. The next year, Human Kinetics published the first applied sport psychology scholarly journal, *The Sport Psychologist*. APA's Society for Sport, Exercise, & Performance Psychology (Division 47) was established in 1987. AASP published the *Journal of Applied Sport Psychology* in 1989, and it was the first organization to recognize applied sport psychology competence when it established the Certified Consultant designation in 1991.

The field of sport psychology continues to hold an interdisciplinary nature. In a recent job task analysis (JTA) of the field, Rosen and Lipkins (2016) found that 20.4% of certified practitioners had been primarily trained in sport science (i.e., physical education, kinesiology), 27.2% of practitioners were primarily trained in psychology, and 49.5% were trained in both sport science and psychology. Given this, a considerable amount of time has been spent on title usage, areas of competence, and boundaries of appropriate practice for applied sport psychology practitioners who have been trained in either sport

science or psychology programs (see Taylor, 1994). Considerable time has also been allocated to the process and advancement of AASP's certification of consultants. The aforementioned JTA was conducted to help develop a certification examination for professionals in sport psychology (Rosen & Lipkins, 2016), a process that had not been required since the Certified Consultant designation's inception in 1991. The JTA objective was to "identify the domains of practice, tasks performed, and knowledge required for effective performance on the job" (Rosen & Lipkins, 2016, p. 1). In other words, the JTA was designed to define sport psychology, a task that had not still not reached consensus since the field's beginning.

### **Defining Sport Psychology**

Portenga, Aoyagi, and Cohen (2017), who are all experienced practitioners in the field of sport psychology, provided an overview of how professions develop. They identified five four criteria that are key in establishing a profession: (1) established academic standards; (2) a standard for evaluating knowledge and skills (e.g., certification exam); (3) an organized community to advocate for the profession; and (4) a unique body of knowledge. They proposed that a clear definition of the of the profession is essential to the first two criteria in order to delineate the scope of what should be taught and evaluated.

There have been a variety of definitions of sport psychology over the years. In the broadest sense, Kontos and Feltz (2008) claim that sport psychology should be defined as an applied psychology, or as a research field in which the principles of psychology are applied to sport, because it is viewed as a sub-discipline of psychology. Aside from this broad definition, several other definitions that vary in precision and clarity have been

proposed: Alderman (1980) proposed sport psychology be defined as “the effect of sport itself on human behavior” (p. 4); Cox (1985) proposed “a field of study in which the principles of psychology are applied in a sports setting” (p. xiii); Cratty (1989) proposed “a subcategory of psychology focusing on athletes and athletics” (p. 1); Gill (1986) proposed “the branch of sport and exercise science that seeks to provide answers to questions about human behavior in sport” (p. 3); Rejeski & Brawley (1983) proposed “the educational, scientific, and professional contributions of psychology to the promotion, maintenance, and enhancement of sport-related behavior” (p. 239); Singer (1978) suggested “an applied psychology; the science of psychology applied to athletics and athletic situations” (p. 4); and Weinberg and Gould (1995) proposed “the scientific study of people and their behavior in sport...activities” (p. 8). Although none of these definitions are inherently wrong, they do lack precision and clarity, especially when referring to the profession of sport psychology. Wylleman, Harwood, Elbe, Reints, and de Caluwe (2009) claim that the lack of clear definition of the profession of sport psychology has led to identity uncertainty within the field, and the lack of clear definition has ultimately had a negative impact on the development of the field.

The European Federation of Sport Psychology (FEPSAC) recognized that a need existed to create an internationally accepted definition of sport psychology (European Federation of Sport Psychology, 1996). Thus, FEPSAC (1996) released a position statement that defined sport psychology:

Sport psychology is concerned with the psychological foundations, processes, and consequences of the psychological regulation of sport-related activities of one or several persons acting as the subject(s) of the activity. The focus may be on

behavior or on different psychological dimensions of human behavior (i.e., affective, cognitive, motivational, or sensorimotor dimensions)...The physical activity can take place in competitive, educational, recreational, preventative, and rehabilitation settings and includes health-related exercise. Subjects are all persons involved in the different sport and exercise settings (e.g., athletes, coaches, officials, teachers, physiotherapists, parents, spectators). (p. 221)

FEPSAC's (1996) definition improves upon previous definitions of sport psychology by including the scope of sport psychology, areas of focus, settings, and subjects. It also does an effective job of outlining areas of study and research and incorporating principles of sport science. However, the definition is not without its faults. It does not include what a practitioner of sport psychology may do, other than be "concerned with" cognitions, emotions, motivation, and sensorimotor functions. The definition also includes general physical activity and exercise components, which are fundamentally different than the sport psychology concepts that are meant to enhance athletic performance (Portenga et al., 2017). Thus, although FEPSAC (1996) improved upon the multitude of definitions already present within the field, there was still room to precisely clarify the discipline.

One of the most widely utilized definitions of the profession of sport psychology is the definition utilized by AASP (n.d.):

Applied sport and exercise psychology involves extending theory and research into the field to educate coaches, athletes, parents, exercisers, fitness professionals, and athletic trainers about the psychological aspects of their sport or activity. A primary goal of professionals in applied sport and exercise

psychology is to facilitate optimal involvement, performance, and enjoyment in sport and exercise. (para. 1)

This definition utilized by the largest professional organization in sport psychology is effective in identifying the profession, but it also lacks clarity and precision (Portenga et al., 2017). It is also impossible to determine what competencies would be necessary to practice sport psychology. Furthermore, the implication of this definition is that sport and exercise psychology are the same profession, which they are not.

Several individuals within the field have proposed that *performance psychology* be adopted as an overarching term, given the uniqueness of the field in promoting high performance, and to lessen the confusion surrounding the term *sport psychology* (Aoyagi, et al., 2012; Hays, 2012; Portenga et al., 2017). Portenga et al. (2017) define performance as a “discrete event where a person, group, or team is expected to execute specific [knowledge, skills, and abilities], which are compared, judged, evaluated, or held to some standard” (p. 52). This shift in terminology virtually separates the field of sport psychology from the previously connected exercise psychology and the psychology of physical activity, which could be considered fundamentally different to sport psychology. Portenga and colleagues (2017) maintain that sport psychology would exist as one domain within performance psychology, as well as other areas in which psychological principles are utilized to enhance performance (e.g., medicine, business, performing arts, military, police). Hays (2012) described performance psychology as facilitating learning on how to perform at a higher level and more consistently in activities where excellence counts. Portenga et al. (2017) build upon Hays’s definition by proposing that performance psychology be defined as:



The study and application of psychological principles of human performance to help people consistently perform in the upper range of their capabilities and more thoroughly enjoy the performance process. Performance psychology practitioners are uniquely trained and specialized to engage in a broad range of activities, including the identification, development, and execution of the mental and emotional knowledge, skills, and abilities required for excellence in performance domains; the understanding, assessment, and managing of the psychological, cognitive, emotional, behavioral, and psychophysiological inhibitors of consistent, excellent performance; and the improvement of performance environments to facilitate more efficient development, consistent execution, and positive experiences in performers. (p. 52).

Based on this definition of performance psychology, Portenga et al. (2017) proposed the following definition of the profession of sport psychology:

The application of psychological principles of human performance in helping athletes consistently perform in the upper range of their capabilities and more thoroughly enjoy the sport performance process. Sport psychology practitioners are uniquely trained and specialized to engage in a broad range of activities including the identification, development and execution of the mental and emotional knowledge, skills, and abilities required for excellence in athletic domains; the understanding, assessment, and managing of the psychological, cognitive, emotional, behavioral, and psychophysiological inhibitors of consistent, excellent performance; and the improvement of athletic contexts to

facilitate more efficient development, consistent execution, and positive experiences in athletes (p. 52).

Portenga et al. (2017) proposed this definition to identify the profession in a clear and precise manner. The authors wanted to clarify the profession from several other professions that had been previously associated with sport psychology including exercise and health psychology, clinical and counseling psychology, positive psychology, and consulting psychology. They also aimed to be in alignment with the Sport Psychology Service Delivery (SPSD) heuristic (see Poczwardowski & Sherman, 2011; Poczwardowski, Sherman, & Henschen, 1998; Poczwardowski, Sherman, & Ravizza, 2004). Portenga et al. (2017) proposed that their definition insisted that practitioners of sport psychology would have both a theoretical orientation for personality and human behavior as well as a theoretical orientation to the psychology of high performance to guide the scope, type, and organization of interventions. They also stated that practice focusing primarily on mental skills training without an overarching theoretical orientation to guide the psychology of performance would be considered unethical. However, no direction is provided on theory other than it is crucial that one's theoretical paradigm address both the understanding of personality and human behavior as well as the psychology of human performance. The lack of direction is particularly relevant in that there has not been a theoretical paradigm created that primarily focuses on human performance.

### **Theoretical Paradigms: Clarifying Terminology**

Although the lack of clarification of the definition of sport psychology appears to have been elucidated by Portenga et al. (2017), there are several other terms in the field

that remain unclear. One of the most prominent terms in the sport psychology literature that lacks clarity is *theory*. The term *theory* holds several meanings in both popular usage and in scientific contexts. Outside of science, the term theory often implies that a phenomenon is untested. Scientifically, *theory* is more often defined as a set of assertions used to describe the data in a given area (Marx & Goodson, 1976). In psychology, *theory* can refer to a variety of concepts beyond assertions that describe data, at various levels of confidence and certitude. When Andersen and Williams-Rice (1996) stated that sport psychology theory should draw from psychology, exercise science, and physical education, the term *theory* could be perceived in a variety of ways (Aoyagi & Poczwardowski, 2012). *Theory* could refer to the scientific underpinnings behind an intervention (e.g., self-determination theory), a pragmatic model of practice (e.g., psychological skills training), or a grand abstract system that explains behavior (e.g., cognitive-behavioral theory, psychodynamic theory, existential theory). In order to predict behavior and predict and control behavior change, it was this third option to which Andersen and Williams-Rice (1996) was referring. Given the lack of clarity around the term *theory* it is necessary for the term to be defined for clarity to be achieved in the current work.

Poczwardowski et al. (2004) attempted to clarify terminology around the term *theory* in their work on delineating the components of sport psychology service delivery. They created a hierarchical structure of professional philosophy for sport psychology that was organized from most (bottom) to least (top) abstract (see Poczwardowski, Sherman, & Henschen, 1998, p. 450). The structure included personal core beliefs, theoretical paradigm (e.g., psychodynamic theory, cognitive-behavioral theory, humanistic theory),

model of practice and consultant role (e.g., psychological skills training, counseling model), intervention goals (e.g., performance enhancement, personal growth), and intervention techniques/methods (e.g., visualization training, positive self-talk training). Poczwardowski et al. (2004) hoped their conceptualization would facilitate the preparation of future sport psychologists, as well as “direct research efforts on the relationship between professional philosophy and the content, process, and effectiveness of sport psychology services” (p. 459).

Although it was not the primary intent of Poczwardowski et al.’s (2004) article, it was structured in a way that provided a clarification on the multiple ways the term *theory* has been used in the literature by providing the hierarchical structure that was organized from most abstract to least abstract. Prochaska and Norcross (2010) explicitly addressed the multiplicity of terminology issue in the field of psychotherapy when they presented a classification system based upon the level of abstraction of certain theoretical psychotherapy terms. The system included high, medium, and low levels of abstraction. High abstraction terms included global theories of psychotherapy (e.g., psychodynamic, cognitive-behavioral, existential). Poczwardowski et al.’s (2004) *personal core beliefs and values* and *theoretical paradigms* would both fit into Prochaska and Norcross’s (2010) high level of abstraction due to their explanations for why particular characteristics and interventions are desirable, or not. Medium abstraction terms included change processes (e.g., consciousness-raising, catharsis, common factors), and would include Poczwardowski et al.’s (2010) *model of practice and consultant role*, which are pragmatically helpful without offering a global explanation of why. Low abstraction terms included clinical techniques (e.g., interpretation, psychoeducation, two-chair

technique) (Prochaska & Norcross, 2010). Poczwadowski et al.'s (2004) *intervention goals* and *intervention techniques/methods* would be classified as low in abstraction.

These are important distinctions to make as the concepts are often misunderstood because *theory* could refer to each level of abstraction. Delineating levels of abstraction allows practitioners, educators, and researchers to be clearer and more precise in terminology.

Although the field of sport psychology may lack a consensus on the proper usage of the term *theory*, the term *theoretical paradigm*—utilizing Poczwadowski et al.'s (2004) language—will henceforth be used in this manuscript as an overarching term for theory, theoretical orientation, frameworks, and systems. However, given the variety of terms utilized in the research, these terms will also be used interchangeably in the remainder of the review of literature.

### **Sport Psychology Service Delivery and the Hierarchical Structure of Professional Philosophy**

Practicing sport psychology involves applying the psychological principles of human performance to assist athletes in performing in the upper range of their capabilities (Portenga et al., 2017). Effective practice requires a framework for how to apply these principles. Upon a review of the sport psychology literature, Poczwadowski et al. (1998) determined that there was no general framework for sport psychology service delivery. The literature in the field covered intervention techniques (e.g., relaxation, concentration), but little was said about how one should design, implement, and evaluate sport psychology services. Thus, pulling from their applied professional experience and a review of the literature in sport and counseling psychology, they proposed 11 factors to consider when providing sport psychology services: 1)

professional boundaries; 2) professional philosophy; 3) making contact; 4) assessment; 5) conceptualizing athletes' concerns and potential interventions; 6) range, types, and organization of service; 7) program implementation; 8) managing the self as an intervention instrument; 9) program and consultation evaluation; 10) conclusions and implications; and 11) leaving the setting. Poczwardowski and colleagues (1998) suggested that a systematic and reflective approach utilizing these 11 elements maximizes sport psychology practitioners' work with athletes, teams, and athletic organizations.

Poczwardowski et al.'s (1998) formative article defined each factor and discussed how it fits into the framework for service delivery. They proposed that considering each factor is a prerequisite to maximizing a sport psychology practitioner's effective practice, and that they are developmental in nature and will require thoughtfulness, time, and commitment to master. Although Poczwardowski et al. (1998) posited that these factors are necessary for effective sport psychology service delivery, they also recognized that the factors they proposed needed further research to determine the fit and efficacy of the factors in sport psychology service delivery.

The most pertinent factor to theoretical paradigms in Poczwardowski et al. (1998) was *professional philosophy*. *Professional philosophy* was defined as "the consultant's beliefs about the nature of reality, the human being's, place in the universe, and more specifically, the nature of human behavior change and a human being's basic nature" (Poczwardowski et al., 1998, p. 193). There are several aspects considered in the *professional philosophy* proposed by Poczwardowski et al. (1998), and the literature provided a variety of ways that *professional philosophy* has been described in the past.

These descriptions included one's beliefs and values regarding human nature, psychological approach to counseling (i.e., theoretical paradigm), beliefs or interest in consulting, primary intervention goals, assessment techniques, model of practice, and determination of the client (e.g., athlete, coach, organization). However, no framework was provided for how to organize and utilize each of these areas.

Poczwardowski et al. (2004) attempted to rectify this limitation by providing a hierarchical structure on the philosophy of sport psychology service. They accomplished this by conducting an extensive review of the sport psychology literature since the 1998 article had been published and organizing their findings in a model (see Poczwardowski, Sherman, & Henschen, 1998, p. 450) that ranges from most abstract to least abstract. In their review, they found that the previously described factor of *professional philosophy* was the foundation of effective sport psychology practice (see Corlett, 1996; Hill, 2001; Ravizza, 2002), and they streamlined the factors for practice. Specifically, Poczwardowski et al. (2004) proposed that a professional philosophy provides guidance for a sport psychology consultant's practice (i.e., gaining entry, conceptualization of issue, intervention, implementation, evaluation), and is re-defined as:

The consultant's beliefs and values concerning the nature of reality (sport reality in particular), the place of sport in human life, the basic nature of human being, the nature of human behavior change, and also the consultant's beliefs and values concerning his or her potential role in, and the theoretical and practical means of, influencing their clients toward mutually set intervention goals. (p. 449)

Poczwardowski et al.'s (2004) model includes five hierarchical components. The model moves hierarchically from the most stable and internal components to the most dynamic

and external components: a) personal core beliefs and values, b) theoretical paradigm concerning behavior change, c) model of practice and consultant role, d) intervention goals, and intervention techniques and methods. Poczwadowski and colleagues (2004) argue that each component is not only hierarchical but also interdependently linked, with the most abstract levels exerting the most impact on one's professional philosophy.

At the base, a sport psychology practitioner's *personal core beliefs and values* refer to their worldview and views on human behavior (e.g., free will versus determinism, rational versus irrational human nature, fundamental goodness versus badness of human nature), particularly the nature sport behavior, as well as values that are of personal importance (e.g., respect for human dignity, respect for integrity, respect for privacy, respect for autonomy) (Poczwadowski et al., 2004). These beliefs and values provide the foundation of one's professional philosophy. Poczwadowski et al. (2004) argue that a practitioner's personal core beliefs and values should inform, and be congruent with, their theoretical paradigm, model of practice and consultant role, intervention goals, and intervention techniques and methods. The authors proposed that one's *personal core beliefs and values* may not be static, and they should be addressed via self-reflective practice beginning at the commencement of formal education in sport psychology and continuing throughout one's career. Poczwadowski et al., (2004) posit that core beliefs and values influence all components of a practitioner's professional philosophy. Thus, a sport psychology practitioner's theoretical paradigm should emerge from and be aligned with these beliefs and values.

One's *theoretical paradigm*, which is a more deliberate and concrete way of describing and explaining human behavior, provides a framework of predicting and



changing behavior in sport (Poczwardowski et al., 2004). Poczwardowski and colleagues (2004) propose that sport psychology practitioners should ascribe to one or more of the theoretical paradigms within the larger psychological field (e.g., psychodynamic). In the *theoretical paradigm* section, Poczwardowski et al. (2004) covered four of the most well-known theoretical paradigms in the field of psychotherapy: 1) psychoanalytic, 2) behaviorism, 3) cognitive-behaviorism, and 4) humanism. Each paradigm was briefly overviewed by providing a brief summary of the basic tenants of each paradigm, but they did not provide a method for how to translate the paradigms to sport psychology. They did, however, provide resources that accomplish this task (e.g., Conroy & Benjamin, 2001; Hill, 2001; Orlick, 1989). Examples of how three of the most utilized psychotherapeutic theoretical paradigms (i.e., CBT, MAC, eclectic) are applied to sport is provided in the Psychological Theories Adapted to Sport section of this manuscript. Poczwardowski et al. (2004) did overview eclectic in a more thorough way, and they indicated that an eclectic approach may be the most appropriate approach for practitioners of sport psychology due to its flexibility in effectively addressing a variety of the psychological and physiological aspects of athletic performance.

Moving up the hierarchy, Poczwardowski et al. (2004) posit that one's *model of practice* (e.g., psychological skills training model, counseling model, medical model, interdisciplinary sport science model, supervisory model) should be directly connected to the more internal levels of their professional philosophy. Each model has been extensively covered in the literature, and thus will not be covered in this review (see Aoyagi & Poczwardowski, 2012 for an extensive description models of delivery). Previously, much of the sport psychology literature on professional philosophy had solely

focused on models of practice, particularly the psychological skills training model and the consultant role (Aoyagi & Poczwardowski, 2012; Poczwardowski et al., 2004).

However, the authors contend that one's model of practice and the role of the consultant should be but one of many important aspects of a professional philosophy.

The model the practitioner selects should ultimately lead to the *intervention goals* (e.g., performance enhancement, increasing well-being, personal growth), of which the authors promote getting buy-in from each level of a sport organization or athlete (e.g., owner, general manager, coach, parent, athlete). Although there has been much research on specific interventions within the field of sport psychology, the Poczwardowski et al. (2004) contend that there is not sufficient research on the use of *specific techniques or methods* for service delivery. Thus, they did not provide specific information on the types of techniques or methods, but rather advised the field to conduct more research on the efficacy of matching interventions with specific problems (e.g., arousal management, concentration, emotion regulation).

The seminal work by Poczwardowski et al. (2004) provided a framework that that has been widely utilized within the field of sport psychology since its publication (Aoyagi, 2013; Aoyagi & Poczwardowski, 2011; Aoyagi & Poczwardowski, 2012; Keegan, 2014). However, pulling a theoretical paradigm from the field of psychology does not sufficiently or holistically frame the psychology of athletic performance. Assimilating a theory of personality to the sporting context fails to include aspects of kinesiology and the ways to achieve performance excellence. Poczwardowski et al. (2004) also fail to sufficiently provide the method in which they built the model (i.e.,

meta-analysis, theoretical integration). Thus, the model's empirical value was unclear at that time.

Upon review of the common factors of sport psychology in the literature and consulting with practitioners in the field of sport psychology, Poczwardowski and Sherman (2011) added sport psychology common factors components (i.e., consultant-client relationship, consultant variables, client variables, immersion, goodness of fit) to their existing model of service delivery (see Poczwardowski et al., 1998). Poczwardowski and Sherman (2011) sought to explore the usefulness of the original heuristic (see Poczwardowski et al., 1998) and the newly added elements. To accomplish this, Poczwardowski and Sherman (2011) utilized qualitative insights from ten accomplished (i.e., average of 21 years in the field of sport psychology) consultants in the field of sport psychology who held degrees from either sport science (kinesiology/physical education,  $n = 5$ ), clinical psychology ( $n = 3$ ), counseling psychology ( $n = 1$ ), or psychiatry ( $n = 1$ ). They utilized the interview guide approach (Patton, 1980) to structure the interviews around the elements of the heuristic, and the participants were given two-sided cards containing descriptions of each SPSD element. Open-ended and probing questions were utilized to encourage interpretations of consultants' professional experiences, insights, and examples in relation to the specified element of the SPSD. Poczwardowski and Sherman (2011) used interpretive, inductive content analysis for both the original SPSD and the added components, which resulted in 2409 meaning units, 127 lower-order themes, and 32 higher-order themes.

The investigators found support for both the original heuristic as well as the newly added features. Poczwardowski and Sherman (2011) also found that the

Poczwadowski et al. (2004) model that posited that one's professional philosophy should shape all aspects of applied work was supported by the data:

The consultant's exemplary meanings included: "philosophy and values underlie everything," "philosophy is linked to ethics," and "philosophy is multifaceted. Burt Giges reflected, "Absolutely the most important aspect. Compared to my philosophy and how I understand this person in their life, it pales by comparison and almost doesn't matter what technique I use." (p. 516)

Although it was not specifically mentioned in the text of the article, theoretical paradigm identification was mentioned by seven of the ten highly experienced consultants.

Theoretical paradigm identification was the most mentioned lower-order theme in the higher-order theme of *Philosophy is Fundamental and Complex*, which was at the top of the hierarchically organized list in the *Professional Philosophy* section.

Poczwadowski and Sherman's (2011) findings yielded a revised model for sport psychology service delivery (see Poczwadowski & Sherman, 2011, p. 528). The SPSD-R heuristic consisted of three factors: a) foundation of service, b) process and service, and c) working alliance. The foundation of service factor contained professional philosophy, professional ethics, and education, training, and professional experience. The process and service factor included three phases: a) entry and conceptualization, b) implementation, and c) conclusion and termination. Entry and conceptualization comprised conceptualizing (concerns and interventions), assessment, and making contact. Implementation contained managing the self as an intervention instrument, program implementation, and range, types, and organization of service. Conclusion and termination included leaving the setting, conclusions and implications, and program and

consultant evaluation. Finally, the working alliance factor contained client variables, consultant variables, and the consultant-client relationship. Poczwardowski and Sherman (2011) found that person-focused values, immersion, and goodness of fit were underlying and interwoven into all of the elements of the revised heuristic, and they utilized the three underlying factors at the base of the model to illustrate a “dynamic, yet solid and impact-focused structure to the entire consulting process” (p. 528).

Although Poczwardowski and Sherman’s (2011) SPSD-R heuristic was supported through qualitative interviews with experts in the field of sport psychology, it is not without its limitations. The authors state that certain concepts (e.g., transference and countertransference, mindfulness, multicultural issues) that were not included in the revised heuristic perhaps should have been. A second limitation of the study is that the only individuals interviewed in the study had been practitioners for an average of 21 years, and it is possible that early-career professionals may have offered different perspectives on what is important for sport psychology service delivery. For example, early career sport psychologists may have a much different relationship with theoretical paradigms than mid- and late-career professionals due to recency of training or differentiation of didactics on theoretical paradigms. Despite these limitations, Poczwardowski et al.’s, (1998, 2004, 2011) research on the service delivery of sport psychology practitioners, specifically their work on professional philosophy, provides a conceptual structure in which theoretical paradigms can be adequately placed in a broader framework.

### **Philosophy and Theoretical Paradigm Development**

The previous sections have reviewed the literature on the interdisciplinary history of sport psychology, defined sport psychology, clarified the term *theory*, and have provided a framework in which one's philosophy and theoretical paradigms may be positioned. These sections have laid the groundwork to better understand the literature on the development and use of theoretical paradigms in sport psychology. Poczwadowski et al.'s (2004) work provided a model for what should be included in a sport psychology practitioner's professional philosophy, including theoretical paradigms, but little was provided in how one develops a philosophy and theoretical paradigm. There is limited literature on the development of theoretical paradigms in practitioners of sport psychology. The majority of understanding of practitioner development has come from the counseling and psychotherapy literature, and models from that literature have begun to be explored within the field of sport psychology (see Tod, 2007). The literature on practitioner development, a case of how theories of sport psychology are taught, a didactic experience of theoretical paradigm development, and an individual's experience of developing a philosophy and theoretical paradigm are reviewed below.

### **Similarities Between Counselor and Sport Psychology Practitioner Development**

Dr. David Tod (2007), a faculty member in the school of sport and exercise science at Liverpool John Moores University in England, reviewed the counseling literature, and highlighted the similarities in Rønnestad and Skovholt's (2003) theory of therapist development and the sport psychology literature. Rønnestad and Skovholt's (2003) theory includes six phases that spans development across a counselor's career: 1) lay helpers, 2) beginning students, 3) advanced students, 4) novice professionals, 5)

experienced professionals, and 6) senior professionals. Although this model of development is an adequate guide to practitioner development, it is worth noting that Rønnestad and Skovholt (2003) argue for a stage theory of development, which consists of distinct phases through which all persons proceed. In reality, development is gradual, wherein individuals mature at different rates, may regress to a previous stage, and may embody themes from more than one stage at a given time (Tod, 2007). Therefore, the following stages should be considered with these caveats in mind.

Lay helpers have no training in counseling, and they informally help others by providing strong emotional support or advice to others (e.g., friends, colleagues, teammates) (Rønnestad & Skovholt, 2003). The emotional support and advice are often based on personal experience, and they are most often guided by their personal beliefs and values rather than science. Beginning students are often primarily influenced by supervisors and teachers, due to the fledgling ability to evaluate their own knowledge about counseling or the research. However, novice practitioners are also beginning to be influenced by clients, theory, research, and peers. Rønnestad and Skovholt (2003) state that beginning students often prefer service-delivery methods that they hope can be easily mastered and generalizable to all situations, which helps with building confidence and reducing anxiety. Advanced students typically rigidly hold to the literature and what they are taught by supervisors, which is similar to beginning students. However, they are more likely to begin to see their own values as shaping the therapeutic process and begin to see context in complex situations. Novice professionals tend to shed some ideas and behaviors learned during training, and they adopt new approaches to service delivery. Some novice professionals may experience disenfranchisement with training that did not

address the complexity of their new environment, and they can have difficulty coping with perceived gaps in knowledge. This often leads novice professionals to examine their skills, values, and interests, and they often begin to look at their current ecological systems (e.g., roles, environments) more closely. Experienced professionals often attempt to find a congruence between their personality and therapeutic role, and many adapt interventions and techniques to fit with their style of counseling. They often learn primarily from interpersonal interactions rather than theory or research, which some consider secondary sources of knowledge at that point in their careers. The idea that experienced professionals pull from internal experiences connects to Stoltenberg's (2005) finding that established practitioners rely on theories that have been internalized from their experience in the field. There are many similarities experienced professionals and senior professionals. The most prominent difference between experienced professionals and senior professional lies in career reflection. Most senior professionals with view their careers through the lens of positive emotional reflection. However, senior professionals may experience negative emotions regarding their careers (e.g., boredom of repetition, dissatisfaction of the current state of the field), and they may experience loss associated with the ending of their professional careers or health related issues.

In his review of the sport psychology literature, Tod (2007) found several similarities with Rønnestad and Skovholt's (2003) theory including self-reflection as a key contributor to professional development, the anxieties of neophyte practitioners, and the recognition of the importance of the therapeutic relationship by experienced practitioners. Tod (2007) highlighted Van Raalte and Andersen's (2000) claim that trainees usually have anxiety about providing service, have difficulty when working with



ambiguity, think concretely, and depend on supervisors to provide the correct ways to providing service. Tod (2007) also highlighted Morris and Thomas's (2004) assertion that novice sport psychology practitioners often expect to learn generalizable rules and procedures without regard for service delivery context. This not only aligns with Rønnestad and Skovholt's (2003) theory, it also supports Loganbill, Hardy, and Delworth's (1982) finding that trainee therapists were dependent on their education and supervision in the provision of therapy.

Tod, Andersen, and Marchant (2009) further explored the development of sport psychology practitioners when they longitudinally studied eight Australian trainee applied sport psychologists' development using three interviews over the first two years of their graduate training. Tod et al. (2009) developed their interview guide from Skovholt and Rønnestad's (1992) investigation on counselor development, which included questions about previous and current client interactions, approaches to service delivery, theoretical orientations, and experiences that influenced professional thinking and behavior. Tod et al. (2009) did not state their ontological and epistemological underpinnings, but it would appear that the article utilized a constructivist grounded-theory framework. The authors distilled four themes from the transcripts: 1) motivation to become an applied sport psychologist, 2) changes in participants' approaches to service delivery, 3) trainees experienced anxiety regarding their competencies, and 4) common sources influencing development. Although each theme described provided rich information about the development of neophyte sport psychology practitioners, the themes regarding changes in service delivery and influential sources to development were the only themes that touched on theoretical paradigms.

In support of Rønnestad and Skovholt's (2003) theory, Tod et al. (2009) found that the neophyte practitioners initially approached working with athletes from an expert problem-solver approach. Later in development, the participants reported that they became more flexible by encouraging athletes to talk more, using less directive approaches, and becoming more collaborative with athletes. One participant stated that she would listen for what fit into the CBT box when first working with clients. As she developed, she began to listen to the entirety of the client's story then overlaid theory to align with the gestalt of the story. A sense of broadening theoretical lenses also appeared over time, as one participant explained how she would use CBT if the athlete wanted performance enhancement strategies, but she would move toward psychodynamic work if clients wanted more in-depth analysis of themselves. The theme of adjusting theoretical orientation was common among the trainees, as multiple individuals reported moving beyond CBT to using either a combination of CBT and psychodynamic work or a primarily psychodynamic framework. An important influencer of participant development was theory and research. Participants indicated that they found books and articles containing service delivery case studies beneficial by being able to not only understand a framework, but also how the framework could be applied to specific situations and issues in consulting with athletes.

Tod et al.'s (2009) study, which paralleled Rønnestad and Skovholt's (2003) theory regarding advanced students, provided a glimpse into the development of sport psychology practitioners theoretical paradigms. The longitudinal nature of the study allowed for a more accurate exploration of development over time, but the transferability of the data to practitioners outside of this program and outside of the Australian system of

training sport psychologists was lacking due to the methods employed by Tod et al. (2009). The authors also note that participation in the study may have impacted the trainees' development in ways that other trainees may not have experiences. Thus, quantitative research should be completed, and practitioners in training from other countries should be studied to examine the generalizability of the data.

Tod and Bond (2010) sought to expand the research on Rønnestad and Skovholt's (2003) theory as it may be applied to sport psychology practitioner development when they conducted a longitudinal constructivist-based case-study with a novice professional in Britain. The participant was 23 years old at the beginning of the study, and she was in the final month of her master's program in sport and exercise psychology. Tod and Bond (2010) provided her with the pseudonym *Anna* to protect her, and her clients' identity. Anna completed three interviews, based on Skovholt and Rønnestad's (1992) study, over a two-year span while she worked in her sport psychology private practice. Four themes emerged in data analysis: 1) changes in working with clients reflecting the individuation process, 2) experiencing a broadening of theoretical orientation, 3) decreased anxiety and increased confidence, and 4) experiential learning influencing service delivery changes. Tod and Bond's (2010) research added to the brief literature dedicated to practitioner development in sport psychology by providing insights into the development of an early career professional. It also specifically addressed, in some depth, the development of Anna's theoretical paradigm.

Anna's theoretical paradigm development was primarily highlighted in the *broadening of theoretical orientation* theme (Tod & Bond, 2010). In her master's training, Anna primarily used a mental skills training (MST; also known as psychological

skills training, PST) approach, which is grounded in cognitive-behavioral theory (CBT), but she reported that her approach had shifted to a primarily humanistic approach in her work post-graduation. Anna found that her values of relationship building and helping clients solve their problems was more aligned with person-centered therapy's hypothesis that client growth is built upon relationships that are genuine, have nonjudgmental caring, and include accurate empathy (Raskin & Rogers, 2000). This shift in theoretical orientation to match beliefs and values is not uncommon (see Collins, Evans-Jones, & O'Connor, 2013; Lindsay, Breckon, Thomas, & Maynard, 2007), and it follows Poczwardowski et al.'s (2004) model which posits that one's personal core beliefs and values should influence their theoretical paradigm to allow for practitioner congruence and philosophical parsimony. In Anna's development as a novice professional, Tod and Bond (2010) found that Anna developed a more sophisticated approach to service delivery, and that she realized one approach was not always sufficient. Anna's newfound integrated approach, which would be classified as assimilative integration (Prochaska & Norcross, 2010), was considered more effective than either MST or humanism on its own (Tod & Bond, 2010).

Anna's use of theoretical paradigms was also briefly explored in the *changes in working with clients reflecting the individuation process and experiential learning influencing service delivery changes* themes. Anna reported that her approach was primarily rooted in humanistic psychology, but she still utilized some aspects of CBT through MST. Congruent with Rønnestad and Skovholt's (2003) theory, Tod and Bond (2010) found that Anna's MST approach had primarily been influenced by her teachers

and reading, but her influencers had shifted to trial and error, self-reflection, and client interaction in her novice professional work.

Similar to Tod et al.'s (2009) longitudinal study on advanced students, Tod and Bond's (2010) work provided support for the parallel between practitioner development in psychotherapy and sport psychology. The two studies provide preliminary evidence that Rønnestad and Skovholt's (2003) theory may be applied to the developmental trajectories of sport psychology practitioners, but the same limitations exist in both. Generalization of the findings of the study is limited due to the sample, and further research needs to be completed to determine if there is alignment for lay helpers, beginning students, experienced professionals, and senior professionals.

### **Teaching Theories of Performance Excellence**

Given the lack of theoretical paradigms specific to the field of sport psychology, Aoyagi and Poczwadowski (2011b) sought to record the implicit theories of prominent practitioners in the field of sport and performance psychology. This collection provided Aoyagi (2013) the opportunity to teach sport and performance psychology trainees about the theories used by practitioners within the field. The central goal of the course was to get students to appreciate and relate to the quote from Kurt Lewin (1951): "There is nothing so practical as a good theory" (p. 169). More specifically, Aoyagi (2013) sought to impart the abstract knowledge of a theory to students in a useful manner.

Aoyagi (2013) organized the course based on three uses of theory in sport psychology: a) understanding performance, b) organizing information, and c) choosing ways to intervene. This allowed him to showcase how the information being taught could be utilized on a practical level. Aoyagi (2013) assigned weekly reaction and

conceptualization papers based on the theories being taught that week. The students were tasked with critically examining each theory based on how it aligned with their beliefs and values about performance. They then were then required to utilize the author's theory to conceptualize a generic case study. Each class session was built to increase the depth and breadth of the students' reflections and conceptualizations of the theory with the following specific goals in mind: a) introduce students to a particular theory, b) deepen the understanding of the theory through class discussion, c) test whether the theory aligned with the students' emerging theory of performance excellence, and d) demonstrate theory in action through a role play.

The final assignment of the course was a cross-course project in which students were to integrate and synthesize learning from both the current class and the *Theoretical Aspects of Sport & Performance Psychology* course in which they were concurrently enrolled (Aoyagi, 2013). The project required that students create their own theory of performance excellence and support it with 30 concepts from the two courses. Aoyagi (2013) collected data through anonymous electronic course evaluations and found that 66.7% strongly agreed (20.8% agree, 12.5% strongly disagree) that the course helped them develop a personal philosophy and theory of performance excellence.

Although these data indicate that students valued the course, it provides little information on actual student growth with regards to theoretical development or how individual students developed their theory. Therefore, a structural analysis of theory development would allow for a clearer understanding of the development. A second constraint is that Aoyagi (2013) did not provide information on the actual content of the course (i.e., theories being taught). To illuminate this information, as well as examining

an expert's approach to theory in sport psychology, a review of one of the theories (Dr. Sean McCann) taught in the course is presented in the Expert Approaches to Sport Psychology section of this manuscript.

### **Individual Development of Philosophy and Theoretical Paradigm**

Keegan (2014), a sport psychology research and practitioner in England, wrote a chapter in *Becoming a Sport, Exercise, and Performance Psychology Professional* that argued for how one should develop a philosophy and theoretical paradigm. He proposed that a sport psychology practitioner should deliberately develop a consulting philosophy and theoretical framework to effectively practice. He stated that a sport psychologist is trying to “change something ineffable (e.g., someone’s way of thinking/feeling/experiencing), to achieve any number of aims (e.g., performance enhancement, recovery from injury, personal well-being, etc.), with no clear guide on how to best achieve this (e.g., approach/philosophy)” (p. 61). He contended that there may never be a way to address the previous issues, and that three assumptions must be made by practicing sport psychologists: a) the purpose of consulting, b) ontology and epistemology, and c) the consulting philosophy utilized to achieve the aims of consulting. Keegan (2014) proposed that if these assumptions were not deliberately considered, it would lead to “disagreements, misunderstandings, stress, uncertainty, unhappy clients, and damaged reputations” (p. 67). He noted that these assumptions must be addressed when a practitioner forms a philosophy and theoretical framework for sport psychology. He also asserted that these assumptions must be in philosophical alignment or risk the possibility of a “messy, disjointed, and confusing experience: for the practitioner, the client, and any onlookers” (Keegan, 2014, p. 67).

The first assumption that Keegan (2014) addressed is the aim of the work. The two areas he delineated are working solely with athletes on increasing performance or working with athletes on a multitude of issues that pertain to performance (e.g., well-being, clinical issues, injury rehabilitation, life skills and character development). Keegan (2014) suggested that to enhance these areas, novice and in-training psychologists should become familiar with both performance enhancement techniques and associated areas of practice. The field of sport psychology includes both licensed practitioners with backgrounds in psychology or a related field, but also includes non-licensed individuals who do not have the competency to work with a more clinical population. Although education with an emphasis on psychology may be the “gold standard” for sport psychologists in training, Keegan (2014) neglected to mention how individuals who primarily had a background in kinesiology could address the aforementioned clinical issues (e.g., referral to clinical psychologist).

The second assumption Keegan (2014) addressed is that of ontology and epistemology by outlining four major positions within the philosophy of science as they pertain to sport psychology: a) positivism, b) constructivism, c) pragmatism, and d) critical realism. He contended that there is no one correct or ideal option to choose but knowing one’s assumptions and being able to describe them in philosophical terms would substantially increase the consistency of one’s practice. For example, an individual who believes that multiple truths exist would likely align with constructivism. If one is aligned with a constructivist position, Keegan (2014) suggested developing a theory of performance that is unique to the specific athlete one is working with, as opposed to a theory based on the assumption of generalizability (i.e., positivism). This suggestion by



Keegan (2014) is in alignment with Poczwadowski et al.'s (2004) contention that one's beliefs and values should direct their theoretical paradigm, their theoretical paradigm should direct their model of practice, their model of practice should direct their intervention goals, and their intervention goals should ultimately direct their intervention techniques and methods.

The final assumption covered by Keegan (2014) is that of consulting philosophy. Keegan's (2014) use of the term consulting philosophy is synonymous with the use of theoretical paradigm mentioned in Poczwadowski et al. (2004). Similar to Poczwadowski et al. (2004), Keegan (2014) insisted that one's theoretical paradigm should be aligned with their philosophical assumptions, and suggested several paradigms (e.g., cognitive behavioral theory, gestalt theory, person-centered theory) that are pulled from the general psychology discipline.

Although Keegan (2014) provided another layer to consider (i.e., goals of the work), little was added to the framework in which Poczwadowski and colleagues (2004) proposed for developing a professional philosophy. In his attempt to create a framework for developing a theoretical paradigm, Keegan (2014) again argued that a practitioner in the field of sport psychology must be deliberate about the formation of a philosophy to ensure consistency, but he wrote little about the actual development of a philosophy or theoretical paradigm.

Keegan (2016) sought to provide further explanation to how he developed his framework and philosophy by presenting two case studies that demonstrated the importance of understanding and developing one's theoretical framework and philosophy. The cases were taken from Keegan's work with female field hockey players

in his first year in supervised practice, and both players presented with similar issues (e.g., fragile confidence, negative self-talk, catastrophizing) and experience (e.g., recently transitioned into academy, defensive players). Keegan (2016) used the pseudonyms *Belle* and *Lynn* for the athletes.

Keegan (2016) began by describing his approach to working with athletes prior to working with the aforementioned cases. Keegan (2016) explained that he tended to use an MST approach. He then described the MST approach using a modified version of the three assumptions he advised practitioners of sport psychology answer when developing a theoretical framework and philosophy (Keegan, 2014): “1) the aims of [sport, exercise, and performance psychology] practice..., 2) the nature of the phenomena we are working with..., and 3) the consulting style one chooses” (Keegan, 2016, p. 58). Keegan (2016) stated that the aim of MST focused on performance, the phenomena was positivist in nature, and the consulting style was practitioner-led and expert-driven. However, the MST approach most closely aligns with Poczwardowski et al.’s (2004) model of practice, and Keegan (2016) would most likely be guided by the cognitive-behavioral theoretical paradigm.

Keegan’s (2016) work with the two athletes was outlined in a three-step process: 1) needs assessment, 2) intervention, and 3) reflection. During the needs assessment phase, Keegan (2016) noted that the athletes completed intake questionnaires to indicate reasons for seeking support, report injuries or medications and identify potential issues that required a referral to a clinical psychologist. After determining that no referrals were necessary, Keegan (2016) conducted an intake interview with each athlete to determine intervention strategies. After the initial intake, he determined that both athletes depended

on accomplishments for self-efficacy, and the recent advancement into the academy had reduced their number of accomplishments. He also determined that both athletes' successes depended on a narrow set of outcomes determined by the coaching staff, which left the athletes with very few chances for positive self-evaluation. Thus, Keegan (2016), using the MST model, determined that both athletes should determine their own intrinsically determined evaluation strategy, and focus on the process rather than outcomes. To achieve these objectives, Keegan (2016) utilized performance profiling (see Butler & Hardy, 1992; Doyle & Parfitt, 1996) and goal-setting with the athletes.

In the intervention phase, Keegan (2016) had the athletes set goals based on their performance profiles (e.g., short-term, long-term, process oriented, performance oriented), and he conducted a cognitive-behavioral intervention targeting negative thoughts regarding performance. Until this point, both athletes appeared to be strikingly similar. However, the athletes separated themselves in performance profiling. When performance profiling, *Lynn* focused mainly on areas that her coaches emphasized as areas for improvement, which undermined the intervention strategies. Keegan (2016) implied that this non-compliance, as well as a lack of compliance for rehabilitation following an injury, led her to eventually leave the team. *Belle*, on the other hand, included current strengths in her performance profile, which provided a foundation for bolstering both short-term and long-term enhancements in her confidence. Keegan (2016) implicitly indicated that her adherence to the program allowed her to be signed by a national-level team.

Keegan (2016) reflected on the two cases, and he suggested that he should have shifted his theoretical and philosophical approach to meet *Lynn's* needs. He indicated that

a focus on emotional support and well-being first may have allowed her cope with her setbacks. If she was unable to cope with the setbacks, then Keegan (2016) suggested that he should have again shifted the focus to a healthy transition out of competitive sport. In contrast to *Lynn*, the MST model aligned very well with *Belle*. This led Keegan (2016) to determine that his practice of sport psychology should be client-led, and that a philosophical and theoretical approach should be aligned with a client's needs. This approach places the burden of adopting the correct philosophical and theoretical approach on the practitioner for each client and each issue they face, and it fails to provide an overarching framework from which to base a practice. This tactic is most closely aligned with the eclectic approach in the psychotherapy literature, and it aligns with Poczwardowski et al.'s (2004) assertion that an eclectic approach may be the most effective paradigm for practitioners of sport psychology. Both single school (e.g., CBT, psychodynamic, humanistic) and eclectic approaches have benefits and drawbacks, and both of these will be covered in the following section.

### **Psychological Theories Adapted to Sport**

Theoretical assumptions made by practitioners of sport psychology define the underlying causes of athlete or team problems, guide the process for solving problems, and suggest the intervention strategy or techniques to be used (Hill, 2001). Currently, there have been no theoretical paradigms developed specifically for sport psychology (Aoyagi & Poczwardowski, 2012). Historically, the sport psychology literature and sport psychology practitioners have relied on adapting theoretical paradigms from psychotherapy rather than developing a theoretical paradigm for sport psychology. Some examples of this include Streaan and Streaan's (1998) application of psychodynamic

concepts to sport psychology, Conroy and Smith Benjamin's (2001) adaptation of interpersonal theory to sport performance enhancement consultation, and Gardner and Moore's (2004) mindfulness-acceptance-commitment approach to performance enhancement.

Perhaps the most thorough adaptation of theories of psychotherapy to sport psychology was Hill's (2001) book, *Frameworks for Sport Psychologists*. Hill (2001), who is a professor emerita of kinesiology, provided outlines for how five psychotherapy models could be used for sport psychology services: a) psychodynamic, b) behavioral, c) cognitive, d) humanistic, and e) neuro-linguistic programming. This resource has often been cited as the primary source for theoretical paradigm adaptation for sport psychology (see Aoyagi & Poczwardowski, 2012; Cashmore, 2006; Fifer, Henschen, Gould, & Ravizza, 2008; Poczwardowski et al., 2004). Hanrahan and Andersen (2010) edited a book meant to guide students and practitioners of sport psychology in a variety of ways including: counseling, assessment, individual teams, team-related issues, working with specific populations, and mental skills. The guide included a section on theoretical and therapeutic models, which may serve as a brief update to Hill's (2001) work. It included several modern theoretical paradigms adapted to sport psychology: a) humanistic/person centered theoretical model, b) cognitive therapy, c) behavioral therapies, d) positive psychology, e) existential psychology, f) psychodynamic models, g) sport as a context for teaching life skills, h) family systems, i) acceptance-based behavioral therapies (ABBT), and j) an Eastern philosophical approach.

Interestingly neither Hill (2001) nor Hanrahan and Andersen (2010) included the reportedly most widely used paradigm in psychotherapy that has been applied to sport

psychology, which is cognitive-behavioral therapy (CBT) (Rosen & Lipkins, 2016). Claspell (2010) did provide an overview of a cognitive approach and a behavioral approach in Hanrahan and Andersen's (2010) work, but a united CBT approach was not addressed. They also did not include an eclectic approach to applying psychotherapy to sport psychology, which has been utilized by a multitude of sport psychology practitioners (see Aoyagi & Poczwardowski, 2011; Rosen & Lipkins, 2016). Hanrahan and Andersen (2010) did include an excellent overview of the sport psychology's adaptation of ABBT, mindfulness-acceptance-commitment (MAC), which is widely used in applied sport psychology (Gardner & Moore, 2004; 2010; Rosen & Lipkins, 2010). The following will provide an overview of how CBT, MAC, and eclecticism may be adapted to the practice of sport psychology.

### **Cognitive-Behavioral Theory (CBT) Applied to Sport**

McArdle, a university lecturer in Ireland and chartered psychologist with the British Psychological Society, and Moore, the director of performance services at the Irish Institute of Sport, (2012) demonstrated how four key principles of CBT can be applied to sport psychology through the use of a case study. The first principle of CBT the authors outlined was the premise that psychological problems arise from the interaction of four different aspects of life experience: (1) biased/distorted thinking; (2) emotions; (3) physiology, and (4) behavior. The second core principle from CBT McArdle and Moore (2012) emphasized was that behavioral, emotional, and physiological changes can only occur directly through cognitive change or indirectly through behavioral interventions. The third central principle of CBT they stressed is that there are three discrete types of cognitions that have different levels of cognitive

processing. Some core beliefs are not readily accessible to consciousness, and they influence the other two levels of cognition, preconscious and conscious. Automatic thoughts make their home in the preconscious level, and assumptions and generalizable rules that often attempt to reconcile negative core beliefs live in the consciousness level. The final principle of CBT McArdle and Moore (2012) highlighted is the position that different problems and disorders can be distinguished on the bases of specific cognitive content, which in turn influence an individual's psychological, interpersonal, and behavioral problems. The authors then utilized a case example to provide examples of situations in which the previously mentioned principles can be applied to sport psychology.

McArdle and Moore (2012) used the case of Liam (pseudonym), who was a 26-year-old national level rugby player, to summarize the CBT process in sport psychology. In the example, the authors provided a needs assessment based on the tenets of CBT, the intervention process, and the evaluation of the intervention. Liam indicated an increasing sense of underachievement in his performance, rumination about his performances and comparisons with other members of the team, and symptoms of anxiety and depression (e.g., low mood, lacking motivation, insomnia, no longer enjoying rugby) in his initial consultation session. In the *needs assessment* section, McArdle and Moore (2012) overviewed how one would conceptualize a case from a CBT approach. They suggested that using a generic model of case formulation would initially develop an understanding of the difficulties experienced by a client, followed by identifying triggers and modifiers, and determining the psychological processes and behaviors that maintain the problem. McArdle and Moore (2012) suggest that using the Socratic method (i.e., asking the client

questions that stimulate reflection and learning) in building the conceptualization. The authors indicated that utilizing the Socratic method allowed them to explore a recent game situation in which Liam failed to make an easy catch, and they found that Liam's response to this situation would lead to negative self-talk (e.g., inner speech that he was "useless," or a "coward") and increased anxiety. McArdle and Moore (2012) stated that further exploration of this situation, and others like it, led to the discovery that increases in negative self-talk led to anxiety, which then led to a loss of concentration on the pitch. Further questioning revealed that Liam set high standards for himself, that he saw situations in black and white terms, he often negatively compared himself to the world's best players, and continuously saw himself as a failure. Thus, the authors determined that tackling Liam's cognitive biases associated with perfectionism would have beneficial effects for his clinical symptoms and performance. McArdle and Moore (2012) utilized an empirically supported CBT model for treating perfectionism (see Shafran, Eagan, & Wade, 2010) for the intervention process.

To treat Liam's perfectionism, McArdle and Moore (2012) aimed to challenge Liam's cognitive biases associated with his perfectionistic mindset in conjunction with developing more adaptive cognitions to promote better functioning. Liam was given the homework of keeping a daily thought record to identify situations that were linked to changes in mood and identify associated automatic thoughts and cognitive biases during those situations. Liam was then asked to modify the rules that underpinned his automatic thoughts and create an experiment that tested the modified rule. For example, Liam's experiment to challenge his rule of being exceptional was to enter his next game with the goal of enjoying his experience for the first 20 minutes of the match. After the



experimental match, Liam determined that he played as well as he normally played and even received positive feedback from the coach regarding his performance. However, he did not experience the negative symptoms associated with his previous performances. This led Liam to want to extend the experiment further for the next match. Liam's negative thoughts about handling the ball were also addressed by targeting increasing positive thoughts and procedural memory through experiential work, evaluation, and self-reflection. Although, the results of this process were not discussed by the authors, and it was not stated how they would directly approach this issue with Liam.

McArdle and Moore (2012) state that it is not simply enough to conceptualize and intervene with an athlete; one must also evaluate the process and outcome of the work. If the evaluation process reveals limited improvement from an athlete, then the authors suggest that a questioning of the formulation process must take place. The authors further state that the three processes—formulation, intervention, and evaluation—occur in an overlapping fashion, and each phase is revisited throughout the process of working with an athlete. It is worth noting that this process does not address the possibility that CBT interventions may not work for every athlete, and that controlling, eliminating, or replacing negative thoughts may not be the most effective modality for athletes to perform at an optimal level, of which there is evidence (i.e., Cohen, Pargman, & Tannenbaum, 2003; Craft, Magyar, Becker, & Feltz, 2003). Therefore, other theoretical paradigms for sport psychology that do not solely include these actions are addressed further.

**Mindfulness-Acceptance-Commitment (MAC) Approach**

The second most utilized theoretical paradigms in sport psychology are acceptance-commitment and mindfulness-based paradigms (Rosen & Lipkins, 2016), and the primary approach within the field that includes both of these areas is the mindfulness-acceptance-commitment (MAC) approach. The MAC approach was developed by Gardner and Moore in 2001 (Gardner & Moore, 2004), and it is an integration and adaptation of Acceptance and Commitment Therapy (Hays, Strosahl, & Wilson, 1999) and Mindfulness-Based Cognitive Therapy (Segal, Williams, & Teasdale, 2002) for use with athletes. MAC draws heavily from rule-governed behavior (Hays et al., 1999). The research on rule-governed behavior suggests that an individual who has a negative emotional experience to an external stimulus, then thinks about the stimulus, is likely to develop a negative emotional response directly to the negative thoughts. The individual will then experience the same thoughts when either presented with the emotional response or external stimulus in the future. The negative or uncomfortable responses, both cognitive and affective, become cues that often lead to avoidance or worry and loss of concentration (experiential avoidance). For example, if an athlete has a thought of, “I’m too anxious to practice” and it leads them to skip practice it would be rule-governed behavior in which the avoidant behavior is governed by the cognitive response to anxiety and not a deliberate choice to act consistently with the valued goal of improving performance. MAC promotes acceptance of internal experiences while promoting the focusing of the individual on appropriate external contingencies and behavioral responses that are necessary to effectively navigate situations that allow for the achievement of both short-term and long-term goals (Gardner & Moore, 2004). The authors also state that

MAC promotes self-regulatory aspects of competitive performance, and they posit that the approach targets decision-making, problem-solving, and behavioral processes that athletes must make on a day-to-day basis as well as actual athletic performance.

Juxtaposing this with CBT, MAC promotes the development of mindful awareness, mindful attention, and acceptance of internal processes instead of internal self-control, task-irrelevant focus of attention and behavior restrictions.

Gardner and Moore (2004) provided a protocol to follow for both individual athletes and teams. When working with teams, the authors suggest eight one and a half hour sessions, and individuals would receive twelve one-hour sessions. The sessions would revolve around five distinct phases: 1) psychoeducation, 2) mindfulness, 3) values identification and commitment, 4) acceptance, and 5) integration and practice. The psychoeducation phase includes a rationale for the intervention, a discussion on the self-regulatory aspects of performance, reviewing personal athletic performances, and contradicting CBT's process of controlling internal experiences. The mindfulness phase includes the introduction of mindfulness and mindfulness techniques. The values identification and commitment phase includes exploring the distinction between process and outcomes, and discussing the importance of choosing valued directions in life. In the acceptance phase, rule-governed behavior is discussed, and building awareness for the purpose of being able to disconnect from negative automatic connections between thoughts, feelings, and behaviors. The final phase, integration and practice, focuses on integrating, consolidating, and practicing MAC concepts and skills.

The MAC protocol mentioned above has been found to be efficacious in several research projects (Gardner & Moore, 2010; Moore, 2009). One study included a series of

case studies with high-level athletes, which found that the athletes studied experienced enhanced awareness, attention, and performance (Gardner & Moore, 2004). Wolanin (2005) found that self and coach ratings of performance, attention, and practice intensity increased after the group MAC protocol was completed with Division I student-athletes. However, Hasker (2011) found no significant differences in performance enhancement between MAC and PST approaches in college athletes. Similar to CBT, the MAC approach does not include principles from sport science, and thus fails to fully capture the interdisciplinary nature that Williams-Rice (1996) and Poczwardowski et al. (2004) call for when practicing sport psychology.

### **Eclectic Approaches to Sport Psychology**

As was mentioned, Andersen and Williams-Rice (1996) stated that sport psychology theory should draw from psychology, exercise science, and physical education. Poczwardowski et al. (2004) posit that eclecticism may provide the flexibility necessary to effectively address the complex issues that athletes face. Eclecticism refers to seeking the improvement of the ability to select the best treatment for the person and the problem (Norcross, 2010). The search is primarily guided by data on what has worked best for others in the past with similar characteristics and issues. This is not to be confused with a purely eclectic approach, which is altering treatment methods based upon private inclinations of the moment, following no identifiable or consistent principles or guidelines (Norcross, 1986). Eclecticism, as it is currently structured, is neither atheoretical or antitheoretical, but it is the least theoretical of the integrated models of psychotherapy (e.g., single school, assimilative integration) (Norcross, 2010).

There is a limited literature on the use of eclectic models in sport psychology, but May and Brown (1989) and Poczwadowski et al. (2004) provided an overview of what an eclectic approach may look like in the practice of sport psychology. May and Brown (1989) utilized an eclectic approach when consulting with the U.S. Alpine Ski Team prior to and during the 1988 Winter Olympics in Calgary, Alberta. The consultants used a broad systems approach that included three factors: 1) the target population (i.e., athletes, coaches, administrators, company representatives, families), 2) service delivery format (i.e., individual, dyadic, group sessions), and 3) the methods of service (i.e., educational, clinical, organizational, research). The authors state that each of these areas were no more important than the other, and a wide variety of issues may arise in each area that are not covered in one single theoretical orientation. They advised that a broad range of understanding in several areas of psychology (e.g., individual achievement, high performance, communication, teamwork, mental health) are necessary for with the broad range of issues (e.g., anger management, depression control, effects of overtraining, family discord issues, parental involvement, relaxation, group interactions) faced by anyone in the system. May and Brown (1989) suggested that this approach provided them with the flexibility to effectively address these diverse issues, and they reported that they approached their work from cognitive, humanistic, behavioral, insight oriented, psychodynamic, or pedagogic frameworks to allow for the optimization of maximum potential. They stated that “the more rigid, single theoretical focused program can be beneficial to one aspect of the sporting activity, but people and systems do not come from one specific packaged issue” (May & Brown, 1989, p. 328).

Poczwardowski et al. (2004) took a similar approach when they advocated for a creative synthesis of several paradigms with cohesive logic and without straying from one's personal core values and beliefs. They proposed that this could be done through either relying on a combination of several theoretical paradigms, using one organizing paradigm but integrating different techniques or methods, or using no preferred paradigm. The final option presented is aligned with Norcross' (2010) technical eclecticism, which is a primarily data driven paradigm, but the first two are more directly aligned with other forms of psychotherapeutic integration. The first, combining theoretical paradigms, is referred to as theoretical integration, and the second, using one organizing theory with methods from other theories, is referred to as assimilative integration. Thus, it appears that there is a current lack of cohesiveness between the language utilized in the sport psychology literature and the integrative psychotherapy literature. Gaining further clarity and specificity in the sport psychology literature would allow practitioners to more deliberately select a paradigm that aligns with their core beliefs and values, teachers to provide a more streamlined and coherent way of addressing theoretical paradigm development, and researchers to examine the efficacy of different theoretical paradigms.

### **Expert Approaches to Sport Psychology**

As made clear by this review, there is no global theoretical paradigm for sport psychology. Theoretical paradigms borrowed and adapted from the fields of counseling and clinical psychology have been given a brief overview above, but it is also necessary to review how those paradigms are being utilized by actual practitioners in the field, which is the goal of this section. Aoyagi and Poczwardowski (2011b) provided several

models of current sport psychology professionals, of which Dr. Sean McCann's (2011) CBT-based model will be covered in the following. Dr. Artur Poczwardowski's technical eclectic model will be highlighted by outlining its use when intervening on an individual's between-shot routine (Aoyagi et al., 2018) to provide an alternative look at the use of models in sport psychology, as well as Gardner and Moore's (2006) Integrative Model of Athletic Performance (IMAP).

### **Sean McCann's Cognitive-Behavioral (CBT) Approach**

Aoyagi and Poczwardowski (2011b) included fifteen theories of performance excellence. One chapter within the work is dedicated to one of the sport psychologists for the United States Olympic Committee, Dr. Sean McCann. McCann's (2011) autobiographical sketch indicated that his theory of performance excellence is inextricably tied to and aligned with the CBT paradigm. What McCann (2011) offers as his theory of performance excellence is most closely aligned to Poczwardowski et al.'s (2004) model of practice. McCann (2011) also provides beliefs about performance excellence that express the relationship between excellence and mental skills, that personality plays a role in the ease or difficulty of acquiring mental skills, and that the environment plays a key role in development of an athlete (see McCann, 2012, p. 116). These beliefs appear to play a key role in McCann's (2011) conceptualization of athlete performance, which is consistent with the recommendations from Poczwardowski et al. (2004) and Keegan (2014; 2016).

Although McCann (2011) highlights these beliefs, which most closely resemble the personal beliefs and values component from Poczwardowski et al. (2004), as well as his model, little is mentioned about the use of theoretical paradigm. McCann's (2011)

model includes “offensive” (e.g., self-talk, visualization, comfort with risk, confidence) and “defensive” (e.g., controlling anxiety, controlling anger and frustration, energy management) mental skills which align with CBT. McCann (2011) described an athlete with strong “offensive” mental skills as being “focused, intense, athletic, looking to win, and ready to take advantage of the opportunity for success” (p. 112), and an athlete with strong “defensive” mental skills as being balanced, resilient, and consistent competition after competition. These skills are either used to change or maintain behavior through thoughts and emotions. For example, McCann (2011) explained that if consistent behavior is the athlete’s goal, then the athlete must think consistently. If behavior change is the goal, then the athlete must change his/her thinking.

McCann (2011) also provided context to ability of athletes acquiring mental skills by acknowledging that personality and the environment also play key factors in the development of the skills necessary for expert performance. McCann (2011) purposefully did not provided an exhaustive overview of how personality impacts performance due to space constraints, but he did emphasize that he believes it is important to distinguish between personality factors and behaviors or skills to prevent practitioners from trying to predict performance based on personality factors. McCann (2011) argued that the environment plays a much more impactful role on the development of athlete behavior than personality. He stated that numerous environmental factors play key roles in mental skill acquisition and use including family, luck, team environments, developmental sport structure exposure, and timing of key events and relationships. McCann (2011) proposed that the role of a sport psychologist is to build key offensive and defensive mental skills



(i.e., CBT skills) while considering, and adapting for, personality and environmental factors.

### **Artur Poczwardowski's Eclectic Approach**

Dr. Artur Poczwardowski—a sport psychology practitioner, educator, and researcher—proposed an eclectic model for working with tennis players in a between-executions routine (Aoyagi et al., 2018). His model, which is a part of his Mental Excellence Training Program, incorporates concepts from neuroscience, cognitive psychology, motor learning, psychophysiology, sport and performance psychology, and motor control. The model, *5Rs as a between-executions routine* (see Aoyagi et al., 2018, p. 104), is adapted from work by Ravizza and Hanson (1995) and Vernacchia (2003), and included five elements: 1) respond, 2) release, 3) replay, 4) recharge, and 5) refocus (Aoyagi et al., 2018). Each area connects to the aforementioned conceptual frameworks (e.g., neuroscience, cognitive psychology, motor control), and Poczwardowski posits that each can be adapted to fit the needs of other performance contexts outside of tennis (e.g., martial arts).

The *respond* phase is conceptually bound in neuroscience, and it involves the adjustment of the athlete's mental state to allow for the best chance to execute the tactical plan for the next play, which involves shifting motor control processes from the controlled to automatic centers of the brain (i.e., shifting from motor cortex to basal ganglia) (Aoyagi et al., 2018). This is accomplished through an attentional shift prior to the execution of the skill, and it is utilized to achieve a state of trust in the ability to complete the task ahead. The *release* phase is governed by principles in cognitive psychology, and it occurs at the beginning of the between-point sequence. The aim of the

*release* phase is to regulate the physiological aspect of emotions that can arise from either winning or losing the previous point, and to simplify the information processing that occurs at that point in time in order to attend to the task at hand. The *replay* phase is rooted in motor learning, and it is facilitated through mental rehearsal. The aim of the *replay* phase is to either visualize the right shot to reinforce that shot or to correct the shot through the visualization process. The *recharge* phase is a micro-break to relax the athlete, and it is housed in a psychophysiology framework. The aim of the phase is to adjust activation levels through the management of psycho-physio-neuro-muscular reactions to match the desired level of arousal. The final phase, *refocus*, is conceptually based in sport and performance psychology as well as motor control. This phase's goal is to allow the athlete to shift to a tactical planning and strategizing mindset, and ultimately allow the athlete to commit to a given execution of the strategy.

Poczwardowski's model is certainly technically eclectic and grounded on theories, principles, mechanisms, and concepts from several different disciplines (Aoyagi et al., 2018). He argues that the scientific foundation of sport psychology is interdisciplinary at its core, and that practitioners of sport psychology should have both educational and applied experiences that address the variety of interdisciplinary issues encountered in the field. An interdisciplinary education and a variety of applied experiences allow for a practitioner to interpret and apply the interdisciplinary scientific literature (e.g., Coombes, Janelle, & Duley, 2005; Hanin, 1980; Nideffer, 1976; Schmidt, 1975; Vine & Wilson, 2010; Yarrow, Brown, & Krakauer, 2009) into pragmatic conceptualization and intervention.

### **Integrative Model of Athletic Performance (IMAP)**

Gardner and Moore's (2006) Integrative Model of Athletic Performance (IMAP) strays from the previously described models of athletic performance. IMAP attempts to explain athletic performance from both clinical and sport sciences, but it does not provide a model of intervention for practitioners. To fill this void, Gardner and Moore (2006) suggest that a MAC approach be taken when working with athletes. Although IMAP is not a model of practice, it was chosen for this work due to its connection to the MAC approach, as well as its integration of both clinical psychology and sport science.

IMAP was developed from Carver and Scheir's (1988) model of behavioral self-regulation, empirically supported models of human sexual performance (Sbrocco & Barlow, 1996), and Turk, Heimburg, and Hope's (2001) model of social performance (Gardner & Moore, 2006). The authors also integrated empirical findings in sport psychology, self-regulation, and other performance research into IMAP (see Gardner & Moore, 2006, p. 15).

The model includes three phases: 1) *preparatory*, 2) *performance*, and 3) *post-performance* (Gardner & Moore, 2006). The *preparatory* phase, which has been referred to as the *pre-performance* phase in the sport psychology literature (Aoyagi & Poczwardowski, 2011b), highlights internal and external demands and processes that affect one's readiness for competition. The phase includes overarching abilities (i.e., sensorimotor, general athletic, sport specific) that develop over time, innate genetic and biological limitations, dispositional characteristics (i.e., cognitive schemas of self and relation to the world based on repeated experiences), environmental stimuli (i.e., external factors that athletes confront in and out of competition), and performance demands (i.e.,

specific cues and general requirements to achieve at or above established standards).

Gardner and Moore (2006) posit that it is the interaction of these areas that set the stage for engagement in athletic performance and allows for behavioral regulation during athletic performance.

In the *performance* phase, Gardner and Moore (2006) argue that individuals must metacognitively be aware of their own behavior, then evaluate and adjust their behavior using reference points to successfully perform to internal and external standards. However, this awareness, evaluation, and adjustment must be automatic for functional performance. This allows the athlete to remain task focused rather than focusing on internal schemas that may negatively affect performance. The authors suggested that mindfulness training enhances the athlete's ability to pay attention to the right thing at the right time, and is thus, the foundation for optimal athletic performance.

The *post-performance* phase of Gardner and Moore's (2006) model includes three paths: 1) continuation of performance (i.e., choosing to continue with sport), 2) reengaging in athletic performance following a brief disengagement period, or 3) disengagement from performance (i.e., leaving sport). The paths are chosen based on the interpretation of the performance related to personal core beliefs and values. If an athlete determines that there is little discrepancy between his or her values and the athletic performance, then the athlete will most likely decide to continue with the sport. An athlete's acceptable levels of thoughts and emotions can be adjusted through work in the MAC approach, and, thus, appraisals of acceptable performance may be malleable over time. If an athlete consistently determines that there are significant discrepancies between his or her values and athletic performance, then the athlete may choose to disengage from

the sport permanently. If the athlete determines that there is a moderate level of discrepancy in his or her appraisal and values, then the athlete may briefly disengage from the sport before reengagement after effectively problem-solving around the discrepancy (e.g., skill development, tactical development).

While IMAP remains as one of the only established interdisciplinary models of the psychological aspects of athletic performance in the literature today, its accuracy has yet to be studied. And while the model is based in both psychology and sport science, it fails to provide intervention methods from sport science. Gardner and Moore (2007) effectively outline several areas that have been shown to be integral to effective performance, but they chose to hinge intervention strategies to their MAC approach, which may ultimately limit the interdisciplinary features of the model.

McCann (2011), Poczwardowski (Aoyagi et al., 2018), and Gardner and Moore (2006) have provided insights into professional models of practice that have been rarely seen in the field of sport psychology. Each showcases a method of practice that has been developed from clinical expertise as well as from theoretical paradigms established in clinical psychology or other fields (e.g., motor learning, neuroscience, psychophysiology). None of these highly regarded individuals' models purely reflects a single theoretical paradigm, although McCann's (2011) is the closest representation. Therefore, it would be safe to assume that these models have developed over time from a variety of practical experiences, self-reflection, previous formal education, and research. However, little is known about how practitioners derive their models of practice from a theoretical perspective, and little is known about how most practitioners derive their models from more abstract theoretical paradigms.

### **Sport Psychology Job Task Analysis and Theoretical Paradigms of Sport Psychology Professionals**

McCann (2011) was one of the few individuals who specifically mentioned a connection to, and the use of, a theoretical paradigm within the collection of implicit theories of performance excellence (Aoyagi & Poczwadowski, 2011b). Although one of the central goals of Aoyagi and Poczwadowski (2011b) was to provide an understanding of the use of theory in the field of sport psychology, little was addressed with regards to the use of theoretical paradigms within the field. After reviewing the literature, only one study was found that presented data on the use of theoretical paradigms.

In 2016, AASP commissioned a job task analysis in preparation for proposed changes to the procedures for certification within the association (Rosen & Lipkins, 2016). An online survey, which included demographic information, was sent to 403 active certified consultants within the organization to review the draft for content and weights. One hundred three certified consultants (male = 50, female = 51, prefer not to answer=1, no response=1) completed the survey. The primary training background of the participants were both sport science and psychology ( $n = 51$ ), psychology ( $n = 28$ ), sport science ( $n = 21$ ), and other ( $n = 3$ ). Of the 103 participants, 17.5% participants had practiced applied sport psychology five years or less ( $n = 18$ ), 27.2% had practiced 6-10 years ( $n = 28$ ), 19.4% had practiced 11-15 years ( $n = 20$ ), 13.6% had practiced 16-20 years ( $n = 23$ ), and 22.3% had practiced more than 20 years ( $n = 23$ ). Within the survey, participants were asked to identify their primary theoretical orientation (i.e., theoretical paradigm) (see Table 1), and were allowed to provide multiple responses. The results indicated that CBT was far and away the most utilized paradigm by practitioners in the

field with 57.3% of consultants utilizing the paradigm. A distant second was ACT (11.7%), and it was followed by Humanistic/Gestalt theories (9.7%).

Table 1

*Primary Theoretical Orientations of AASP Consultants*

Theoretical Orientation	N
Cognitive Behavioral Therapy (CBT)	59
Acceptance & Commitment Therapy (ACT)	12
Eclectic/Interdisciplinary	9
Humanistic/Gestalt	10
Mindfulness	7
Systems Theory	7
Self-Determination Theory	6
Solution-Focused	5
Interpersonal/Dynamic	4
Person/Client/Athlete Centered	4
Positive Psychology	3
Developmental (various)	5
Social-Psychological Foundations	2
Scientist-Practitioner Model	2
Phenomenology	2
Self-efficacy	2
Trans-Theoretical Model (TTM)	2
Biopsychosocial Model	2
*Miscellaneous Theoretical Models	24
No Response	11
Total	178

*Note.* Adapted from Rosen & Lipkins, 2016, p. 12.

\*Miscellaneous Theoretical Models: Motivational Interviewing, Sports Transition, Mental Skills, Psychology of High Performance, Rational Emotive Therapy, MAC, Social-Cognitive, Behavioral, Achievement Goal Theory, Mindset, Toolbox Philosophy, Self-Regulation Model, Dialectical Behavior Therapy, Barnard & Goodyear's Discrimination Model, Rotellian, Ravissian, Shelleyian, Life Coaching, Performance Psychology, Inverted-U Theory, Drive Theory, Quiescence Theory, Optimal Arousal Theory, Holistic Model.

Although this was the first formal information gathered on the use of theoretical paradigms in the field of sport psychology, there are some issues with the data. This is in specific regard to the term "primary theoretical orientation." If an individual has a

primary theoretical orientation, it suggests that the orientation is singular. Being allowed to provide multiple responses to this question does not automatically negate the results, but it does lack precision and clarity. Rosen and Lipkins (2016) do provide an eclectic/interdisciplinary option, which inherently implies multiple theories being utilized. However, it is indeterminable which theories are being utilized within these eclectic and interdisciplinary frameworks. There are currently theoretical paradigms that allow for multiple responses (i.e., integrated), but that option does not exist.

Prochaska and Norcross (2010) outlined four central types of integration in clinical psychotherapy: a) technical eclecticism, b) theoretical integration, c) common factors, and d) assimilative integration. *Technical eclecticism* is designed to “improve our ability to select the best treatment for the person and the problem...guided primarily by data on what has worked with others in the past with similar problems and similar characteristics” (p. 8). *Theoretical integration* involves synthesizing two or more theoretical paradigms in the hope that the integration will increase effectiveness of practice. *Common factors* refers to seeking the “core ingredients that different therapies share in common, with the eventual goal of creating more parsimonious and efficacious treatments based on those commonalities” (p. 9). Finally, *assimilative integration* entails a firm grounding in one theoretical paradigm, but a willingness to incorporate practices and views from other paradigms. Eclecticism was included in Rosen and Lipkins’ (2016) job task analysis, but it is unclear whether they are referring to technical eclecticism or pure eclecticism. Pure *eclecticism* refers to altering treatment methods based upon private inclinations of the moment, following no identifiable or consistent principles or guidelines (Norcross, 1986). Practitioners who utilize pure *eclecticism* have no rules to



guide treatment, which leads to an inability to articulate or replicate the treatment in the future. The inclusion of each of the three other types of paradigmatic integration, as well as separating pure eclecticism from technical eclecticism, would have provided a more comprehensive picture of the use of theoretical paradigms in the field. The lack of an “integrationist” option with flexibility in the specificity of paradigms to be integrated (e.g., Assimilative Integrationist primarily utilizing CBT and assimilating ACT, humanistic, and psychodynamic principles), coupled with the option of selecting multiple theoretical orientations, does not provide a clear view of the use of theoretical paradigms in the field of sport psychology. However, it does provide the first evidence of the multitude of paradigms being utilized within the field.

In sum, the field of sport psychology has utilized an overarching framework for practice (e.g., Keegan, 2014; Poczwardowski et al., 2004). The framework includes beliefs and values, theoretical paradigms, models of practice, intervention goals, and intervention techniques. Much work has been dedicated to the specific models of practice within sport psychology, but the theoretical paradigm component has been overlooked in the literature. Only recently has an investigation been completed on the use of theoretical paradigms in sport (i.e., Rosen & Lipkins, 2016), but the data collected failed to provide a targeted look at what is actually being utilized within the field. Further exploration needs to be completed on the use, development, and practitioner satisfaction of theoretical paradigms within the field of sport psychology. Further understanding in these areas would allow practitioners to be more deliberate in conceptualization and intervention planning with athletes. It could also provide more evidence for the need of a theoretical paradigm specific to sport psychology.

### Chapter 3: Methodology

This study sought to answer the following questions: (1) what are the current theoretical paradigms utilized by sport psychology practitioners?; (2) how were these theoretical paradigms developed over time?; and (3) are practitioners satisfied with the current theoretical paradigms utilized in sport psychology? This was accomplished through a mixed methods approach, which is a procedure for collecting, analyzing, mixing, and integrating both quantitative and qualitative data (Creswell & Plano Clark, 2011). The rationale for mixing both types of data is that neither quantitative nor qualitative data on its own is sufficient to capture the trends and details of the use of theoretical paradigms by sport psychology practitioners, how theoretical paradigms are developed over time, and the practitioner satisfaction of current theoretical paradigms to facilitate effective sport psychology service delivery. When quantitative and qualitative methods are combined they complement each other and provide a more complete picture of the research problem. For example, completing a quantitative study in this area of research would allow for the study of trends within the field regarding theory use (e.g., use of CBT by practitioners). However, it would not be able to provide the nuances of why or how that theory is utilized. On the other hand, if a qualitative study was conducted, a rich picture of how several practitioners developed their theoretical paradigms over time would be rendered, but it would not sufficiently determine the development of theoretical paradigms by most practitioners in sport psychology.

#### **Research Design**

This study used a sequential explanatory mixed methods design (see Figure 1) (Creswell & Plano Clark, 2011; Ivankova et al., 2006). The sequential explanatory design

consists of two main phases: an initial quantitative phase and a follow-up qualitative phase. The qualitative data are utilized to explain or elaborate on the results of the quantitative data by exploring participants' views in more depth. The quantitative and qualitative phases of the study were integrated in the intermediate portion of the study as the quantitative results informed the sample and interview guide for the qualitative portion of the study (Ivankova et al., 2006). The quantitative and qualitative data were integrated upon conclusion of the qualitative portion of the study, which allowed for a holistic view of the use, development, and practitioner satisfaction of theoretical paradigms in sport psychology. The qualitative data provided insights on the use and development of theoretical paradigms in applied sport psychology. It also delivered depth on practitioner satisfaction with their theoretical paradigm. In other words, the quantitative results provided a general picture of the research problem, and the qualitative data explained and expanded the statistical results by exploring the lived experiences of practitioners.

Priority, which refers to whether quantitative or qualitative approaches is given more attention throughout the data collection and analysis of the study (Creswell, 2014), was given to the quantitative data in the proposed study. Priority is typically given to the quantitative approach in the sequential explanatory design because data collection comes first and often represents the majority of data collection in this design (Ivankova et al., 2006). The priority of the current study was not simply chosen at random, but rather chosen due to the potential for the quantitative data to be generalizable to the larger sport psychology practitioner population. However, a dialectic stance, which aims to hold the tensions between—and honor—the paradigmatic (i.e., postpositivist & constructivist)

traditions, was taken to allow for meaningful engagement with the different data (Greene & Hall, 2010).

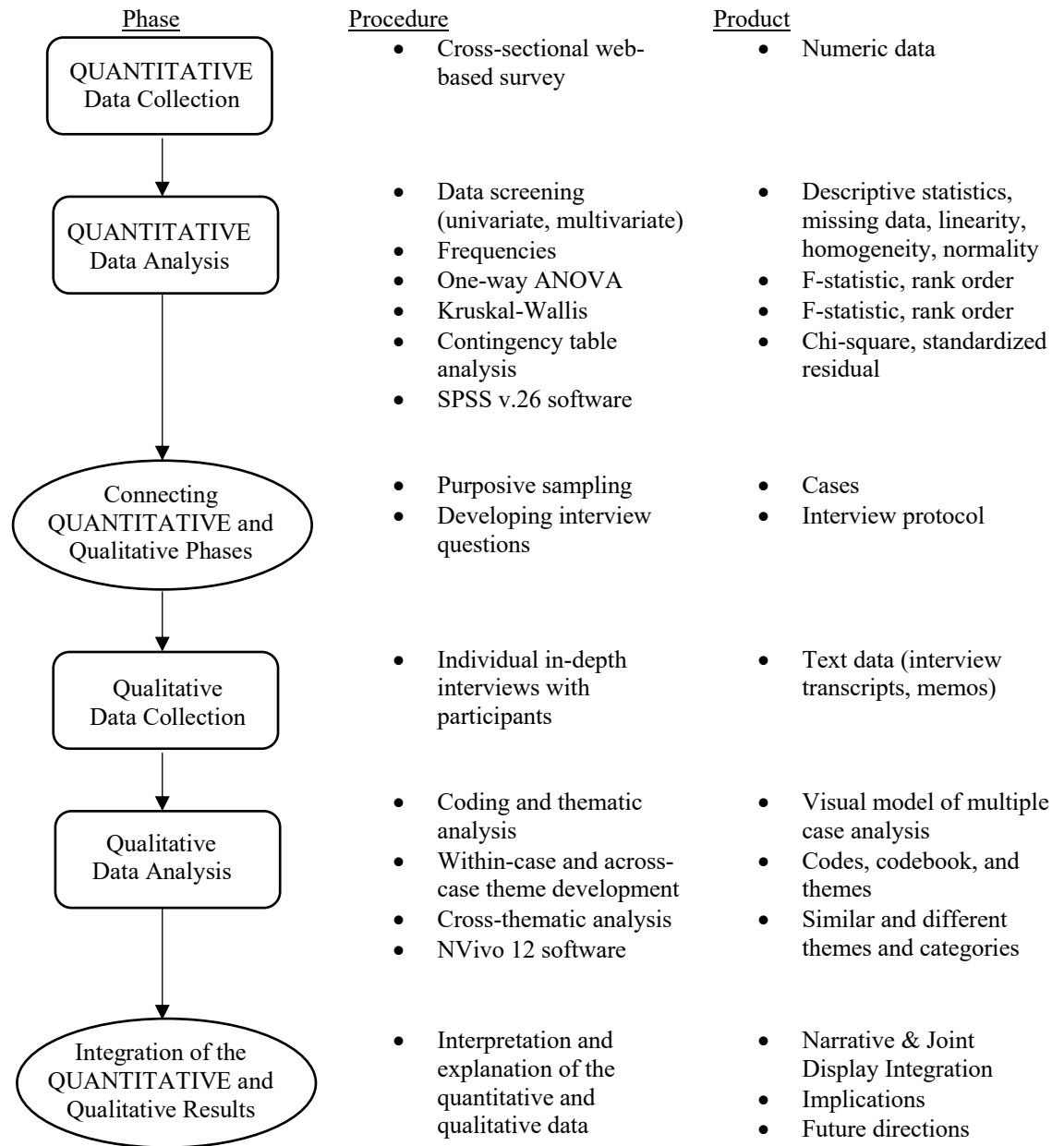


Figure 1. Visual Model for Mixed-Methods Sequential Explanatory Design Procedures (adapted from Ivankova et al., 2006, p. 16)

## **Sample Selection**

### **Quantitative Phase**

The study utilized convenience sampling after approval from the Institutional Review Board (IRB). The lead investigator targeted current practitioners in the field of sport psychology. The sample included Certified Mental Performance Consultants (CMPCs), non-certified practitioners, pre-certified practitioners, and graduate student practitioners (i.e., master's, doctoral). To be considered for the study, practitioners needed to have had direct contact with athletes in a sport psychology setting in the previous year (e.g., individual sessions, team sessions). Exclusion criteria included non-current practitioners of sport psychology (e.g., researchers, academics, retired consultants). One of the most prominent listservs for sport psychology practitioners, Temple University's Sportpsy listserv, and the AASP membership directory were utilized to disseminate the cross-sectional online survey. Consent (see Appendix B for Quantitative Consent) was required prior to participant access of the survey. The survey concluded by requesting consent to participate in the qualitative portion of the study.

### **Qualitative Phase**

Given the sequential explanatory nature of this study, criterion for the qualitative portion of the study was established after the analyzation of the quantitative data to ensure a sample that could most richly explain the results of the quantitative data (Merriam & Tisdale, 2016). Several sampling options exist for sequential explanatory models. The most may be learned from either extreme or outlier cases, significant predictors, significant results, insignificant results, demographics, or a combination these options (Creswell, 2014). Depending on the results of the quantitative strand of a study,

three potential methods for selecting qualitative participants are typical, unique, and maximum variation (Merriam & Tisdale, 2016). Typical sampling allows the lead investigator to explore a cross-section from the quantitative results (e.g., student practitioner, pre-certification practitioner, non-certified practitioner, CMPC). Unique sampling allows the lead investigator to explore highly divergent responses (e.g., members with most years of experience in the field) from the quantitative data. Maximum variation sampling allows for the investigation of those who have the widest possible range of characteristics (e.g., theoretical paradigm meets all important concepts, theoretical paradigm meets some important concepts, theoretical paradigm meets very few important concepts).

Given the explanatory function of the qualitative data, it was determined that a sample of four practitioners would be selected utilizing stratified purposeful sampling (Palinkas et al., 2015) to capture major variations in the sample. This sampling technique combines typical case sampling (i.e., highlight what is typical or average) with maximum variation sampling (i.e., highlight important shared patterns that cut across cases and derive significance emerging out of heterogeneity). Stratified purposeful sampling allowed for the rich examination of those who are satisfied with their theoretical paradigm across heterogeneous groups. The sample of four to explain the quantitative results was chosen purposefully from the participants of the quantitative portion of the study who agreed to participate in the qualitative portion of the study ( $n = 70$ ). The sample included participants who were either somewhat satisfied, satisfied, or very satisfied with their theoretical paradigms. These satisfied practitioners included one participant from the central paradigms types (i.e., assimilative integration, theoretical

integration, common factors, eclectic), participants from the three training backgrounds (i.e., sport science, psychology, both sport science and psychology), one participant who has been practicing fewer than 6 years, two who have practiced between 6-30 years, and one participant who has been practicing at least 30 years. Written consent (see Appendix C for Qualitative Consent) was required prior to participation in the interview.

### **Data Collection and Analysis Procedures**

#### **Quantitative Phase**

Quantitative data were collected using a locally developed cross-sectional instrument via online survey. The survey (see Appendix D for Theoretical Paradigm Survey) included demographic questions (e.g., gender, highest degree completed, primary training background), questions regarding type of theoretical paradigm used (e.g., single school, integrated, eclectic), theoretical paradigms used (e.g., cognitive-behavioral, psychodynamic), where theoretical paradigms developed (e.g., doctoral training, early career experiences), the components necessary for an efficacious sport psychology theoretical paradigm (e.g., cognitions, emotions, motor control), practitioner satisfaction with their theoretical paradigm, and the perceived benefit of a theoretical paradigm specific to sport psychology.

Both multivariate and univariate statistical processes were utilized to screen the data, and frequencies were used to provide descriptive statistics. Contingency table analyses were conducted to determine relationships between categorical variables. Standardized residuals were used for each statistically significant contingency table analysis, also known as a Pearson chi-square analysis. Because the omnibus chi-square value from a contingency table analysis does not specify which combination of variables

contributes to statistical significance, a standardized residual was computed for each cell in the analysis to determine which differences between observed and expected values were larger than chance (Beasley & Shumacker, 1995). Post hoc analyses of the standardized residuals were conducted by computing adjusted  $z$  scores for each cell, deriving the chi-square value for each cell, and determining the statistical significance of each cell. To control for Type I errors, post hoc analyses were conducted using Bonferroni adjusted alpha levels.

Independent between-groups ANOVAs were conducted to determine mean differences between groups. Prior to conducting each ANOVA, the assumption of normality was evaluated against acceptable skew ( $<2$ ) and kurtosis ( $<9$ ) (Schmider, Ziegler, Danay, Beyer, & Bühner, 2010), and the assumption of homogeneity of variance was tested based on Levene's  $F$  test. A Kruskal-Wallis test was conducted to determine mean differences between groups of non-parametric data. Prior to conducting each Kruskal-Wallis test, homogeneity of variance was tested using the non-parametric Levene's test (Vargha & Delaney, 1998), which was accomplished by ranking the ordinal data, ranking the means of the groups, computing the absolute difference between ranks and mean ranks of groups, and running an independent between-groups ANOVA to compare the absolute difference between groups. If the assumption of homogeneity of variance was not met, the ordinal data was transformed to reestablish homogeneity of variance (Nordstokke, Zumbo, Cairns, & Saklofske, 2011). Because the omnibus chi-square value derived from the Kruskal-Wallis test does not specify which combination of variables contributes to statistical significance, follow-up Kruskal-Wallis tests were



conducted to evaluate pairwise differences among groups. A simple linear regression was run to determine the relationship between continuous variables.

Frequencies were used to analyze the types of theoretical paradigms used by practitioners, as well as the theoretical paradigms used. A contingency table analysis was run to determine the relationship between years practicing sport psychology and the type of theoretical paradigm used by practitioners. Two ANOVAs were conducted to determine the effect of training background on concepts perceived to be integral in a theoretical paradigm for sport psychology. A Kruskal-Wallis test was used to determine if the years spent practicing sport psychology can predict practitioner satisfaction with their theoretical paradigm. A simple linear regression was run to determine if the number of theoretical paradigms integrated can predict a practitioner's satisfaction with their paradigm. Finally, three contingency table analyses were run to determine the relationship between one's paradigm incorporating important concepts and one's satisfaction with their paradigm, the relationship between a practitioner's satisfaction with their paradigm and the perception of the benefit to their practice from a theoretical paradigm specific to sport psychology, and the relationship between a practitioner's satisfaction with their paradigm and the perception of the field benefitting from a theoretical paradigm specific to sport psychology.

### **Qualitative Phase**

The qualitative phase of the study utilized a *basic qualitative* framework (Merriam & Tisdale, 2016; Percy, Kostere, & Kostere, 2015). *Basic qualitative studies* are constructivist in nature, which refers to the idea that all individuals construct reality as it interacts with his or her social worlds. Given that the lead investigator was interested

in the how sport psychology practitioners are interpreting, constructing, and attributing meaning to the use, development, and their satisfaction of theoretical paradigms in sport psychology, the *basic qualitative* nature of this study allowed for the understanding of how practitioners are making sense out of experiences regarding these areas.

Qualitative data were collected using semi-structured interviews (see Appendix E for Interview Protocol) with the selected sample. The interviews lasted between 35-62 minutes. The interviews were transcribed, and they were returned to the participants to ensure accuracy. Once returned, the transcripts were inductively coded in NVivo 12 by initial line-by-line coding, focused coding, and axial coding (Charmaz, 2014). Line-by-line coding was utilized to generate initial codes, focused coding was used to synthesize and explain the codes generated in line-by-line coding, and axial coding was utilized to reassemble the data and diagram it visually. Memos were utilized throughout the qualitative process to preliminarily explore the data and explore possible codes and themes.

## **Rigor**

### **Validity and Reliability**

In quantitative studies, validity is defined as the extent to which a concept is accurately measured (Heale & Twycross, 2015). There are several categories of validity, including content validity, construct validity, and criterion validity. Content validity refers to whether an instrument adequately covers all of the content that is should in relation to the variable(s) being measured; construct validity refers to whether one can draw inferences about the test scores related to the concept being studied; and criterion validity refers to correlations with other instruments that are designed to measure the

same variable. There are no current instruments that measure the use, development, and perceived efficacy of theoretical paradigms in sport psychology. Thus, criterion validity was not addressed. Content validity was addressed through the use of piloting the quantitative measure with current students, neophyte practitioners, and professionals within the field of sport psychology. The practitioners provided feedback regarding the content included in the measure, as well as any items that should be added to adequately cover the variables to be studied. Upon receiving feedback from the practitioners, two questions were edited for clarity, one item was added to the options for theoretical paradigms, and questions were edited via Qualtrics to be more accessible for those with physical disabilities. Theory evidence was utilized to address construct validity, particularly as it pertains to Poczwardowski et al.'s (2004) utilization of theoretical paradigms, Prochaska and Norcross's (2010) psychotherapy integration, and Rønnestad and Skovholt's (2003) theory of counselor development.

Reliability is defined as the extent to which an instrument consistently produces the same results (Heale & Twycross, 2015). Participants of the qualitative portion of the interview were originally scheduled to be given the quantitative measure immediately prior to the qualitative interview to test the stability of the measure, as well as refreshing them on the phenomena explored in the qualitative portion of the study. However, due to confidentiality concerns, it was determined that the online survey would be separate from the agreement to participate in the qualitative portion of the survey. Thus, qualitative participant quantitative data was not accessible to test the stability of the measure.

**Trustworthiness**

Trustworthiness is the aspect of qualitative research that separates it from anecdotes or journalism (Nutt Williams & Morrow, 2009). Trustworthiness, often compared to quantitative validity, is the extent to which the phenomenon is accurately reflected in a qualitative study. The trustworthiness of this study was enhanced using several strategies. The first strategy to enhance the trustworthiness of the study was member checks. Member checks were utilized to enhance the credibility of the proposed study by taking the coding and emerging themes back to the participants to determine that they plausibly reflected the participants' lived experiences (Merriam & Tisdell, 2014). The second strategy to increase credibility in this study is positioning, which entails the lead investigator describing the background and views held by the lead investigator, and how the lead investigator may provide a unique position on the research (Morrow, 2005; see Appendix F for Lead Investigator Researcher-as-instrument Statement). The third strategy to increase credibility was the bracketing interview and statement of bias (Pollio, Henley, & Thompson, 1997). A bracketing interview is completed by the lead investigator participating in the qualitative interview. The interview allows the investigator to engage in self-reflection of the phenomenon to be investigated as well as involvement, knowledge, and presuppositions concerning the phenomenon. The bracketing interview was transcribed and analyzed to determine any biases, which are not necessarily negative for the research (Pollio et al, 1997), concerning the phenomenon to be studied. After the transcription of the bracketing interview was analyzed, a bias statement was produced that summarizes the lead investigator's biases. The final strategy to increase credibility is peer review. The lead investigator utilized experts in the field of

psychological theory and sport psychology to determine if the findings were plausible. The disclosure of the lead investigator's position, peer review, and the use of auditing were conducted to enhance consistency. A detailed journal that included how data were collected, how categories were derived, and how decisions were made allow for the study to be audited. Rich, thick descriptions were used to enhance transferability. Transferability was also enhanced by the use of stratified purposeful sampling (Palinkas et al., 2015) for the qualitative data.

### **Data Integration**

Integrating quantitative and qualitative data can considerably increase the value to mixed methods research (Creswell & Plano Clark, 2011). Creswell and Plano Clark (2011) conceptualize data integration in mixed methods studies as linking the methods of data collection and analysis, which can occur through connecting (e.g., utilizing quantitative participants in qualitative interviews), building (e.g., developing an interview guide based on quantitative results), merging (i.e., combining the quantitative and qualitative data for examination and comparison), and embedding (i.e., linking qualitative and quantitative data at multiple points). This study linked the methods of data collection and analysis through the use of connecting, building, and merging. Connecting was applied by purposefully selecting qualitative participants from the quantitative data set that allowed for the richest explanation of the quantitative data. Building was employed by informing the qualitative interview guide from the quantitative results. Merging was used by bringing the quantitative and qualitative databases together for analysis and comparison. Given that the quantitative data were weighted stronger than the qualitative data, the qualitative results were organized vis-à-vis the quantitative results. Qualitative

themes that were either dissonant or diverged from the quantitative results were allowed to emerge to honor the constructivist aspect of this study (Green & Hall, 2010).

Data can also be integrated at the interpretation and reporting level through three different approaches: (1) narrative integration, (2) data transformation integration, and (3) joint display integration (Fetters, Curry, & Creswell, 2013). Narrative integration, as it pertains to this study, involves either weaving quantitative and qualitative data together on a theme-by-theme basis, or presenting the quantitative and qualitative data in separate sections. Data transformation integration involves transforming either qualitative data into quantitative data or transforming quantitative data into qualitative data. The transformed data are then integrated into the data that have not been transformed. Joint display integration occurs through bringing the quantitative and qualitative data together through visual means. This study employed narrative integration by weaving the two datasets together on a concept-by-concept basis (i.e., concepts derived from quantitative results) in the discussion section. Joint display integration was also used to visually represent the data by using tables to display quantitative results, relevant qualitative themes informing the coherence (i.e., confirmation, expansion, or discordance) to the quantitative results, and example quotations that provide richness to the qualitative themes. The attention provided to integration at the design, methods, interpretation, and reporting stages of this research was a central focus of this study to enhance the quality of the evidence on the use, development, and practitioner satisfaction with theoretical paradigms in the field of sport psychology.

#### Chapter 4: Participants and Results

This chapter presents the quantitative and qualitative participants and findings. More specifically, this section begins with a review of the demographic information of the sport psychology practitioners who participated in the quantitative portion of the study. The section then describes the following findings on the use, development, and practitioner satisfaction of theoretical paradigms in the field of sport psychology: 1) a frequency analysis of the types of theoretical paradigms used, and the theoretical paradigms used; 2) a contingency table analysis of the relationship between years practicing sport psychology and the type of theoretical paradigm used; 3) two ANOVAs on the effect of training background on the perception of concepts vital to a practitioner's paradigm; 4) a Kruskal-Wallis test on the years spent practicing sport psychology and practitioner satisfaction with their theoretical paradigm; 5) a simple-linear regression on the number of paradigms integrated and practitioner satisfaction with their paradigm; and 6) three contingency table analyses on the inclusiveness of practitioner's paradigms and satisfaction with the paradigm, satisfaction with the paradigm and the perceived benefit to an individual's practice from a sport psychology specific theoretical paradigm, and satisfaction with the paradigm and the perceived benefit to the field of a sport psychology specific theoretical paradigm.

The section reviews the demographic information of the participants of the qualitative portion of the study and provides richness and depth in explaining the quantitative results on the use, development, and practitioner satisfaction of theoretical paradigms in sport psychology. Specifically, the qualitative results section explores the following: (1) the types of paradigms (i.e., assimilative integration, theoretical

integration, common factors, eclecticism) used and the paradigms (e.g., CBT, ACT, humanistic) used within those types; (2) how practitioners are integrating the paradigms; (3) when paradigms are being developed; (4) the factors that impact paradigm development (e.g., performance background, mentors, personal therapy); (5) how one's training background (e.g., sport science, psychology) impacts the development of theoretical paradigm development; and (6) what impacts practitioner satisfaction with their own paradigm? The section also provides an exploration into the added qualitative research question "are practitioners satisfied with the state of theoretical paradigms in the field of sport psychology?" More specifically, the qualitative portion of the study sought to explore practitioner satisfaction with the education, research, and development of theoretical paradigms in the field. The qualitative results section reviews the higher order themes generated from axial coding, the themes generated from focused coding of each higher order theme, and prototypical quotes that provide insight into the research questions.

Lastly, this chapter concludes with the integration of the quantitative and qualitative data. This section begins with an argument for the philosophical shift in the weighting of the quantitative and qualitative data as the study unfolded. Next, the quantitative and qualitative data are integrated through narrative integration and joint display integration (Fetters, Curry, & Creswell, 2013). The meta-themes derived from the qualitative data are integrated with the specific research questions associated with the quantitative results for organizational purposes. Qualitative themes that diverged from the quantitative are also presented in an effort to hold the dialectical tensions between the postpositivist and constructivist paradigms present within the study.



### **Demographics of Quantitative Participants**

The participants for this study were practitioners of sport psychology. Unlike other studies (e.g., Rosen & Lipkins, 2016), this study purposefully recruited participants of all different educational levels, and participants who were both certified (i.e., CMPC) and uncertified. The study used convenience sampling through one of the most prominent listservs, Temple University's Sportpsy listserv, and the AASP membership directory. Participants were recruited via email (see Appendix G for Quantitative Recruitment Email). The quantitative portion of the study examined the use, development, and practitioner satisfaction of theoretical paradigms in sport psychology utilizing a cross-sectional web-based survey (see Appendix D for Theoretical Paradigm Survey). Survey respondents were asked to report demographic information, indicate the type of theoretical paradigm they use, the theoretical paradigm(s) they use, when their theoretical paradigm developed, what components are advised to be included in a theoretical paradigm for sport psychology, their satisfaction with their theoretical paradigm, the potential benefits of a paradigm specific to sport psychology, and if they would be willing to participate in the qualitative portion of the study.

Participating sport psychology practitioners ( $n = 170$ ) were comprised of 55.9% women ( $n = 95$ ) and 44.1% men ( $n = 75$ ). The highest degree earned of 14.7% of participants was an undergraduate degree ( $n = 25$ ), 44.1% of participants had earned a master's degree ( $n = 75$ ), and 41.2% had earned a doctorate ( $n = 70$ ). Training backgrounds of the participants included primarily sport science/kinesiology (14.1%,  $n = 24$ ), primarily psychology (48.2%,  $n = 82$ ), both sport science and psychology (37.6%,  $n = 64$ ), and other (i.e., coaching, 0.6%,  $n = 1$ ). Three other participants listed other primary

training backgrounds. One participant reported a marriage and family therapy training background, and one participant reported a psychotherapy training background. These participants were added to the primarily psychology training background group. One participant reported a training background in sport science and counseling and was added into the both sport science and psychology training background group. Of the 170 participants, 14.1% were currently master's students ( $n = 24$ ), 24.1% were currently doctoral students ( $n = 41$ ), 58.8% had completed their formal education ( $n = 100$ ), and 2.9% had an educational status that was not listed (e.g., accepted into doctoral program) ( $n = 5$ ). Participating practitioners reported receiving a variety of licenses and certifications including CMPC (29.4%,  $n = 50$ ), licensed or certified counselor (10.0%,  $n = 17$ ), licensed or chartered psychologist (13%,  $n = 22$ ), licensure in another healthcare profession (3.6%,  $n = 6$ ), and other licensures or certifications (e.g., certified personal trainer) (5.3%,  $n = 9$ ). Fifty-three and a half percent of participants reported no licensure or certifications ( $n = 91$ ). Of the 170 participants, 35.9% practiced sport psychology 1-20% of their professional time ( $n = 61$ ), 27.1% practiced 21-40% of the time ( $n = 46$ ), 15.3% practiced 41-60% of the time ( $n = 26$ ), 7.6% practiced 61-80% of the time ( $n = 13$ ), and 14.1% practiced 81-100% of the time ( $n = 24$ ). See Table 2 for full demographic information.

Table 2

*Quantitative Participant Demographics*

Variable	<i>n</i>	%	Variable	<i>n</i>	%
<i>Gender</i>			<i>Training Background</i>		
Man	95	55.9	SS	24	14.1
Woman	75	44.1	Psychology	82	48.2
<i>Country Practicing</i>			SS/K & Psychology	64	37.6
United States	164	96.5	<sup>c</sup> Other	4	0.6
Britain	2	1.2	<i>Years Practicing</i>		
Belgium	1	0.6	<6	84	49.9
Canada	1	0.6	6-10	42	24.7
Germany	1	0.6	11-15	12	7.1
Mexico	1	0.6	16-20	7	4.1
<i>Highest Degree</i>			21-25	10	5.9
Undergraduate	25	14.7	26-30	6	3.5
Masters	75	44.1	>31	9	5.3
Doctorate	70	41.2	<i>Licensure/Certification</i>		
<i>Current Ed. Status</i>			CMPC	50	29.4
Current Masters	24	14.1	L/C Counselor	17	10.0
Current Doctoral	41	24.1	L/C Psychologist	22	13.0
Completed Ed.	100	58.8	None	91	53.5
<sup>a</sup> Other	5	2.9	<sup>d</sup> Other Healthcare	6	3.6
<i>Primary Employment</i>			<sup>c</sup> Other	9	5.3
Academia	28	16.5	<i>% Time Practicing SP</i>		
Team/Organization	15	8.8	1-20	61	35.9
Private Practice	38	22.4	21-40	46	27.1
University AD	15	8.8	41-60	26	15.3
Student	52	30.6	61-80	13	7.6
University CC	13	7.6	81-100	24	14.1
<sup>b</sup> Other	8	4.7			

*Note.* *n* = number of participants; SS/K = sport science/kinesiology; CMPC = AASP Certified Mental Performance Consultant; L/C = licensed or certified; AD = athletic department; CC = Counseling Center; SP = sport psychology

<sup>a</sup> Other current educational statuses: applying to graduate school; applying to doctorate; soon to be masters student; soon to be doctoral student; graduate certificate student

<sup>b</sup> Other primary employment setting: coach; government; hospitality; military contract ( $n = 3$ ); performance academy; sports medicine

<sup>c</sup> Other primary training backgrounds: coaching; marriage and family therapy (added into primarily psychology); psychotherapy (added into primarily psychology); sport science & counseling (added into both sport science/kinesiology and psychology)

<sup>d</sup> Licensed or certified in another healthcare profession: addiction counselor; athletic training; licensed clinical social worker ( $n = 2$ ); licensed marriage and family therapist; certificate of registration as a psychological associate

<sup>e</sup> Other licensure or certification: chartered psychologist; Finnish Psychological Association certified mental performance coach; certified in Mexico; certified personal trainer ( $n = 3$ ); certified strength & conditioning specialist; certified national speed and explosion specialist; physical education teacher

### Quantitative Results

This study primarily sought to answer the following research questions: (1) What are the current theoretical paradigms utilized by sport psychology practitioners?; (2) How were these theoretical paradigms developed over time?; and (3) Are practitioners satisfied with the current theoretical paradigms utilized in sport psychology? In addition, several sub-questions were employed to answer these questions more specifically.

First, to determine the use of theoretical paradigms, the study sought to answer the following questions: (1) what types of theoretical paradigms are practitioners using (e.g., single school, integrated, pure eclectic)?; (2) if practitioners are using integration, what types of integration are they using (e.g., theoretical integration, assimilative integration, common factors)?; and (3) what theoretical paradigms (e.g., CBT, ACT, humanistic) are practitioners using?

Next, to determine the how these types of paradigms and paradigms were developed over time by practitioners, this study sought to answer the following: (1) at what point in practitioner development are theoretical paradigms developed?; (2) is there a relationship between the years spent practicing sport psychology and the type of theoretical paradigm practitioners use?; and (3) how does one's training background

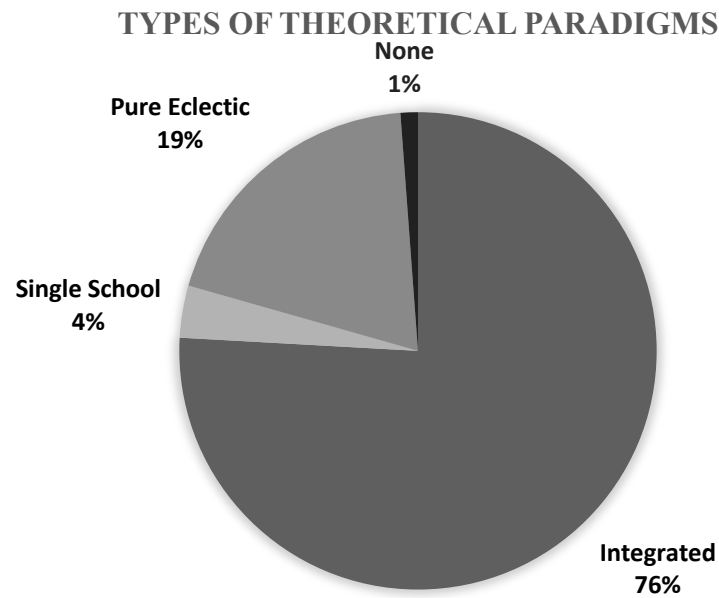
affect what principles are perceived to be important to be included in a theoretical paradigm?

Finally, the following questions were used to determine practitioner satisfaction with theoretical paradigms: (1) are practitioner's satisfied with their theoretical paradigm?; (2) would practitioners' practice benefit from a theoretical paradigm specific to sport psychology?; (3) do practitioners believe that the field would benefit from a paradigm specific to sport psychology?; (4) does the time spent practicing sport psychology affect a practitioner's satisfaction with their paradigm?; (5) does the amount of paradigms used affect a practitioner's satisfaction with their paradigm?; (6) is there a relationship between the perception that a practitioner's theoretical paradigm addresses important concepts and satisfaction with their theoretical paradigm?; (7) is there a relationship between practitioner satisfaction with their theoretical paradigm and the belief that a paradigm specific to sport psychology would benefit their practice?; and (8) is there a relationship between practitioner satisfaction with their theoretical paradigm and the belief that a paradigm specific to sport psychology would benefit the field?

### **Use of Theoretical Paradigms**

Participants were provided with definitions of the three types of theoretical paradigms (i.e., single school, integrated, pure eclectic) and the four types of integration types (i.e., theoretical integration, assimilative integration, common factors, technical eclecticism). Participants were asked to identify their theoretical paradigm type based on the definitions provided. If participants selected that they use an integrated paradigm, they were asked to select the type of integration they use based on the definitions of the types of integrative paradigms.

Frequency analysis was employed to examine the types of theoretical paradigms used by sport psychology practitioners. The majority of practitioners reported using an integrated theoretical paradigm ( $n = 129$ ), followed by a pure eclectic paradigm ( $n = 33$ ), single school paradigm ( $n = 6$ ), and no theoretical paradigm ( $n = 2$ ) (see Figure 2). Of those reporting an integrative theoretical paradigm, assimilative integration was the most commonly utilized ( $n = 57$ ), followed by theoretical integration ( $n = 42$ ), common factors ( $n = 22$ ), and technical eclecticism ( $n = 8$ ) (see Figure 3).



*Figure 2.* Types of theoretical paradigms utilized by sport psychology practitioners.

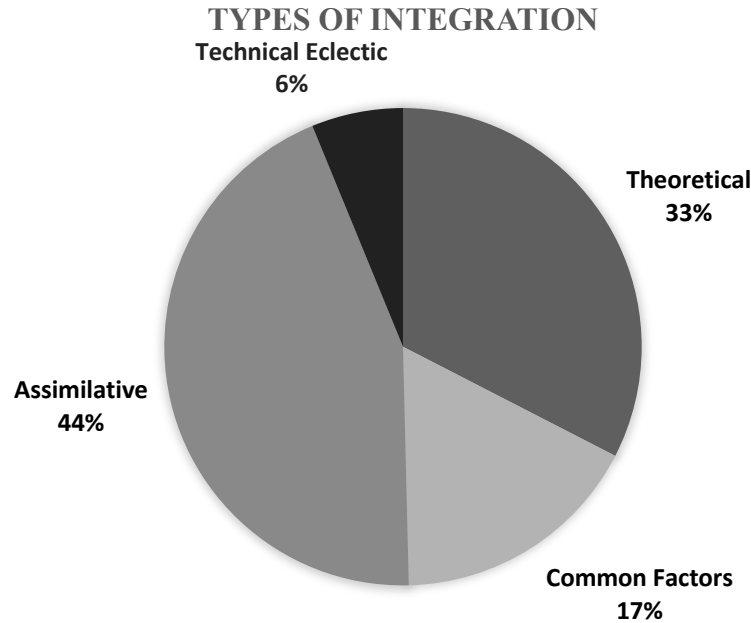


Figure 3. Types of integration used by sport psychology practitioners.

Participants were provided with a list, or multiple lists, of well-known theoretical paradigms (e.g., CBT, psychodynamic) to choose from based on their responses to the questions regarding paradigm type and type of integration. Participants were also allowed a write-in option if their paradigm was not listed (see Appendix D for Theoretical Paradigm Survey). For example, if participants chose that they used a *single school* paradigm, then they were allowed to choose the theoretical paradigm they used from the list. If the participant did not utilize one of the 14 paradigms listed (e.g., dialectical behavior therapy), they could write-in that option. If participants selected that they used an *assimilative integration* paradigm, then they were allowed to choose the primary theoretical paradigm from the list. They were then provided with the same list and were allowed to select all theoretical paradigms assimilated into the primary theoretical paradigm.

A frequency analysis was utilized to examine the paradigms used by sport psychology practitioners. Participants reported that they used 689 theoretical paradigms for an average of 4.72 theoretical paradigms per practitioner. The most common theoretical paradigm used was CBT, with 85.6% of practitioners reporting that they incorporate CBT in their practice ( $n = 125$ ). Every practitioner who reported using a pure eclectic paradigm, reported that they pulled from CBT. CBT was also the most widely used primary paradigm in assimilative integration, the most widely used secondary paradigm in assimilative integration, the most used paradigm in theoretical integration, and tied for the most widely used paradigm by those employing technical eclecticism.

The second most used paradigm reported was ACT, with 63.0% of practitioners reporting that they use ACT in their practice ( $n = 92$ ). Although only six participants reported using a single school paradigm, ACT was the only paradigm reported to be the only paradigm in use by more than one participant ( $n = 2$ ). The third most used paradigm reported was humanistic, with 62.3% of practitioners reporting that they use humanistic theory in theory in their practice ( $n = 91$ ). Although humanistic theory did not lead in any theoretical paradigm type, it was the second most reported paradigm to be used as an assimilated paradigm ( $n = 23$ ), the second most theoretically integrated paradigm ( $n = 26$ ), and the second most reported paradigm used by individuals practicing with pure eclecticism ( $n = 29$ ). IPT was the fourth most utilized paradigm (41.1%,  $n = 60$ ), followed by systems theory (36.3%,  $n = 53$ ), behavioral theory (33.6%,  $n = 49$ ), cognitive theory (28.8%,  $n = 42$ ), EFT (26.0%,  $n = 38$ ), psychodynamic theory (24.7%,  $n = 36$ ), existential theory (23.3%,  $n = 34$ ), gestalt theory (11.0%,  $n = 16$ ), and psychoanalytic



theory (4.8%,  $n = 7$ ). Several other paradigms, models, and theories were written in by participants. For the full list of theoretical paradigm use by paradigm type see Table 3).

Table 3

*Theoretical Paradigms Used by Paradigm Type*

Paradigm	AP	AS	TI	PE	TE	SS	Total
CBT	21	30	34	33	6	1	125
ACT	18	22	23	22	5	2	92
Humanistic	6	23	26	29	6	1	91
IPT	3	17	17	21	2		60
Systems		19	18	16			53
Behavior		13	13	19	3	1	49
Cognitive		12	11	16	3		42
EFT		15	11	11	1		38
Psychodynamic	2	7	16	10	1		36
Existential	1	12	9	12			34
Gestalt		6	2	8			16
Psychoanalytic		1	1	5			7
†DBT		2	1	2			5
†SDT		2		2	1		5
†Positive psychology		1	3	1			5
†Solution focused		3	1	1			5
†Mindfulness	1	2					3
†MI		1	2				3
†Relational Cultural	1	1	1				3
†Phenomenology	1			1			2
††Other	4	3	4	2	1	1	15
Total	58	192	193	214	29	6	689

*Note.*  $n = 146$ . AP = assimilative primary; AS = assimilative secondary; TI = theoretical integration; PE = pure eclecticism; TE = technical eclecticism; SS = single school; CBT = cognitive-behavioral theory; ACT = acceptance-commitment theory; IPT = interpersonal process theory; EFT = emotion focused theory; DBT = dialectical behavior theory; SDT = self-determination theory; MI = motivational interviewing.

†Paradigms, models, or theories written in by more than one participant.

††Other paradigms, models, or theories used: achievement motivation, adaptive information processing, electric kinesthetic psychotherapeutic imagery, feminist/critical

theories, internal family systems, intrinsic motivation, multicultural theories, postmodernism, social cognitive theory, social therapy, social-psychological perspectives, somatic psychology

Overall, the participants overwhelmingly identified with either an integrated approach. Of the 170 participants, only 6 identified with a single school paradigm. In other words, the vast majority sport psychology practitioners are using more than one theoretical paradigm when working with athletes. Predictably, CBT was the most common theoretical paradigm used by practitioners, but ACT and humanism were also highly utilized. Overall, 45 different paradigms, models, or theories were identified by participants, which indicates that the field is relatively fragmented regarding the use of theoretical paradigms.

### **Development of Theoretical Paradigms**

Participants were asked to report the percentage of the development of their theoretical paradigm they attributed certain developmental periods (i.e., prior to university, undergraduate, master's, doctoral, early-career, mid-career, late-career). Total percentages were required to total 100. For example, if a participant attributed 100% of his/her theoretical paradigm development to his/her master's program, he/she would enter 100 into the associated text box. If a participant equally attributed his/her paradigm development to all stages of his/her development, then he/she would enter 14 in six of the boxes and 15 in two.

A descriptive analysis was conducted to determine stages in a practitioner's career at which theoretical paradigms are developed and found that participants developed their theoretical paradigms across all portions of their careers. On average, practitioners attributed 2.60% [ $SD = 7.07$ , range: 0-50, 95% CI (1.66, 3.88)] of their paradigms

development to the developmental stage prior to entering university, 10.53% [ $SD = 18.76$ , range: 0-100, 95% CI (13.54, 23.33)] to the undergraduate stage, 36.02% [ $SD = 29.36$ , range: 0-100, 95% CI (31.81, 40.41)] to the master's program stage, 28.44% [ $SD = 29.50$ , range: 0-100, 95% CI (24.17, 32.93)] to the doctoral program stage, 13.79% [ $SD = 20.10$ , range: 0-100, 95% CI (10.89, 17.04)] to the early-career stage, 5.12% [ $SD = 11.91$ , range: 0-80, 95% CI (3.47, 7.00)] to the mid-career stage, and 2.76% [ $SD = 11.30$ , range: 0-92, 95% CI (1.27, 4.70)] to the late-career stage. Given that this study included practitioners of all levels of development, further analysis was warranted to determine to account for the time practitioners had spent practicing in the field.

Thus, a descriptive analysis was conducted to examine the percentage of each stage's contribution to practitioners' theoretical paradigms by years spent practicing sport psychology. Results indicated that master's training was the most influential period in the development of theoretical paradigms for those who had been practicing five years or less ( $n = 84$ ,  $M = 50.89\%$ ,  $SD = 30.35$ ) (See Table 4). Doctoral training was identified as the most influential period for development for those who had been practicing more than five years: 6-10 years ( $n = 42$ ,  $M = 41.79\%$ ,  $SD = 28.39$ ), 11-15 years ( $n = 12$ ,  $M = 29.59\%$ ,  $SD = 29.11$ ), 16-20 years ( $n = 7$ ,  $M = 42.14\%$ ,  $SD = 21.58$ ), 21-25 years ( $n = 9$ ,  $M = 28.33\%$ ,  $SD = 25.50$ ), 26-30 years ( $n = 6$ ,  $M = 34.17\%$ ,  $SD = 11.14$ ), and more than 31 years ( $n = 9$ ,  $M = 35.78\%$ ,  $SD = 30.89$ ). It is worth noting that the highest percentage of development attributed to prior to undergraduate training was by individuals who had practiced between 21-25 years ( $M = 4.44\%$ ,  $SD = 6.35$ ), the highest percentage attributed to undergraduate training were those who practiced five years or less ( $M = 15.95\%$ ,  $SD = 22.94$ ), the highest percentage attributed to early-career experience were those who

practiced 16-20 years ( $M = 22.86\%$ ,  $SD = 12.53$ ), the highest percentage attributed to mid-career experience were those who practiced 21-25 years ( $M = 18.33\%$ ,  $SD = 25.62$ ), and the highest percentage attributed to late-career experience were those who had practiced at least 31 years ( $M = 24.00\%$ ,  $SD = 35.68$ ).

Table 4

*Time of Development by Years Practicing*

Development	<6	6-10	11-15	16-20
	( $n = 84$ )	( $n = 42$ )	( $n = 12$ )	( $n = 7$ )
	$M (SD)$	$M (SD)$	$M (SD)$	$M (SD)$
Prior to Undergrad	2.56 (6.33)	3.69 (10.00)	.83 (2.89)	
Undergrad	15.95 (22.94)	3.33 (6.69)	12.08 (23.69)	2.14 (3.93)
Master's	<b>50.89 (30.35)</b>	27.14 (18.52)	18.33 (23.19)	10.00 (8.66)
Doctoral	19.29 (29.25)	<b>41.79 (28.39)</b>	<b>29.58 (29.11)</b>	<b>42.14 (21.58)</b>
Early-Career	7.44 (16.07)	20.83 (22.84)	21.25 (29.55)	22.86 (12.53)
Mid-Career	1.85 (7.10)	3.21 (9.29)	9.58 (16.85)	17.14 (11.13)
Late-Career	.54 (2.20)		8.33 (19.46)	5.71 (9.76)

Development	21-25	26-30	>30
	( $n = 9$ )	( $n = 6$ )	( $n = 9$ )
	$M (SD)$	$M (SD)$	$M (SD)$
Prior to Undergrad	4.44 (6.35)	3.33 (8.12)	
Undergrad	8.33 (8.66)	7.50 (11.73)	2.22 (4.41)
Master's	22.22 (22.24)	19.17 (18.55)	7.44 (11.89)
Doctoral	<b>28.33 (25.50)</b>	<b>34.17 (11.14)</b>	<b>35.78 (30.89)</b>
Early-Career	13.89 (11.40)	14.17 (13.57)	22.78 (25.31)
Mid-Career	18.33 (25.62)	17.5 (13.69)	7.78 (12.11)
Late-Career	4.44 (9.17)	4.17 (5.85)	24.00 (35.68)

*Note.* Means are in percentages. Bold = largest percentage of paradigm development.

It is also important to note that those who have practiced 10 years or less may not have completed training, let alone had late-career experiences. Therefore, the aforementioned results must be considered with the following information. Of those who

had practiced five years or less, 27.4% ( $n = 23$ ) were current master's students; 29.8% ( $n = 25$ ) were current doctoral students; 36.9% ( $n = 31$ ) had completed their education; and 1.2% ( $n = 1$ ) were applying to grad school, applying to doctorate programs, accepted into a master's program, and accepted into a doctoral program. Of these practitioners, and undergraduate degree was the highest degree earned for 28.6% ( $n = 24$ ), a master's degree was the highest degree earned for 58.3% ( $n = 49$ ), and a doctorate was the highest degree earned for 13.1% ( $n = 11$ ). Of those who had practiced 6-10 years, 2.4% ( $n = 1$ ) were current master's students, 31.0% ( $n = 13$ ) were current doctoral students, and 66.7% ( $n = 28$ ) had completed their education.

A 5x7 contingency table analysis was run to determine if a relationship exists between years spent practicing sport psychology and the type of theoretical paradigm (e.g., single school, assimilative integration) used. The relationship between these variables was not significant [ $\chi^2(36, 169) = 34.48, p = .541$ ]. A standardized residual for each cell was used to determine if any differences between observed and expected values were larger than chance. A post hoc analysis of the residuals was conducted by computed adjusted  $z$  scores for each cell, deriving the chi-square value for each cell, and determining the statistical significance for each cell. To control for Type I errors to an  $\alpha = .05$  in a contingency table of 35 cells, post hoc analysis was conducted using a Bonferroni adjusted  $\alpha = .001$ . No cells were statistically significant when compared with the Bonferroni adjusted alpha, with the closest being pure eclecticism by those practicing 26-30 years ( $p = .002$ ).

As part of the demographic portion of the survey, participants were asked to identify their primary training background. Participants were given the option to select

that they had either a sport science/kinesiology, psychology, both sport science and psychology, or another (write-in option) primary training background. Later in the survey, participants were asked to identify the percentage (total must equal 100%) of psychology, sport science, and other (write-in) principles a sport psychology practitioner's theoretical paradigm should include.

An independent between-groups ANOVA was conducted to compare the effect of training background on the advised percentage of psychological principles in a sport psychology practitioner's theoretical paradigm among individuals primarily trained in psychology, sport science/kinesiology, and both psychology and sport science. Prior to conducting the ANOVA, the assumption of normality was evaluated and determined to be satisfied as the three groups' distributions were associated with a skew and kurtosis less than 2.0 and 9.0 respectively (Schmider, Ziegler, Danay, Beyer, & Bühner, 2010; see Table 5). Furthermore, the assumption of homogeneity of variances was tested and satisfied based on Levene's  $F$  test [ $F(2, 158) = 1.45, p = .238$ ].

Table 5

*Percentage of Psychological Principles by Training Background*

Training Background	N	M	SD	Skew	Kurtosis
Primarily psychology	79	69.80%	17.19	-.743	1.29
Primarily sport science	21	49.24%	23.00	-.199	.113
Both psych and sport science	61	65.90%	14.68	-.024	-.638

The independent between-groups ANOVA yielded a statistically significant effect [ $F(2, 158) = 17.22, p = <.001, \eta_p^2 = .179$ ]. Thus, the null hypothesis of no differences between the groups was rejected, and 17.9% of the variance in the advised percentage of psychological principles in a sport psychology practitioner's theoretical paradigm was

accounted for by primary training background. To evaluate the nature of the differences between the three means further, the statistically significant ANOVA was followed-up with three Tukey's HSD post-hoc tests. The difference between the primarily psychology training background group and the psychology and sport science training background group was statistically significant [ $t(138) = 2.82, p = .006$ ], and had a medium effect size ( $d = .48$ ) (Cohen, 1992). The difference between the primarily psychology training background group and the primarily sport science/kinesiology training background group was statistically significant [ $t(98) = 5.37, p < .001$ ], and had a large effect size ( $d = 1.08$ ). Finally, the difference between the psychology and sport science training background group and the primarily sport science/kinesiology group was statistically significant [ $t(80) = 3.84, p < .001$ ], and had a large effect size ( $d = .86$ ).

An independent between-groups ANOVA was conducted to compare the effect of training background on the advised percentage of sport science principles in a sport psychology practitioner's theoretical paradigm among individuals primarily trained in psychology, sport science/kinesiology, and both psychology and sport science. Prior to conducting the ANOVA, the assumption of normality was evaluated and determined to be satisfied as the three groups' distributions were associated with a skew and kurtosis less than 2.0 and 9.0 respectively (Schmider et al., 2010; see Table 5). Additionally, the assumption of homogeneity of variances was tested and satisfied based on Levene's  $F$  test [ $F(2, 158) = 2.73, p = .068$ ].

Table 6

*Percentage of Sport Science Principles by Training Background*

Training Background	N	M	SD	Skew	Kurtosis
Primarily psychology	79	23.76%	14.36	.118	-.634
Primarily sport science	21	50.71%	22.43	.381	.076
Both psych and sport science	61	32.38%	14.16	.138	-.535

The independent between-groups ANOVA yielded a statistically significant effect [ $F(2, 158) = 25.63, p < .001, \eta_p^2 = .245$ ]. Thus, the null hypothesis of no differences between the groups was rejected, and 24.5% of the variance in the advised percentage of sport science principles in a sport psychology practitioner's theoretical paradigm was accounted for by primary training background. To evaluate the nature of the differences between the three means further, the statistically significant ANOVA was followed-up with three Tukey's HSD post-hoc tests. The difference between the primarily sport science/kinesiology training background group and the both psychology and sport science training background group was statistically significant [ $t(80) = 4.36, p < .001$ ], and had a large effect size ( $d = .98$ ) (Cohen, 1992). The difference between the psychology and sport science training background group and the primarily psychology training background group was statistically significant [ $t(138) = 3.54, p = .001$ ], and had a medium effect size ( $d = .60$ ). Finally, the difference between the primarily sport science/kinesiology training background group and the primarily psychology training background group was statistically significant [ $t(98) = -6.72, p < .001$ ], and had a large effect size ( $d = 1.36$ ).

Taken together, these results suggest that one's training background significantly impacts the perceived principles that should be included in a sport psychology



practitioner's theoretical paradigm. Specifically, the results suggest that individuals that have some formal training in psychology will gravitate toward principles of psychology over principles of sport science more than their colleagues who have been primarily trained in sport science/kinesiology.

### **Satisfaction with Theoretical Paradigms**

Frequency and descriptive analyses were run to determine practitioner satisfaction with their theoretical paradigm, if they believed that their practice would benefit from a theoretical paradigm specific to sport psychology, and if they believed the field of sport psychology would benefit from a paradigm specific to sport psychology. These areas were measured using a 7-point Likert scale with "1" strongly disagreeing and "7" strongly agreeing. On average, practitioners were satisfied with their paradigms ( $n = 162$ ,  $M = 5.62$ ) (see Table 7), with 27.6% ( $n = 47$ ) being very satisfied with their theoretical paradigm, 35.3% ( $n = 60$ ) being satisfied, 18.8% ( $n = 32$ ) being somewhat satisfied, 4.1% ( $n = 7$ ) being neither satisfied nor dissatisfied, 4.1% ( $n = 7$ ) being somewhat dissatisfied, 2.4% ( $n = 4$ ) being dissatisfied, 2.9% ( $n = 5$ ) being very dissatisfied, and 4.7% ( $n = 8$ ) of participants did not respond to the question. Practitioners on average somewhat agreed that their practice would benefit from a theoretical paradigm specific to sport psychology ( $n = 161$ ,  $M = 4.98$ ) with 14.1% ( $n = 24$ ) strongly agreeing, 29.4% ( $n = 50$ ) agreeing, 18.2% ( $n = 31$ ) somewhat agreeing, 20.0% ( $n = 34$ ) neither agreeing nor disagreeing, 2.9% ( $n = 5$ ) somewhat disagreeing, 6.5% ( $n = 11$ ) disagreeing, 3.5% ( $n = 6$ ) strongly disagreeing, and 5.3% ( $n = 9$ ) of participants did not respond to the question. On average, practitioners also somewhat agreed that the field would benefit from a theoretical paradigm specific to sport psychology ( $n = 163$ ,  $M = 5.12$ ) with 18.8% ( $n = 32$ ) strongly

agreeing, 29.4% ( $n = 50$ ) agreeing, 18.8% ( $n = 32$ ) somewhat agreeing, 15.9% ( $n = 27$ ) neither agreeing nor disagreeing, 4.1% ( $n = 7$ ) somewhat disagreeing, 4.1% ( $n = 7$ ) disagreeing, 4.7% ( $n = 8$ ) strongly disagreeing, and 4.1% ( $n = 7$ ) did not respond to the question.

Table 7

*Satisfaction with Theoretical Paradigms*

	<i>n</i>	<i>M (SD)</i>	<i>95% CI</i>
Paradigm Satisfaction	162	5.62 (1.45)	[5.39, 5.84]
Practice would Benefit	161	4.98 (1.57)	[4.71, 5.23]
Field would Benefit	163	5.12 (1.61)	[4.85, 5.36]

*Note.* CI = confidence interval. Means are based on 7-point Likert scale with 1 = strongly disagree, 3 = somewhat disagree, 5 = somewhat agree, and 7 = strongly agree.

A Kruskal-Wallis test was conducted to evaluate differences among sport psychology practitioners' years practicing sport psychology (e.g., <6, 6-10, 11-15, 16-20, 21-25, 26-30, >30) on median change in the satisfaction of their theoretical paradigm. Prior to conducting the Kruskal-Wallis test, homogeneity of variance was tested using the non-parametric Levine's test (Vargha & Delaney, 1998). This was accomplished by ranking the satisfaction data, ranking the means of the groups, computing the absolute difference between ranks and mean ranks of groups, and running an independent between-groups ANOVA to compare the absolute difference scores between groups. The assumption of homogeneity of variance was not met [ $F(6, 162) = 7.87, p > .001$ ]. Therefore, the satisfaction data was transformed to reestablish homogeneity of variance [ $F(6, 162) = 2.15, p = .051$ ] (Nordstokke et al., 2011). Follow-up Kruskal-Wallis tests were conducted to evaluate pairwise differences among groups.

The Kruskal-Wallis test, which was corrected for homogeneity of variance, to evaluate differences among sport psychology practitioners' years practicing sport psychology on the median change in the satisfaction of their theoretical paradigm was significant [ $\chi^2(6, 162) = 38.39, p < .001$ ]. Thus, the null hypothesis of no differences between the groups was rejected, and 23.8% of the variance in the satisfaction with theoretical paradigm was accounted for by years spent practicing in the field.

Follow-up Kruskal-Wallis tests were conducted to evaluate pairwise differences among the seven groups, and several tests were significant (see Table 6). Practitioners practicing five years or less were less satisfied with their theoretical paradigm than those practicing 6-10 years [ $\chi^2(2, 121) = 15.36, p < .001, r = .138$ ], 11-15 years [ $\chi^2(2, 91) = 5.30, p = .021, r = .058$ ], 16-20 years [ $\chi^2(2, 88) = 6.85, p = .009, r = .078$ ], 21-25 years [ $\chi^2(2, 90) = 8.33, p = .004, r = .094$ ], and 31 years or more [ $\chi^2(2, 90) = 19.27, p < .001, r = .217$ ]. Practitioners practicing 6-10 years were less satisfied with their theoretical paradigm than those practicing 31 or more years [ $\chi^2(2, 49) = 5.622, p = .018, r = .117$ ]. Practitioners practicing 11-15 years were less satisfied with their theoretical paradigm than those practicing 31 years or more [ $\chi^2(2, 19) = 6.50, p = .011, r = .361$ ], those practicing 16-20 years only significantly differed from those practicing five years or less, those practicing 21-25 years were less satisfied with their theoretical paradigm than those practicing 31 years or more [ $\chi^2(2, 18) = 3.90, p = .048, r = .229$ ], and those practicing 26-30 years were less satisfied with their theoretical paradigm than those practicing 31 or more years [ $\chi^2(2, 15) = 4.854, p = .028, r = .347$ ].

Table 8

*Satisfaction with Theoretical Paradigm by Years Practicing*

Years Practicing SP	N	Median	Mean Rank
<6	81	5	61.50
6-10	40	6	96.05
11-15	10	6	92.35
16-20	7	7	111.93
21-25	9	6	104.17
26-30	6	6	89.58
>30	9	7	133.06
Total	162		

*Note.* SP = sport psychology. Mean ranks transformed to correct for homogeneity of variance.

A simple linear regression was calculated to predict the number of theoretical paradigms used based on practitioner satisfaction with their theoretical paradigm. No significant regression equation was found [ $F(1, 160) = 2.47, p = .118$ ].

A 7x7 contingency table analysis was run to determine if a relationship exists between practitioner theoretical paradigms addressing important concepts and practitioner satisfaction with their theoretical paradigm. A standardized residual for each cell was used to determine which differences between observed and expected values were larger than chance, because the omnibus chi-square value does not specify which combination of variables contributes to statistical significance (Beasley & Shumacker, 1995). A post hoc analysis of the residuals was conducted by computing adjusted z scores for each cell, deriving the chi-square value for each cell, and determining the statistical significance of each cell. To control for Type I errors to an  $\alpha = .05$  in a contingency table of 49 cells, post hoc analysis was conducted using a Bonferroni adjusted  $\alpha = .001$ .

The 7x7 contingency table analysis revealed that the relationship between these variables was significant [ $\chi^2(36, 162) = 302.90, p < .001, \phi = 1.37$ ]. Results of the post hoc analysis revealed significant relationships in eleven cells (see Table 7). Practitioners who strongly disagreed that their theoretical paradigms included important concepts were more likely to be strongly dissatisfied with their theoretical paradigm ( $\chi^2 = 102.01, p < .0001$ ). Those who disagreed that their paradigms included important concepts were more likely to be dissatisfied with their paradigm ( $\chi^2 = 19.01, p < .0001$ ). Those who were neutral that their paradigm met important concepts were also more likely to feel neutral about their paradigm ( $\chi^2 = 15.92, p < .0001$ ). Those who somewhat agreed that their paradigm met important concepts were more likely to be somewhat satisfied with their paradigm ( $\chi^2 = 39.31, p < .0001$ ), less likely to be satisfied with their paradigm ( $\chi^2 = 12.53, p = .0004$ ), and less likely to be very satisfied with their paradigm ( $\chi^2 = 14.44, p < .0001$ ). Practitioners who agreed that their paradigm contained important concepts were more likely to be satisfied with their paradigm ( $\chi^2 = 55.35, p < .0001$ ), and less likely to be very satisfied with their paradigm ( $\chi^2 = 16.4, p = .0003$ ). Those who strongly agreed that their paradigm included important concepts were more likely to be very satisfied with their theoretical paradigm ( $\chi^2 = 85.01, p < .0001$ ), and they were less likely to be either satisfied with their paradigm ( $\chi^2 = 13.40, p = .0002$ ) or somewhat satisfied with their paradigm ( $\chi^2 = 11.76, p = .0006$ ).

Table 9

*Important Concepts Addressed by Satisfaction with Paradigm*

Satisfaction with Paradigm	Paradigm meets criteria						
	SD	D	SoD	NAND	SoA	A	SA
SD	<b>10.10*</b>	-0.25	-0.18	-0.41	-1.19	-2.01	-0.34
D	-0.36	<b>4.36*</b>	-0.16	2.57	1.40	-1.79	-1.22
SoD	-0.48	3.20	-0.21	1.75	2.34	-1.61	-1.63
NAND	-0.48	-0.30	-0.21	<b>3.99*</b>	1.40	-0.83	-1.63
SoA	-1.13	-0.71	2.02	0.01	<b>6.27*</b>	-1.60	<b>-3.80*</b>
A	-0.80	-1.09	-0.77	-1.74	<b>-3.54*</b>	<b>7.44*</b>	<b>-3.66*</b>
SA	-1.45	-0.91	-0.64	-1.45	<b>-3.43*</b>	<b>-4.05*</b>	<b>9.22*</b>

*Note.* SD = strongly disagree; D = disagree; SoD = somewhat disagree; NAND = neither agree nor disagree; SoA = somewhat agree; A = Agree; SA = strongly agree.

\*Statistically significant at the Bonferroni adjusted alpha of .001

A 7x7 contingency table analysis was used to determine if a relationship exists between practitioner satisfaction with their theoretical paradigm and the belief that a theoretical paradigm specific to sport psychology would benefit their practice. The relationship between these variables was significant [ $\chi^2(36, 160) = 65.61, p = .002, \phi = .64$ ].

Results of the post hoc analysis revealed significant relationships in three cells (see Table 8). Practitioners who dissatisfied with their theoretical paradigm were more likely to strongly agree that their practice would benefit from a paradigm specific to sport psychology ( $\chi^2 = 23.23, p < .0001$ ). Those who were very satisfied with their paradigm were more likely to disagree that their practice would benefit from a sport psychology theoretical paradigm ( $\chi^2 = 11.16, p = .0008$ ) and less likely to agree that their practice would benefit from a sport psychology paradigm ( $\chi^2 = 11.83, p = .0006$ ).

Table 10

*Satisfaction with Paradigm by Benefit to Practice*

Practice would Benefit	Satisfaction with Paradigm						
	SD	D	SoD	NAND	SoA	A	SA
SD	-50.4	-0.4	-0.5	-0.5	-1.2	-0.2	2.1
D	-0.6	-0.6	-0.7	-0.7	-0.9	-1.4	<b>3.3*</b>
SoD	-0.4	-0.4	-0.5	-0.5	-1.1	0.1	1.6
NAND	-0.1	-1.1	-1.4	-0.5	-0.8	-0.5	1.4
SoA	1.2	-1.0	-0.6	-0.6	-1.0	1.4	-1.3
A	-0.5	-1.3	2.4	-0.7	2.4	0.6	<b>-3.4*</b>
SA	0.3	<b>4.8*</b>	-1.1	-0.1	0.8	-1.8	0.0

*Note.* SD = strongly disagree; D = disagree; SoD = somewhat disagree; NAND = neither agree nor disagree; SoA = somewhat agree; A = Agree; SA = strongly agree.

\*Statistically significant at the Bonferoni adjusted alpha of .001.

A 7x7 contingency table analysis was used to determine if a relationship exists between practitioner satisfaction with their theoretical paradigm and the belief that a theoretical paradigm specific to sport psychology would benefit the field. The relationship between these variables was not significant [ $\chi^2(36, 160) = 46.96, p = .104$ ]. Results of the post hoc analysis revealed a significant relationship in one cell. Practitioners who were very satisfied with their theoretical paradigm were less likely to agree that the field would benefit from a theoretical paradigm specific to sport psychology ( $\chi^2 = 12.04, p < .0005$ ).

Generally, practitioners were satisfied with their theoretical paradigms. The results indicate that neophyte practitioners were the least satisfied with their theoretical paradigms, and late-career practitioners were the most satisfied with their theoretical paradigms. Those who believed that their theoretical paradigm was comprehensive were also most satisfied with their paradigms. Those who were dissatisfied with their

theoretical paradigm were more likely to believe that a theoretical paradigm specific to sport psychology would benefit their practice, although the majority of practitioners at least somewhat agreed that both their practice and the field would benefit from a theoretical paradigm specific to sport psychology.

### **Description of Qualitative Participants**

This study employed connected integration by purposefully selecting qualitative participants from the quantitative data set. Seventy quantitative participants agreed to be contacted for participation in the qualitative portion of the study. Upon completion of the analysis of the quantitative data, it was determined that stratified purposeful sampling (Palinkas et al., 2015) would yield the richest results by highlighting important shared patterns (i.e., satisfaction with theoretical paradigm) that cut across cases that derived significance emerging out of heterogeneity (e.g., type of integration used, training background, years practicing sport psychology).

Upon approval from the IRB, the 70 quantitative participants who agreed to be contacted for participation in the qualitative portion of the study were contacted via email with questions pertaining to inclusion and exclusion criteria (i.e., satisfaction with paradigm, type of paradigm used, years practicing sport psychology, training background). Of the 70 contacted, 19 replied with responses to inclusion and exclusion criteria questions (see Table 11) as well as continued interest in participating in a qualitative interview. Given the inclusion and exclusion criteria, one respondent was removed from consideration due to dissatisfaction with his theoretical paradigm, and one was removed from participation due to a single school theoretical paradigm type. To fit inclusion criteria, five participants were selected to participate in the qualitative portion



of the study. However, the participant with the sport science training background did not respond to further email contact and was removed from the qualitative participant pool.

Table 11

*Qualitative Participant Pool*

Variable	<i>n</i>	Variable	<i>n</i>
<i>Satisfaction</i>		<i>Type of Paradigm</i>	
Very Dissatisfied		Single School	1
Dissatisfied	1	Assimilative Integration	7
Somewhat Dissatisfied		Theoretical Integration	8
Neither Satisfied nor Dissatisfied		Common Factors	2
Somewhat Satisfied	2	Technical Eclecticism	
Satisfied	9	Pure Eclecticism	1
Very Satisfied	7	No Paradigm	
<i>Years Practicing</i>		<i>Training Background</i>	
<6 years	7	Psychology	14
6-30 years	11	Sport Science	1
>30 years	1	Both	4

*Note.* Both = training background in psychology and sport science/kinesiology.

Final qualitative participants included two women and two men. One participant was somewhat satisfied with his theoretical paradigm, two were satisfied with their theoretical paradigms, and one was very satisfied with his theoretical paradigm. One qualitative participant reported using assimilative integration, one reported the use of theoretical integration, one utilized the common factors approach, and one identified the use of pure eclecticism. One participant had practiced sport psychology less than six years, two have practiced between six and 30 years, and one had practiced for more than thirty years. One participant's training background was solely in psychology, and three participants had training from both psychology and sport science/kinesiology. Of the three participants who had training in both psychology and sport science/kinesiology, one

had more training in psychology than in sport science/kinesiology and two had more training from sport science/kinesiology than from psychology.

Each participant was given the option of either choosing a pseudonym or being assigned a pseudonym by the principle investigator to protect the confidentiality of the participants and provide participants with autonomy. Three of the four participants chose their pseudonym, and one participant requested a lead investigator assigned pseudonym. Participants are henceforth referred to by their pseudonyms.

### **Qualitative Participant 1: Diana**

Diana was entering her second year as a clinical psychology Psy.D. student, and she had been practicing applied sport psychology for three years. She had previously obtained a M.S. in physiology and an M.A. in sport and performance psychology. Diana was preparing to sit for the CMPC certification exam. Diana reported that she was spending 10-20% of her applied work with athletes and a performer and 80% of her time working with clinical clients. Diana was working with individual sport psychology clients at the time of the interview, but she had previously worked with teams as well. She was working with athletes and performers who were 12-24 years old who competed at elite and international levels. Diana was primarily working with winter sport athletes, but she also was working with an international level dancer.

### **Qualitative Participant 2: Randy**

Randy was in private practice, and he had been practicing applied sport psychology for 38 years. He obtained his M.A. and Ph.D. in clinical psychology and had completed his formal education. Randy was CMPC certified. Randy reported that he was spending 90% of his applied work with athletes and performers and spending 10% of his

time in parenting education and work in technology. Randy expressed that he also spent a considerable amount of his time on writing on sport psychology and parenting as well as speaking internationally about sport and performance psychology. Randy stated that he has provided coach education, and that he has worked with international level winter sport teams, national governing bodies, professional and elite level athletes, elite dance companies, performing artists, and international corporations.

### **Qualitative Participant 3: Luis**

Luis was in private practice, and he had been practicing applied sport psychology for 12 years. He obtained his B.A. in psychology, his M.S. in exercise and sport sciences with a concentration in sport psychology, his M.A. in counseling, and his Ph.D. in sport and exercise psychology. Luis was CMPC certified. He reported that he was spending 100% of his time practicing in sport and performance psychology. Luis stated that he was contracted for sport psychology work with several Division I athletic programs, he worked with professional athletes (i.e., golf, tennis, baseball, volleyball, softball), worked with Olympic teams, does pro bono work with youth athletes, and has worked with performing artists (i.e., singers, song writers, pop stars, actors and actresses, movie studios).

### **Qualitative Participant 4: Olivia**

Olivia was primarily in an academic setting as a professor, and she practiced applied sport psychology outside of her academic duties. Olivia had been practicing applied sport psychology for 10 years, and she was CMPC certified. She obtained her B.S. in psychology, her M.A. in counseling, her M.S. in kinesiology, and her Ph.D. in sport and exercise psychology. She reported that she was spending between 10-15% of

her time practicing applied sport and performance psychology. Olivia stated that she was exclusively working with individual clients at the time the interview was conducted, and that she has worked with youth athletes, collegiate athletes, a professional athlete, a master's level athlete, team consultation, coach consultation, firefighters, skydivers, nurses, dancers, and personal trainers.

### **Qualitative Results**

The qualitative portion of this study sought to expound on the quantitative data that provided insight into the central research questions: (1) what are the current theoretical paradigms utilized by sport psychology practitioners?; (2) how were these theoretical paradigms developed over time?; and (3) are current practitioners satisfied with the current theoretical paradigms utilized in sport psychology? It also sought to expound on the aforementioned sub-questions (e.g., what types of paradigms are practitioners using?; at what point in practitioner development are theoretical paradigms developed?; is there a relationship between the perception that a practitioner's theoretical paradigm addressed important concepts and satisfaction with their theoretical paradigm?).

Further illuminating the quantitative results was imperative to this portion of the study due to the weight given to the quantitative results prior to data collection. However, to honor the constructivist epistemological paradigm of the qualitative portion of this study, qualitative themes that diverged from, or were dissonant to, the quantitative data were allowed to emerge. Meta-themes (i.e., themes that transcended the original research questions) were also allowed to emerge in data analysis.

Therefore, the following section will begin by reviewing the meta-themes that emerged from data analysis. The section will then review the themes that emerged from

each central research question by exploring themes that aligned with the research sub-questions. Finally, the section will culminate in an exploration of data that diverged from the primary research questions, which more broadly explored practitioner satisfaction with the state of theoretical paradigms in the field of sport psychology.

### **Meta-themes**

The interviews presented three meta-themes that were highlighted by all participants and spanned across research questions. These meta-themes could not be constrained to just one aspect of theoretical paradigms in sport psychology, and thus, warranted their own exploration. The three meta-themes extrapolated from the qualitative data were: (1) “Depth and Complexity”, (2) “Lifelong Learning”, and (3) “Client Impacts.”

#### **Depth and Complexity**

The theme “Depth and Complexity” emerged from all four participants across all research questions. Although each participant noted that they each utilize some form of mental skills training in their varied theoretical paradigms, they all highlighted the need for more depth and complexity beyond mental skills training. Incorporating paradigms that have the desired depth and complexity has allowed them to more thoroughly conceptualize clients. One participant stated:

I have a very deep insight orientation. Issues such as ownership, fear of failure, perfectionism, risk taking. And I dig pretty deep, especially these obstacles that interfere with athletes to achieve their goals. I’ve found that if there are deeper psychological or emotional obstacles in the way; all the mental training will be

useless, because it's basically how athletes approach performance will be how they perform. (Randy)

The participants also spoke to the benefits to intervening with clients from a place that moves beyond mental skills training, which has been a method often associated with sport psychology since its inception. They posited that individual practitioners can have some success working with athletes using mental skills, but that mental skills alone will not lead to the most effective work.

What we do is so much bigger than teaching self-talk. It's so much bigger than teaching imagery. I've started using the phrase "mindset training". Like, mental skills are important, but this is mindset training. If you're doing mindset training, what's the philosophy that's guiding the choices you're making? That's your theoretical orientation. And if you don't have an understanding of that, then you're automatically handicapping yourself. You're automatically limiting your effectiveness. (Olivia)

Although the practitioners reported that they have found that incorporating paradigms that move beyond teaching mental skills to be helpful, they did note that it does come with added time and difficulty.

Just teaching someone a breathing routine is really great, or a pre-shot routine is awesome. But a pre-shot routine is great for narrowing your focus for an execution at the moment of execution. It's terrible for dealing with fear of failure. Right? I guess it's not real robust. It's not addressing the root cause. It's only addressing symptoms, which is great. If you've got a cold, you definitely want a box of tissues. But if you don't address the virus underneath, you're not really

doing anything other than making your nose dry. A band-aid on a bullet wound. I don't want to take the super deficiency model of medicine, but medicine does a good job of diagnosing and getting to the root of what's going on rather than just treating the symptoms. And that's how you change. Now, it's more difficult, and it takes more time. But if you want sustainable change and teach people how to do it on their own, then that's where you've got to go. (Luis)

Incorporating "Depth and Complexity" is something that the practitioners saw as being inherently valuable to their practice of sport psychology despite the added time, effort, and difficulty added to their work with athletes. The added depth and complexity did not happen overnight, however. It was an area that developed over time.

So, my supervisor and I are in a year-long sequence looking at behavior analysis, and starting from philosophy, going to theory, going to methods, going to intervention. So, it's been a deep dive that I felt like I was sort of missing in my master's. We developed the theory of performance excellence and it was informing our work in a lot of ways. But also, I never really felt like I had a good grasp on it. (Diana)

Diana, who is currently working toward her Psy.D. in clinical psychology, may be at the beginning of her journey of developing her own theoretical paradigm that includes the richness and depth she hopes for. Others have found that integrating depth and complexity has been a long process. Randy, who has been practicing for almost 40 years, had more recently added the depth and complexity to his theoretical paradigm that he has found necessary to address the "sophistication of performance" and the "complexity of human beings."

It wasn't until six or seven years ago that I developed the model I use now. Which, before that it was basic mental training. You know, motivation, confidence, intensity/anxiety/arousal; whatever term you want to use. Focus. Things like that. But now it's much richer, much deeper, much more sophisticated. Because I'm a big believer that performance is complex, and it can't be boiled down. (Randy)

Ultimately, Randy stated that the ability of his theoretical paradigm to cover the concepts, principles, and client issues in a deep way has allowed him to be more satisfied with his theoretical paradigm.

I think that it's because it's comprehensive. It covers everything that I've been able to figure out or identify in my work. And so, it's just incredibly comprehensive and structured. That's what I would say. It covers all the bases. (Randy)

The depth and complexity valued in participant's theoretical paradigms was present in their use of theoretical paradigms and being able to cover the necessary issues when working with clients in an effective manner led to greater satisfaction with their theoretical paradigms. The depth and complexity woven in their theoretical paradigms was not developed immediately upon entering the field, however. It has taken long periods of time for the evolution of these theoretical paradigms to emerge, which is a result of the participants' dedication to "Lifelong Learning."

### **Lifelong Learning**

"Lifelong Learning" was the second meta-theme that emerged from the data. The lifelong learner is one who adjusts and adapts over time in an intentional manner. The



adjustments occur through natural evolution of personality, but also through deliberate actions aimed at improving one's work. The methods for lifelong learning can occur through self-reflection, personal therapy, reading research, or through client interaction.

It's been largely an evolution of my personal experience that has certainly informed my professional experience, no doubt. Because, I guess, going from a very rigid, rational, logical, cognitive, intellectual, cerebral approach early in my career was very much the way I approached my life. And now, I approach it in a very different way. Very depth oriented in times of emotions. Looking at weaknesses, obstacles, challenges, and I think it has informed my professional approach as well. (Randy)

The idea of lifelong learning was also viewed in a more abstract manner. It was a concept that was valued by all four participants, but it may be difficult to look beyond the current developmental level to envision what it may look like in later stages of development.

I think that my practice has really benefitted from taking that deep dive into one thing and looking at it from that space. And one day I hope I question the hell out of that. Maybe something else fits. But, as far as my training goes, being able to really look in depth at layers of what is going on for an athlete or a clinical clients, has been hugely valuable in the way that I'm going to be able to intentionally create my own [theoretical paradigm] one day. (Diana)

Lifelong learning was considered a necessary and ethical part of the practice of sport psychology. It not only helped develop one's theoretical paradigm, but it also aligned with the philosophy of one's work.

I think it is so crucial for us a consultants and professionals in general. We are growing and changing, and if we aren't then that's a whole ethical piece in and of itself. But we are growing and changing. And so, just like we ask clients to adapt, evolve. I think it's so important that we do as well. (Olivia)

Ultimately, the area in which lifelong learning was most present was in the current satisfaction level of the participants. Practitioners believed that if they reported that they were very satisfied with their current paradigm, that it would leave no room for growth and adaptation in the future. Diana, who reported that she was satisfied with her paradigm, stated "I guess that I'm never quite satisfied with anything. There's always more that I want to learn. I know I have a lot more to learn." She was not the only one who attributed her level of satisfaction with being open to growth. Luis, who reported that he was somewhat satisfied with his theoretical paradigm stated:

I would say that that's very much along the lines of when an athlete plays a really good game and goes, "eh, I could have done more." I'm always combing the research and/or trying to evaluate how I'm delivering sport psychology and getting feedback on how to do it better. If I was totally satisfied with it, it would be a world where all my athletes were all destroying their performance and having a great time doing it. I don't know if that world quite exists. (Luis)

Olivia, who reported that she was satisfied with her theoretical paradigm, also shared Luis's sentiments on perfectionism and satisfaction:

I think that's the perfectionist in me. I think I always see room to grow. I always see room to get better. I always see room to evolve. To me, very satisfied means I made it, and maybe that's my own bias...I'm sure there are pieces to my approach

that can still get better. I'm sure there are things that I still need to learn. I'm sure that there are other orientations that I still haven't considered yet, or that I checked off years ago but are actually are far more in line with where I'm at. (Olivia).

Each participant spoke to the incorporation of lifelong learning into their personal or professional philosophy. This aspect of their philosophy has been, or will continue to be, a driving force in their work in sport psychology. Each participant identified that they are ultimately working with clients, and the lifelong learning was in service to being able to work with them in a more effective manner.

### **Client Impacts**

The theme "Client Impacts" spanned the use, development, and satisfaction with theoretical paradigms for all practitioners. Topics identified within in this team were the following: connecting with clients; what to incorporate in your paradigm; doing what's best, not easiest, for clients; keeping your job; learning from clients; feedback from clients; increased satisfaction with paradigm through connection with clients; and effectively working with clients.

Olivia's and Luis's theoretical paradigms incorporated aspects of theory that promote a connection with the athlete. Luis utilized a Rogerian (i.e., humanistic, person-centered) approach when first interacting with clients. A Rogerian perspective underpinned Olivia's work with clients, and she found it critical to her practice.

I think honestly, one of the foundational approaches at the baseline for me is Rogerian, that relationship first and foremost is key. Now, I somewhat disagree that it's only the relationship that causes change. I think there needs to be a little

bit more. Hence the ACT, the mindfulness, so on and so forth. But that idea of genuineness, unconditional positive regard, connection. Right? That to me...if they don't know that's established, and that's not there, then nothing else matters.

(Olivia)

Olivia expressed that it was essential for her clients to know that she cared for them in order to be able to enact change in her clients. Diana saw tremendous benefit from incorporating aspects in her paradigm that connected to clients on a visceral level. She has found that including concepts from physiology has impacted clients in a different way than utilizing psychological principles alone.

I feel like psychology can be a little bit ethereal for people, and so letting them experience the physiological response they're having in that concrete and tangible way, they're like "whoa." (Diana)

The impact of one's theoretical paradigm on a client can manifest in a variety of different ways. At the end of the day, the participants reflected on what ultimately allows a client to be better in the performance arena. Sometimes, performance enhancement can be really difficult and painful; however, as Luis noted, seeing improvements in his clients' performance is what has driven his use of his theoretical paradigm.

It's really painful to go through your psychological framework and address your relationship with failure, right? But if you resolve that, then you don't have to deal with it when you're out on the golf course, or on the tennis court. And by the way, mindfulness training every day. Boring as hell, right? But then when you're in competition, and all of a sudden you notice a change in your inner experience 20 seconds sooner than you would have before, and you can make this type of

correction instead of this type of correction. It makes all the difference in the world. (Luis)

It is this change in athletes that Luis values in his work. A sport psychology practitioner's job often depends on positive change in athlete performance. Luis highlighted this aspect of the profession by stating that his job depends on how much he can impact clients.

From a professional standpoint, if I'm not helping people change then you should stop working with me. If I'm not helping them actually get better, then I'm not going to stick around. (Luis)

The theme of "Client Impacts" was most heavily present when the participants spoke about the development of their theoretical paradigms. Randy stated that he has learned from every client with whom he has worked. Each participant spoke to how clients have impacted their theoretical paradigms, particularly when receiving feedback from clients about what works or does not work.

God, I've learned so much from my clients. That's one of the things I've enjoyed about working with high schoolers. Cause, God, they'll just "nope". They'll just tell you, right? And that's my favorite...I tell them that one of my expectations of them is they're going to tell me "I hate that. I love that. That's not going to work. That sounds great." In that, they've taught me so much. What they like. What they don't like. What works for them. What doesn't. And of course, everyone is unique and different, even in a team...It's just cool to see how they grow and mature, and how they can help me grow and mature as well. (Olivia)

Luis had similar experiences to Olivia, and he reported that he also is in continual communication with his clients regarding what works and what does not work.

Receiving feedback from clients, whether it be through implicit or explicit feedback was evident in each participant's description of how their theoretical paradigm developed. For Diana, it was showcased in the connection she saw from clients to physiological interventions. For Olivia and Luis, it was about receiving explicit verbal feedback from their clients. For Randy, his current values of depth and complexity were shaped by work early in his career with two young athletes.

Clients have impacted the use and development each of the participant's theoretical paradigms, but it was the impact of the paradigms on the clients which led to greater satisfaction with a theoretical paradigm for the participants. Diana experienced satisfaction with her paradigm through the connection it allowed with her clients.

It's kind of cool to be able to have that really experiential aspect to pull from when speaking with clients that tends to land a little bit more profoundly than me trying to go into a, you know, psychodynamic lens and being like "well somebody else said this." It's like, for me being able to speak from an experiential place is valuable. So, the moment's where I've been able to, like, speak to what my experience in a way that they're like, "yes, you get it." Having them know that you get it has been very satisfying. (Diana)

Olivia attributed a large portion of her satisfaction with her paradigm to the effectiveness it provided when working with clients.

Effectively working with clients. Seeing that it works. Seeing that I've been able to interact with people, be they students or clients or whatever, and be effective with them. I think that's been a piece of it. (Olivia)

The three meta-themes presented were intertwined throughout the participants' narratives of their use, development, and satisfaction with theoretical paradigms. Each participant spoke to the importance of depth and complexity, lifelong learning, and client impacts in their sport psychology work, the continual development of their paradigms, and their satisfaction with their paradigms. Although each one speaks to the broad and narrow research questions, each meta-theme was unique in that each transcended the boundaries that were held by the participants for other themes. Thus, it was warranted to explore these meta-themes separately from the quantitative genres to honor the constructivist paradigm inherently utilized in the basic qualitative framework.

### **Use of Theoretical Paradigms**

The first broad research question was: What are the theoretical paradigms utilized by sport psychology practitioners? Three sub-questions were applied to determine the use of theoretical paradigms: (1) what types of paradigms are practitioners using (e.g., theoretical integration, eclecticism?); (2) what theoretical paradigms are practitioners using?; and (3) how are practitioners integrating theoretical paradigms? Themes, which emerged from the line-by-line coding, aligned with these sub-questions, and are presented in the following.

#### **Paradigm Type**

Two themes emerged from the data analysis of the four interviews on the type of paradigm practitioners were using: (1) "Types of Paradigms Used"; and (2) "Difficulty with Label." Each participant identified the theoretical paradigm type that they identify with. Diana reported that she mostly uses a single school paradigm type. Randy reported

that he most closely identifies with theoretical integration. Luis stated that he identifies with common factors. Olivia expressed that she utilizes pure eclecticism.

Although not explicitly stated by the participants, three of the four had difficulty finding a label for their theoretical paradigm type that provided an accurate description for what they were using. The most explicit example of this was Olivia, who reported that she used a pure eclectic paradigm. Practitioners who utilize *pure eclecticism* have no rules that guide treatment, which leads to an inability to articulate or replicate the treatment in the future (Norcross, 1986). This is not the case for Olivia.

I'm eclectic because I recognize, and I've deliberately chosen the important aspects that align with my values and my approach and my authenticity. And this how I apply it in that way to make sure that I'm most able to connect with my client. Most able to the best possible work. (Olivia)

This may appear to be closer to the technical eclecticism model that is guided primarily by data, but Olivia reported that she is not choosing techniques that are most driven by purely data.

I look more at the theoretical integration. So, I'm going even deeper. It's not just about technique...I'm looking even deeper. That's why I went more that pure route. (Olivia)

Olivia was not the only one who had difficulty identifying a theoretical paradigm type that aligned with what she was actually using. Luis reported that he utilizes a common factors framework, which would indicate that he is using the core ingredients that different theoretical paradigms have in common (Prochaska & Norcross, 2010). However, he stated that he is “only interested the areas of human psychology and



performance that are predictive of increased performance and a fulfilling relationship with your craft,” which appears to be more closely linked with a non-theoretical base that is guided by data (i.e., technical eclecticism). Diana, who reported that she aligns with the single school of ACT, would actually more closely align with assimilative integration in the idea that she has a firm grounding in ACT, but she also selectively incorporates practices and views from mindfulness, Buddhism, humanism, and physiology. Randy, who identified with theoretical integration, appeared to find the most alignment with Prochaska and Norcross’s (2010) definitions of the types of integration by integrating psychodynamic theory and CBT.

### **Paradigms Used**

Two themes emerged from the data analysis on what theoretical paradigms practitioners are using: (1) “Paradigm Variety”; (2) “Paradigm Similarity.” A variety of different theoretical paradigms were integrated into the participants’ theoretical paradigms. Diana reported that she primarily identifies with ACT, but she integrates “a smattering of underlying tones with the mindfulness themes and Buddhism themes,” person-centered philosophy, and physiology. Randy used both a more traditional CBT approach to sport psychology as well as a psychodynamic approach.

I take two paths to my work. One is a traditional sport psychology...imagery, routines, confidence, focus. All those classical type stuff. But I also get into deeper stuff...I have a very deep insight orientation. Not clinical by any means, but certainly, but I have a very deep insight orientation...I’m not a label guy. But, certainly CBT. It’s classic. Imagery is CBT. Self-talk is CBT. Um, certainly psychodynamic approach. Um, certainly not psychoanalytic, but I believe that

early life experiences shape athletes' attitudes, beliefs, emotions, and so on.

(Randy)

Similar to Diana, Luis's theoretical paradigm also incorporated ACT and mindfulness, but he also uses a variety of other theoretical paradigms that offer further distinction.

I draw strongly from mindfulness, ACT type stuff...diving into a lot of deliberate practice work from Anders Ericsson...growth mindset type stuff...and then the last part of it would be some type of mental skills." (Luis)

Olivia, who identified as using an eclectic paradigm type, reported the most paradigms used in her theoretical paradigm.

I started out learning from someone who was very existential in his approach...to have existential and CBT was an interesting dynamic to grow up in. But through that, as mindfulness has more come to the forefront, I've done my own work in MBSR [mindfulness-based stress reduction]...MBCT [mindfulness-based cognitive therapy]...I'm starting to learn more about ACT, which is phenomenal, and I think fantastic. Reality and choice theory is huge in my work, But then I also get into some of the classics like Adlerian and Rogerian and behavioral. The systems approaches I think are crucial in what we do because there's not a single performer who operates in a bubble, right?...Like I said, the existential. Yeah so, then there's the solution focused.

Each participant utilized a variety of different paradigms within their own theoretical paradigm type. Despite the variety of paradigms used by these practitioners of sport psychology, there was quite a bit of overlap in the paradigms that they incorporated. Three of the four participants identified that they included some form of CBT mental

skills training, three of four included ACT, and all four participants reported that used a client-centered approach.

It is very client centered... The term I would use is “in the trenches” with them. Its very client centered. They have to drive; well they don’t have to. I find it to be most effective when your client figures things out on their own by asking the right questions and providing them with the right information rather than you saying “here’s what’s going on.” (Luis)

While Luis utilized a client-centered approach to allow his clients to allow clients to figure things out on their own, Olivia applied the client-centered method in a different manner.

I really try, again from that client-centered perspective. “Ok. You’re the expert in your world. You’re the expert in your experience. Tell me what you’re feeling. Tell me what you’re seeing. Tell me what you’re experiencing. What do you think would be helpful here?” (Olivia)

Both Randy and Diana also reported viewing each client as an individual and tailoring their work with clients based on the individual characteristics they bring to the table.

### **Integrating Paradigms**

Two themes emerged from data analysis on how practitioners were integrating paradigms. First, the importance of “Depth and Complexity”, which was a meta-theme that emerged from the data, was a central theme to how practitioners were integrating paradigms. The participants reported that they integrated different theoretical paradigms to provide depth and complexity to their conceptualization of and intervention with athletes. Randy reported that he integrated psychodynamic theory with CBT to be able to

tackle deeper psychological and emotional issues that underlie athlete roadblocks to success. Diana stated that she assimilated principles physiology to more fully address how the mind and body are connected. Luis expressed that he integrates mindfulness, ACT, and deliberate practice to effectively work with complexity and nuance of performance and preparation. And Olivia integrated a wide variety of paradigms to implement evidenced-based practice with clients in a way that is connected to individual clients at specific points in time.

The second theme that emerged for how practitioners were integrating paradigms was “Connection with Philosophy.” Three of the four participants identified their theoretical paradigm’s connection to their philosophy of working with clients, as well as their core beliefs and values. Olivia reported that “there’s all these concepts from Eastern philosophies that underlie everything I do,” which stemmed from her own practice of yoga and meditation after retirement from her sport. Randy reported that he believes that “early life experiences shape athletes’ attitudes, beliefs, emotions, and so on.” Olivia reported that her theoretical paradigm’s foundation comes from her philosophies, beliefs, and values.

My own philosophies and values and morals and beliefs, and how does that relate to my beliefs about human nature, and who we are, and human behavior, and all that...I would have to say that my faith is a huge determining factor. I’m quite religious. I’m Christian. I’m heavily involved in the church. Um, my husband and I are really involved. That’s a big part of who we are. I think that drives a lot of my beliefs about human nature, capability for change, and things like that. I think

that drives my morals and my values quite often...I think it's an important piece that drives what I'm drawn to. (Olivia)

### **Development of Theoretical Paradigms**

The second broad research question was: How are theoretical paradigms developed? Three sub-questions were applied to determine the development of theoretical paradigms: (1) when are theoretical paradigms being developed?; (2) what factors lead to paradigm development?; and (3) how does one's training background affect principles perceived to be important in a theoretical paradigm? Themes, which emerged from line-by-line coding, aligned with these sub-questions, and are presented in the following.

#### **When Paradigms are Developed**

Three themes emerged from the data analysis on when theoretical paradigms are developed: (1) "Early Struggles"; (2) finding "Depth and Complexity"; and (3) "Lifelong Learning". All participants spoke to the difficulties they encountered when first developing their theoretical paradigm. Topics included: learning through failure; a rudimentary understanding of paradigms; worries about developing your own paradigm; and a dissatisfaction with their education.

Three of the four participants reported early struggles in the development of their theoretical paradigm, particularly when they attempted to put their paradigm into practice. These individuals were attempting to figure out what worked and fit for them, as well as what did not work and what did not fit for them.

I feel bad for the first kid I worked with. I charged him like 10 bucks an hour, some 14-year-old basketball player. I'm sure he got worse. But it was valuable for my framework in that master's program because my advisor encouraged me to go

do work, figure out what works and what doesn't, and go fuck up. And go screw up with someone that doesn't know you're screwing up. Like, middle school kids, they don't know. But it was important because you actually had to field test.

(Luis)

Olivia indicated that she had to learn from the mistake of trying to emulate her mentors, whom she had realized were well-known members of the field of sport psychology.

I made the mistake, so I have to do it like them. And [one of my mentors] was always, always "you can't be me; you haven't failed enough. You can't be me; you don't have enough grey hair yet." I remember one time going to supervision with him, and a team I was working with just had a terrible game. It was so bad. And I remember thinking "I've done a bad job. I've failed them as a consultant." And I remember him looking at me in a way that only [my mentor] could, and saying "oh, I'm sorry. I didn't realize you were that important." Again, it was so much of that trial by fire. Failure. Trial and error.

Diana also struggled with the development of her theoretical paradigm early in her development, and she reported that had difficulty grasping what led to performance excellence and seeing clients through her paradigm, "Everybody was talking about how you start to see through this lens. And I was like, 'well, yes, and I don't feel like I know what it's like through this lens yet'." Randy also experienced difficulties with confidence in his paradigm early in his career, and he stated that he did not begin to feel competent in his paradigm development until he had been practicing for at least seven years.

Although many of the participants struggled with their early theoretical paradigm development in graduate training, all participants highlighted that they were able to find

“Depth and Complexity,” a meta-theme, through advanced graduate training, further research both inside and outside of sport psychology, or through self-exploration. Diana and Olivia reported that they had found added depth and complexity through more intensive education on theoretical paradigms. Diana experienced this through specialized training in ACT, and Olivia experienced this through a class taught by a clinical psychologist that focused theoretical paradigms.

Randy and Luis reported different experiences in graduate training. Randy stated that he believed the only thing he got out of school was a foundation of knowledge that minimally impacted his theoretical paradigm, and Luis reported that he only learned what he did not what to do from his formal doctoral education. Randy expressed that his journey of understanding himself in more depth has led to greater depth and complexity in his theoretical paradigm. “I think we’re our own first guinea pig as psychologists, and that we use our own personal experience to guide how we understand people.” Luis found depth and complexity through extensive research on what enacts change in athletes.

And that was outside of my graduate program, and a lot of that research and diving into all that information came after I finished my Ph.D. program...I probably have a doctoral understanding of [rational emotive behavior therapy and mindfulness], but after I finished my doctorate. (Luis)

Three of the four participants indicated that they will continue to develop their theoretical paradigm though the meta-theme of “Lifelong Learning.” The only participant that did not indicate that he would continue to develop his paradigm was Randy, who reported that he solidified his paradigm after more than 30 years of work in the field. It is

important to note that Randy did not explicitly state that he would not continue to develop his paradigm, but he was the only participant that did not explicitly state that development would continue.

### **Factors that Lead to Development**

Two themes emerged from the data analysis on the factors that lead to theoretical paradigm development: (1) “Influencers to Development”; and (2) “Personal Development.” All four participants identified important “Influencers to Development” of theoretical paradigms. These influencers included authors and researchers, peers, and the meta-theme of “Client Impacts” on the development of their paradigm.

You’re talking growth mindset stuff from Carol Dweck. You’re talking some grit research from Angela Duckworth. You’re talking a lot of research from Martin Seligman of learned optimism...And then if you teach people how to practice on top of that, which again is Anders Ericsson. (Luis)

Dialogue and discussion with peers have led three of the four participants to further the development of their theoretical paradigm.

We’ll sit down and talk about a hypothetical case and it will go somewhere I never thought it would go. And reconsidering, so, if they’re going at it from this perspective, why would that be helpful? What aspect would be helpful? Is that authentic to who I am? Is that something that I could incorporate? And just bouncing ideas off of each other. (Olivia)

However, the most widely reported influencer on the development of theoretical paradigms was mentors. The participants reported that mentors helped shape their



theoretical paradigms, offered information on their theoretical paradigms and how they look in practice, and encouraged exploration and creation of theoretical paradigms.

One of the things I love about him is that “it’s not my way, an I’m not teaching you what to think. I’m teaching you how to think about what you think.” And I think that’s been a really strong fit for me. (Diana)

Three of the participants noted that their theoretical paradigms were influenced by mentorship they received in graduate training. Luis also mentioned that he experienced the influence of mentorship after graduate training through two well-known figures in the field.

Dr. Ken Ravizza. He’s connected through a lot of people I went to grad school with. And I met up with him a couple of year ago. And I’m really grateful that I was able to build a relationship with him before he passed last year. He also challenged me quite a bit on “why would you use this information,” and “why wouldn’t you go with that.” And ask a lot of the questions...And there were sometimes where he would say, you should go back and look at that some more...Dr. Michael Gervais, who’s out on the West Coast. I mean that guy is involved in a thousand different projects. Our paradigms are very similar. The first two levels. He’s very much mindfulness based, and psychological framework based...I’ve been able to bounce some ideas off of him and have conversations with him where we’re talking about the same thing, but he’s talking about it on another level. Which has been really valuable. (Luis)

The theme of “Personal Development” was present for three of the four participants, and it included topics such as personal use of sport psychology in their own life and personal

therapy. When referring to her own practice of sport psychology, Diana stated that she found it necessary to practice what she preaches.

If I wasn't present in the way that I'm learning to conceptualize and intervene in therapy. You know, what is the experience unfolding between the two of us right now? That's not geared toward an intervention or an exercise or a conceptualization. It's like really being present in that model, and really having contact with the present moment alongside you while you're trying to get to this place. (Diana)

Both Diana and Randy spoke about the importance of their own therapy in the development of their theoretical paradigms. Randy stated that it is important to experience work from the other side, and that it was this personal journey through therapy that has largely informed his professional experiences.

### **Impact of Training Background**

The impact of one's training background on the perceived principles beneficial to a theoretical paradigm of sport psychology varied amongst the participants. Diana had a training background in both sport psychology and sport science (primarily trained in psychology) and relies heavily on her sport science background.

I often find myself falling back on my training in physiology that a lot of my peers don't have. They're going, "like yeah, just breathe." And it's actually like, "yeah, that's because your diaphragm presses on your vagus nerve. You know if you respond to physical palpitations that's why that works." For me, having that understanding of how the systems integrate has been hugely beneficial for understanding what's actually going on for a client or athlete. (Diana)

Luis and Olivia had training backgrounds in both psychology and sport science (primarily been trained in sport science) and both valued different principles. Diana viewed the principles of clinical psychology through a lens that is “really heavily, heavily, heavily, heavily on the sport sciences side.” Luis, on the other hand, primarily identifies with psychological principles.

I would say the two foundations of my theoretical [paradigm], mindfulness and psychological framework are much more psychological...I think deliberate practice and understanding how to practice is probably more sport sciency, and then psychological skills are a little bit of both...A lot of coaches, and even physical trainers, their understanding of deliberate practice is pretty flawed. And so, even though that's where I'm a little bit more sport sciency, there's significant portions of deliberate practice where it's important to understand that if you don't have a growth mindset, deliberate practice is probably the worst experience you could possibly have. So, you do have to have an understanding of the psychological component to it.

Finally, Randy, who only received formal education on psychology, resonated more with psychological components in sport psychology.

Let's go with 75-80%. I think certainly of what it means to be an athlete, the athletic experience, both physically and with injury, biomechanically, technically, tactically. That comes in, but it's much less than the psychological.

### **Satisfaction with Theoretical Paradigms**

The third broad research question was: Are practitioners satisfied with their theoretical paradigms? To qualitatively explore this research question, a focused was

placed on what factors lead to the current satisfaction level with their theoretical paradigm. Two sub-questions were applied to determine what leads to practitioner satisfaction of theoretical paradigms: (1) how does length of time practice impact satisfaction?; and (2) do practitioner's theoretical paradigms address components they deem critical to a theoretical paradigm? Themes, which emerged from line-by-line coding, aligned with these sub-questions, and are presented in the following.

### **Years Practicing**

Three of the participants reported that they had gained “Flexibility” with and within their theoretical paradigm, which has led to greater satisfaction with their theoretical paradigm. Diana reported that being immersed in her theoretical paradigm through more intensive training has provided her with more freedom to work within her paradigm, and Randy stated that deeply understanding a variety of paradigms has allowed him to operate outside of the traditional schools (i.e., theoretical paradigms) that he operated in at the beginning of his career. Olivia indicated that building flexibility into her theoretical paradigm and adjust her paradigm has led to her satisfaction with her theoretical paradigm.

Olivia reported that she has been able to feel more authenticity in her work, which has led to “Client Impacts” as she has continued her development, and she expressed that feeling authentic significantly impacted her satisfaction with her theoretical paradigm.

Doing the work and feeling authentic. Feeling like I am no longer trying to be somebody else. Although I hear [mentor 1]'s voice come out every once in a while. I hear [mentor 2]'s. I hear [mentor 3] and [mentor 4] come out every once in a while, But even when they're coming out, it's with my spin on it, or I'm

smiling and laughing because I'm quoting them once again. It's in a way that's authentic to me. Which is relatively new for me. I've struggled to get there, but now that I'm there it's really, that feels good, and I think that leads to that satisfaction piece as well.

The meta-themes of "Client Impacts" and "Lifelong Learning" were also present in how increased years in practice impact theoretical paradigm satisfaction. Participants reported that their satisfaction with their theoretical paradigm has increased as they have seen their paradigms be more effective when working with clients. Three participants also identified that their current satisfaction levels may be skewed due to their value of continual growth and development.

#### **Paradigm Addressing Important Concepts**

Two participants reported that the "Comprehensiveness" of their theoretical paradigms led to satisfaction. Randy identified the comprehensiveness of his paradigm as his central reason for his high level of satisfaction.

Yeah, well I think that it's because it's comprehensive. It covers everything that I've been able to figure out or identify in my work. And so, it's just incredibly comprehensive and structured. That's what I would say. It covers all the bases.

(Randy)

Luis also found that his theoretical paradigm was comprehensive with the current body of knowledge that exists within the field, but he stated that he would like to simplify his paradigm if possible.

I would love to simplify it even more. It's only got four components in it. I would love to get it down to one. I don't know if that exists either. I mean all those

things are interrelated, and I guess you could put it into a circle instead of a tear. The bottom line is that I would love to be able to teach it sooner. Teach it faster. Have it take effect sooner. I don't know if it would be more effective if it did or it didn't. So, somewhat satisfied would be more related to, would love to be able to do my job more effectively, even though I think I'm pretty good. (Luis)

Luis's pursuit of efficiency, simplicity, and effectiveness despite current satisfaction with his theoretical paradigm also aligns with the meta-theme of "Lifelong Learning." Three of the participants indicated that they are currently satisfied with their paradigms, but that they will never be content with the current state of their paradigm. Diana, Luis, and Olivia all reported that they will continue to search for ways to improve their theoretical paradigms in the pursuit of working with their clients in more effective ways.

### **The State of the Field**

The interviews revealed four themes that partially diverged from the quantitative research questions. The themes explore participant's views of the state of the field of sport psychology regarding theoretical paradigms and include the following themes: (1) "Shortcomings in the Field"; (2) "Shortcomings with Education"; (3) "Future Research on Paradigms"; and (4) "Ambivalence about Development of Paradigms."

### **Shortcomings in the Field**

All four participants noted shortcomings within the field of sport psychology as it pertains to theoretical paradigms. Topics included: not taking the necessary steps to legitimize the field, the desire to be considered *performance psychology*, insufficiency in current theoretical paradigms, and tensions within the field.

Three participants noted that the field has not progressed in a way that they believe would legitimize the field as compared to other fields associated with psychology or sport performance.

I don't know if it's just the adolescent stage of our field, but I think we've been around for a while. I don't think we've taken the big steps in really solidifying ourselves as a field in "this is what we do." (Diana)

Two participants indicated that the field of sport psychology should be under the umbrella of the term *performance psychology* due to their belief that performance enhancement is an aspect of sport psychology that can be translated to a variety of different fields.

I mean sport psychology is a really outdated term, honestly. It really should be peak performance psychology. Sport makes up a large portion of that, especially in America, but we're all performing in whatever it is that we're doing. Whether it's sport, whether it's on a stage, or whether it's in relationships, or in grad school. Your performance matters wherever you are. (Luis)

Three participants expressed that they believe theoretical paradigms are deficient in the field of sport psychology by either lacking physiology, taking a liability reduction approach, or by relying too heavily on paradigms from clinical psychology.

I don't think there's anything wrong with learning from other people. I think that's incredibly valuable. I mean, shit, that's why I am where I am. But I think learning from them is one thing, relying on them is another. And unfortunately, I think when it comes to theoretical paradigms, we've relied on counseling and psychology to help people find their path...I think the concepts all greatly, greatly

apply, but why are we not talking about them in the setting of sport and performance psychology? (Olivia)

### **Shortcomings with Education**

All four participants reported that they perceived the educational state of the field of sport psychology to be lacking when referring to theoretical paradigms. Olivia stated that she felt lucky to have the education she received in her sport psychology training but does not believe the majority of the field has had the same experience. Randy expressed doubt that any master's level program provides the education necessary to fully understand a theoretical paradigm.

If you're getting a clinical or counseling degree you learn a lot of stuff depending on the orientation of the program and your own personal orientation. But you know, even [master's program], which I think is probably the best master's degree in the country is woefully lacking in sophistication of really the psychological issues. (Randy)

Luis reported that he believes graduate programs are studying the wrong things by being stuck in sport psychology research and not incorporating other principles (e.g., growth mindset, core beliefs) he sees as integral to his theoretical paradigm. Olivia, stated that she believes her education on theoretical paradigms occurred by taking elective courses in her graduate programs.

### **Research on Paradigms**

The participants reported mixed feelings on future research on theoretical paradigms in the field. Topics included: doubts about research's ability to capture the complexity of the human psyche, the need to tap into broader interdisciplinary research,



doubts about current theory being empirically supported, and using the current research project as a starting point.

Two participants were unsure of what effective research on theoretical paradigms would look like, particularly given the complexity of theoretical paradigms.

At one level I'm an empiricist and I'm grounded in data. And at the same time, I'm an experientialist. Meaning I'm grounded in experience, and research cannot possibly replicate the complexity of the human psyche, because you can control for one variable, but the mind is millions. Well not millions, many, many variables. And you can't separate them. They're all tied in. (Randy)

Centrally, two participants wanted to see research conducted on current aspects of theoretical paradigms that can be used when intervening with clients.

I guess I would be curious to know more specifically around for what aspects of these performance challenges are these things working better than others...And let's talk about how we can really broaden the scope to use this intervention for this thing and a batter of tools for that. I guess at this point I'm just kind of curious of all the conceptions and perhaps misconceptions we have in this field of what works and what doesn't. And is this true, or is it not? (Diana)

### **Ambivalence about Development of Paradigms**

The final theme that emerged from data analysis was ambivalence regarding the development of theoretical paradigms specific to sport psychology. Participants shared worries about how a theoretical paradigm may limit the field of sport psychology, and how a theoretical paradigm would be accepted in the field. Multiple participants also

voiced a desire for multiple theoretical paradigms to be developed that were specific to the field.

I think it would be. Oh. I don't know...I'm toggling back and forth between that it could be limiting to the field to have one specific to our field. You have so many people that have different paradigms and they do such incredible work. I think there's a range of people doing this and a range of skills that can meet a range of needs for a variety of people. And, I also know that people within theoretical orientations that practice so wildly differently that I don't know that it would necessarily limit that. I don't know if I feel like that would be. I think there needs to be something. Some sort of a framework. I just don't know that we would ever agree on one in this field. (Diana)

Two participants expressed their desire for multiple theoretical paradigms to be developed that were specific to sport psychology. Randy stated that "it doesn't have to be one. Just like there's not one paradigm for psychology." Olivia indicated that "it would be fantastic if there was the development of these new approaches that might be more specific to our field and what that uniquely looks like."

### **Integration of the Quantitative and Qualitative Data**

Originally, data priority (i.e., more attention in data collection and analysis) was given to the quantitative data (Creswell, 2014), which is typical in a sequential explanatory design (Ivankova et al., 2006). Despite the priority on the quantitative data, a dialectic stance (i.e., holding and honoring the tensions between paradigms) was taken to allow for meaningful engagement with both sets of data (Green & Hall, 2010). This stance recognized the legitimacy of both paradigmatic traditions (i.e., postpositivist,

constructivist), and allowed for a shift in what was valued methodologically in this study. Given the divergence and incongruence in the qualitative data from some of the quantitative data, it was determined to shift the weighting of the data to equal priority for both quantitative and qualitative data. This shift allows for a better understanding of theoretical paradigms, as opposed to data convergence or consonance, in applied sport psychology, which is the ultimate goal of this study. The following integration of the quantitative and qualitative data reflect this shift.

### **Use of Theoretical Paradigms**

Quantitative analyses revealed that 76% of practitioners reported using an integrated theoretical paradigm (n = 129), followed by 19% using a pure eclectic paradigm (n = 33), 4% using a single school paradigm (n = 6), and 1% using no theoretical paradigm (n = 2). Of the 76% using an integrated theoretical paradigm, 44% reported using assimilative integration (n = 57), 33% reported using theoretical integration (n = 42), 17% reported using common factors (n = 22), and 6% reported using technical eclecticism (n = 8). Using stratified purposeful sampling (Palinkas et al., 2015), participants were recruited for the qualitative portion of the study to highlight important shared patterns that cut across cases. Thus, participants reflected the assimilative integration, theoretical integration, common factors, and pure eclectic theoretical paradigms respectively.

Although theoretical paradigm type was assumed to be understood prior to the qualitative interviews, the theme of “Difficulty with Label” was revealed in the analysis of qualitative data. This theme emerged from implicit extrapolation of the data, as three of the four qualitative participants experienced difficulty determining the type of

theoretical paradigm that accurately described what they were using. Two participants appeared to align more with different theoretical paradigm types, while one had difficulty finding a paradigm type that fully encompassed her use of a theoretical paradigm.

The frequency analysis of the types of theoretical paradigms used by sport psychology practitioners revealed that practitioners averaged 4.72 theoretical paradigms integrated into their paradigm type, with the most common theoretical paradigm used being CBT (85.6%,  $n = 125$ ), the second most common theoretical paradigm used being ACT (63.0%,  $n = 92$ ), and the third most common theoretical paradigm used being humanistic (i.e., client-centered) (62.3%,  $n = 91$ ). The qualitative data mostly converged with the quantitative results. Three of the four participants incorporated CBT and ACT into their theoretical paradigms. However, the client-centered approach was utilized by all qualitative participants.

The qualitative findings on the use of theoretical paradigms not only highlighted convergence with the quantitative data, they also provided some insight into how theoretical paradigms are integrated for practitioners (See Table 12). Two themes emerged on how practitioners are integrating theoretical paradigms: (1) “Depth and Complexity”; and (2) “Connection with Philosophy”. Practitioners were found to be integrating theoretical paradigms to add “Depth and Complexity” in their conceptualization and intervention with athletes. Practitioners were also found to be integrating theoretical paradigms to align with their philosophy, values, and core beliefs.

Table 12

*Joint Display of Paradigm Type, Central Paradigms, and Practitioner Integration*

Paradigm Type	<i>n</i>	%	Top 3 Paradigms Used ( <i>n</i> )		
			1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
<i>Single School</i>	6	3.5%	ACT (2)	4 with <i>n</i> = 1	
<i>Assimilative Integration</i>	57	33.5%	CBT (21)	ACT (18)	Hum (6)
<i>Theoretical Integration</i>	42	24.7%	CBT (34)	Hum (26)	ACT (23)
<i>Technical Eclecticism</i>	8	4.7%	CBT (6) & Hum (6)		ACT (5)
<i>Pure Eclecticism</i>	33	19.4%	CBT (33)	Hum (29)	ACT (22)
<i>Common Factors</i>	22	12.9%			
<i>No Paradigm</i>	2	1.2%			

## Themes

*Depth and Complexity*

Just teaching someone a breathing routine is really great, or a pre-shot routine is awesome. But a pre-shot routine is great for narrowing your focus for an execution at the moment of execution. It's terrible for dealing with fear of failure, right? I guess it's not real robust. It's not addressing the root cause. It's only addressing symptoms...I don't want to take the super deficiency model of medicine, but medicine does a good job of diagnosing and getting to the root of what's going on rather than just treating the symptoms. And that's how you change. Now, it's more difficult, and it takes more time. But if you want sustainable change and teach people how to do it on their own, then that's where you've got to go.

*Connection with Philosophy*

My own philosophies and values and morals and beliefs, and how does that relate to my beliefs about human nature, and who we are, and human behavior, and all that...I would have to say that my faith is a huge determining factor. I'm quite religious. I'm Christian. I'm heavily involved in the church...I think that drives a lot of my beliefs about human nature, capability for change, and things like that. I think that drives my morals and my values quite often...I think it's an important piece that drives what I'm drawn to.

*Note.* Hum = Humanistic

### **Development of Theoretical Paradigms**

Quantitative results found that theoretical paradigms were developed across all portions of their careers. On average, 36.02% of development was attributed to development within a master's program, 28.44% was attributed to the development within a doctoral program, and 13.79% was attributed to the development in one's early career. The quantitative results indicated that master's training was the most influential period for those practicing five years or fewer, and doctoral training was the most influential period for those practicing more than five years. These results diverge from the literature therapist development (see Rønnestad and Skovholt, 2003). However, the qualitative data align much more strongly with the previous literature.

Three themes emerge of when theoretical paradigms are developed: (1) "Early Struggles"; (2) finding "Depth and Complexity"; and (3) "Lifelong Learning" (see Table 13). Several practitioners described their early struggles with the development of their theoretical paradigm, particularly regarding difficulty grasping the factors that lead to performance enhancement and failure when working with clients. Two of the participants, one still in graduate training and one early in her career, were able to find "Depth and Complexity" through advanced graduate training, and two reported that they had to develop "Depth and Complexity" outside of their graduate programs. The participants also described how the continuation of their growth over time has led to continued development of their theoretical paradigm. This was most salient for Randy, who had been practicing sport psychology for 38 years.

Table 13

*Joint Display of Theoretical Paradigm Development Timeframe*

Development of Paradigm	
Development Period	
<i>Prior to University</i>	$M = 2.60\%$ , $SD = 7.07$
<i>Undergraduate</i>	$M = 10.53\%$ , $SD = 18.76$
<i>Master's</i>	$M = 36.02\%$ , $SD = 29.36$
<i>Doctoral</i>	$M = 28.44\%$ , $SD = 29.50$
<i>Early-career</i>	$M = 13.79\%$ , $SD = 20.10$
<i>Mid-career</i>	$M = 5.12\%$ , $SD = 11.91$
<i>Late-career</i>	$M = 2.76\%$ , $SD = 11.30$
Themes	
<i>Early Struggles</i>	“I feel bad for the first kid I worked with. I charged him like 10 bucks an hour, some 14-year-old basketball player. I'm sure he got worse. But it was valuable for my framework in that master's program because my advisor encouraged me to go do work, figure out what works and what doesn't, and go fuck up. And go screw up with someone that doesn't know you're screwing up. Like, middle school kids, they don't know. But it was important because you actually had to field test.”
<i>Depth and Complexity</i>	“It wasn't until six or seven years ago that I developed the model I use now. Which, before that it was basic mental training. You know, motivation, confidence, intensity/anxiety/arousal; whatever term you want to use. Focus. Things like that. But now it's much richer, much deeper, much more sophisticated. Because I'm a big believer that performance is complex, and it can't be boiled down.”
<i>Lifelong Learning</i>	“It's been largely an evolution of my personal experience that has certainly informed my professional experience, no doubt. Because, I guess, going from a very ridged, rational, logical, cognitive, intellectual, cerebral approach early in my career was very much the way I approached my life. And not, I approach it in a very different way. Very depth oriented at times of emotions. Looking at weaknesses, obstacles, challenges, and I think it has informed my professional approach as well”

The qualitative data not only revealed when paradigms are being developed, but also factors that lead to the development of paradigms. Two themes emerged from the qualitative data on the factors that have led to theoretical paradigm development: (1) “Influencers to Development”; and (2) “Personal Development.” All four participants identified important others who influenced their theoretical paradigm development including authors and researchers, peers, clients, and mentors. The most prevalent influencer to theoretical paradigm development was clients, although mentors were most frequently described as influencers for development in graduate training. The other theme that was found to impact paradigm development was “Personal Development,” which included incorporating one’s paradigm into one’s own performance enhancement. The theme of “Personal Development” also included the benefit of seeking personal therapy to the development of a theoretical paradigm.

The quantitative results found that one’s training background impacted the advised percentage of psychological and sport science principles advised to be used in a theoretical paradigm for sport psychology. More specifically, the analyses revealed that those who were trained primarily in psychology valued psychological principles more than sport science principles, and those who were trained primarily in sport science held more value for principles from sport science. Those trained in both psychology and sport science valued psychological principles more than sport science principles, but they also valued sport science principles more than those trained primarily in psychology.

Qualitative results partially diverged from the quantitative data. The participant who was primarily trained in psychology valued psychological principles more heavily than sport science principles, and one participant who was mostly trained in the sport



sciences aligned more heavily with sport science principles (See Table 14). However, a participant who was mostly trained in psychology found significant value in sport science principles. The other participant who was mostly trained in in the sport sciences also diverged from the quantitative results by leaning much more on the psychological principles in his theoretical paradigm. These results highlight the individual differences that exist among practitioners, particularly how one's training background may impact the development of a theoretical paradigm. Conversely, the results also indicate that further research is needed to determine a more accurate picture of how training backgrounds impact a theoretical paradigm.

Table 14

*Joint Display of Training Background on Paradigm Development*

Training Background and Principles Included	
Training Background & Psychological Principles	
<i>Primarily Psychology</i>	$n = 79, M = 69.80\%, SD = 17.19$
<i>Primarily SS/K</i>	$n = 21, M = 49.24\%, SD = 23.00$
<i>Psychology &amp; SS/K</i>	$n = 61, M = 65.90\%, SD = 14.68$
<i>ANOVA</i>	$F(2, 158) = 17.22, p < .001, \eta_p^2 = .179$
Training Background & SS/K Principles	
<i>Primarily Psychology</i>	$n = 79, M = 23.76\%, SD = 14.36$
<i>Primarily SS/K</i>	$n = 21, M = 50.71\%, SD = 22.43$
<i>Psychology &amp; SS/K</i>	$n = 61, M = 32.38\%, SD = 14.16$
<i>ANOVA</i>	$F(2, 158) = 25.63, p < .001, \eta_p^2 = .245$
Themes	
<i>Importance of SS/K</i>	I often find myself falling back on my training in physiology that a lot of my peers don't have. They're going, "like yeah, just breathe." And it's actually like, "yeah, that's because your diaphragm presses on your vagus nerve. You know if you respond to physical palpitations that's why that works." For me, having that understanding of how the systems integrate has been hugely beneficial for understanding what's actually going on for a client or athlete.
<i>Mostly Psychological</i>	I would say the two foundations of my theoretical [paradigm], mindfulness and psychological framework are much more psychological...I think deliberate practice and understanding how to practice is probably more sport sciency, and then psychological skills are a little bit of both...A lot of coaches, and even physical trainers, their understanding of deliberate practice is pretty flawed. And so, even though that's where I'm a little bit more sport sciency, there's significant portions of deliberate practice where it's important to understand that if you don't have a growth mindset, deliberate practice is probably the worst experience you could possibly have. So, you do have to have an understanding of the psychological component to it.

*Note.* SS/K = Sport Science/Kinesiology

### **Satisfaction with Theoretical Paradigm**

Quantitative results indicated that sport psychology practitioners were generally satisfied with their theoretical paradigm with 85.8% of practitioners expressing that they are at least somewhat satisfied with their paradigm. Therefore, participants who were at least somewhat satisfied with their paradigm were selected for the qualitative portion of the study via stratified purposeful sampling (Palinkas et al., 2015). Quantitative results revealed that practitioners who practiced less than five years were least satisfied with their theoretical paradigm, and those who had practiced more than 30 years were most satisfied with their theoretical paradigm. No statistical differences existed among those who practiced between 6-30 years.

On the surface, it would appear that the qualitative results were discordant from the quantitative results, with the exception of the satisfaction level for the participant who had been practicing for 38 years and was very satisfied with his paradigm. However, the qualitative data revealed further growth and development has led to greater flexibility with and within a paradigm for three participants. The data also revealed that the younger participants exhibited a growth mindset and perfectionistic tendency with their theoretical paradigm satisfaction which emerged within the meta-theme of “Lifelong Learning.” All four participants described the increase in effectiveness of working with clients over time as increasing their satisfaction with their theoretical paradigm. Although this increased satisfaction through perceived efficacy over time speaks to satisfaction increasing over time, it fails to truly explain why no statistical differences exist between practitioner satisfaction rates for those practicing between 6-30 years. However, the “Comprehensiveness” of theoretical paradigms was mentioned as an impactor for

paradigm satisfaction. Each practitioner highlighted that their theoretical paradigms have increased in complexity and depth over time, which may point to increasing levels of satisfaction among practitioners who have been practicing for over 30 years (see Table 15). “Lifelong Learning” may also play a key role as to why practitioners who have practiced five years or fewer experience less satisfaction with their paradigm. They may view the vast options to choose from as overwhelming, or they may have strongly identified with a growth mindset in that they are constantly pursuing more complexity, depth, and effectiveness with their theoretical paradigms.

Table 15

*Joint Display of Theoretical Paradigm Satisfaction by Years Practicing*


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Satisfaction with Paradigm	
Paradigm Satisfaction by Years practicing	
<i>Kruskal-Wallis</i>	$\chi^2(6, 162) = 38.39, p < .001, r = .238$
Themes	
<i>Lifelong Learning</i>	I would say that that's very much along the lines of when an athlete plays a really good game and goes, "eh, I could have done more." I'm always combing the research and/or trying to evaluate how I'm delivering sport psychology and getting feedback on how to do it better. If I was totally satisfied with it, it would be a world where all my athletes were all destroying their performance and having a great time doing it. I don't know if that world quite exists.
<i>Client Impacts</i>	Effectively working with clients. Seeing that it works. Seeing that I've been able to interact with people, be they students or clients or whatever, and be effective with them. I think that's been a piece of it.
<i>Comprehensiveness</i>	Yeah, well I think that it's because it's comprehensive. It covers everything that I've been able to figure out or identify in my work. And so, it's just incredibly comprehensive and structured. That's what I would say. It covers all the bases.

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**State of the Field**

Four themes emerged from the qualitative data regarding participant thoughts on the state of the field of sport psychology that partially diverged from the quantitative data. The four themes included: (1) "Shortcomings in the Field"; (2) "Shortcomings with Education"; (3) "Future Research on Paradigms"; and (4) "Ambivalence about Development of Paradigms."

Several topics were addressed by participants when referring to “Shortcomings in the Field” including lack of legitimizing the field, sport psychology should be a subfield of performance psychology, insufficiency in theoretical paradigms, and tensions within the field. The “Shortcomings in Education” theme included standardized training on theoretical paradigms and a more holistic education on concepts, principles, and theories derived outside the field of sport psychology. Participants reported mixed feelings about future “Research on Theoretical Paradigms” in the field, which included doubts about research efficacy, the desire to broaden the scope of research through interdisciplinary work and using this research as a starting point for future research on theoretical paradigms. Connected to the mixed feelings regarding research, participants expressed “Ambivalence about Development of Paradigms” specific to the field of sport psychology. This ambivalence included worries about how a single paradigm may limit practitioners, the desire for the development of a theoretical paradigm or multiple theoretical paradigms in the field, and whether or not a theoretical paradigm would be accepted in the field given the tensions in the field perceived by the participants. This partially aligns with the quantitative results, which found that sport psychology practitioners somewhat agreed that the field would benefit from a paradigm specific to sport psychology ( $n = 163$ ,  $M = 5.12$ ,  $SD = 1.61$ )

## Chapter 5: Discussion

This chapter offers a discussion of the quantitative and qualitative results. More specifically, this section begins with an interpretation of the integrated data. The section also reflects on the convergence or dissonance from the previous literature on the use and development of theoretical paradigms in the field of sport psychology. Next, the strengths and limitations of the study will be discussed. Limitations to be discussed are the scope of the study, the use of a locally developed instrument, sampling, and difficulties with determining an appropriate theoretical paradigm type. The strengths of the study include the innovative nature of this study, the methodology used to explore the research questions, and the inclusion of all practitioner developmental levels. Implications for the education and practice are included in the following section, as well as future directions for the research on theoretical paradigms in sport psychology. Finally, this chapter will conclude with final conclusions of the study.

### **Interpretation of Integrated Data**

This study provided a holistic view of the use, development, and satisfaction with theoretical paradigms in the profession of sport psychology. This study provided further evidence and support for a large portion of the scant literature that existed on theoretical paradigms within the field, and it built upon the literature by offering a more precise investigation that was more representative of the practitioners of sport psychology. This study also provided clear areas in which the field has opportunities for growth.

Several findings aligned with Poczwardowski et al.'s (2004) recommendations for service delivery and professional philosophy. The finding that the majority of practitioners identified with an integrated theoretical paradigm was in line with

Poczwadowski et al.'s (2004) assertion that an integrated approach can effectively address both psychological and physiological issues regularly encountered in applied sport psychology. This study also provided evidence that practitioners are primarily drawing from one or more theoretical paradigms from the field of psychotherapy, which was a second recommendation of Poczwadowski et al. (2004). Although not directly addressed in the quantitative portion of this study, qualitative evidence suggested that practitioners' paradigms were in alignment with their personal core beliefs and values, which was a central tenet of Poczwadowski et al.'s (2004) *Hierarchical Structure of Professional Philosophy*. The qualitative data also supported the assertion that one's beliefs and values should not be static but developed over time through self-reflective practice. Thus, it appears that practitioners are, at least with what they have been given from the field, ascribing to the key principles of professional philosophy regarding theoretical paradigms from Poczwadowski et al. (2004). The question remains, however, as to if practitioners in the field have been provided with a theoretical paradigm that effectively addresses the complexity of athletic performance (i.e., psychologically and physiologically) that is in line with the spirit of this framework for professional philosophy.

The quantitative and qualitative results provided support for Rosen and Lipkins's (2016) finding that CBT was the most prevalent theoretical paradigm within the field. However, the extent to which traditional CBT is being utilized is unclear. The qualitative participants who identified with CBT primarily referred to its use through mental skills training. Mental skills training is certainly rooted in CBT, but mental skills training is far from a complete representation of this paradigm. If practitioners are identifying with



CBT as a primary theoretical paradigm purely due to the practice of mental skills training, they are at risk of losing the complexity offered within the paradigm (McArdle & Moore, 2012). Although CBT was the most common theoretical paradigm in use by the participants, this study provided evidence that the separation between CBT and other paradigms is not as pronounced as the Rosen and Lipkins (2016) study suggested. The use of ACT and humanistic paradigms was much more prevalent in the current study, and interpersonal and systems paradigms were reported to be much more heavily utilized than previously suggested. Overall, the results on the use of theoretical paradigms provided more clarity, precision, and inclusiveness to Rosen and Lipkins (2016) by offering theoretical paradigm types as organizing structures for the individual theoretical paradigms in use, as well as including practitioners both with and without AASP certification.

The integrated results on the development of theoretical paradigms by sport psychology practitioners aligned with Rønnestad and Skovholt's (2003) theory of therapist development and provided further evidence for Tod's (2007) assertion that sport psychology practitioner development aligns with psychological therapist development. Although the quantitative data illustrated that practitioners continue to develop their theoretical paradigms throughout their careers, it was the qualitative data that richly illuminated practitioner development. The qualitative data described early experiences of uncertainty with theoretical paradigm development, and the primary influence of mentors in graduate training. The qualitative interviews also highlighted that early theoretical paradigm development was also influenced by clients, peers, theory, and research. The qualitative data provided evidence that practitioners tended to shed some ideas and

behaviors regarding theoretical paradigms when they were novice professionals. Two qualitative participants experienced disenfranchisement with training that failed to address the complexity of the environment, left perceived gaps in knowledge, and led to an examination of the literature and their ecological systems in which they operated. These experiences directly align with Rønnestad and Skovholt's (2003) theory. Finally, congruence with the literature existed for experienced practitioners. Those who had been practicing for more than 30 years (including training) attributed 54.56% of their theoretical paradigm development to their experience in the field, and the qualitative participant who had been practicing for 38 years attributed virtually all of his paradigm development to his experiences in the field and self-reflection. This not only aligns with Rønnestad and Skovholt (2003), but also aligns with Stoltenberg's (2005) finding that established practitioners rely on internalized theories developed from experiences in the field. This study provided support that theoretical paradigm development in sport psychology practitioners aligns with Rønnestad and Skovholt's (2003) theory of therapist development, but further research in this area needs to be conducted to conclusively determine alignment with the theory.

The results on the use and development of theoretical paradigms highlights two key areas of fragmentation in the field. The first area of fragmentation is rooted in the establishment of the field. Sport psychology originated in the fields of psychology and physical education (i.e., sport science/kinesiology), and training primarily in one of these areas impacts the concepts determined to essential in a theoretical paradigm for sport psychology. The differences in training and allegiances to these domains remains a source of tension within the field, and the perception of the scope of practice for sport

psychology practitioners lies on a continuum of purely sport science to purely psychology. It has been a goal of the leaders of the field to find harmony between these positions, and progress has certainly been made since the field originated in the 1960s. However, it is evident that tensions still exist between the two camps. The second area of fragmentation borrows from the field of psychology (see Henriques, 2011) in that there is a tremendous amount of material in the field (i.e., data from research, theories from psychology, theories from sport science/kinesiology) but no central way to organize and use the data. In the current study, the paradigms that were reportedly used averaged over four and a half separable paradigms per practitioner. Eight practitioners indicated that they integrate more than 10 paradigms into their work. Given that the qualitative participants reported that they did not receive a broad and deep education on theoretical paradigms, and no participant reported training in paradigm integration in their graduate training, it is fair to assume that practitioners are either forced to learn how to effectively integrate on their own or they have no systematic way of integrating these paradigms in an effective and ethical manner. Neither case is ideal for the field.

This was the first study to explore practitioner satisfaction with theoretical paradigms in the field, and it found that the majority of practitioners were satisfied with their theoretical paradigms. Although individual practitioners reported that they were satisfied with their own theoretical paradigms, it was evident through the quantitative and qualitative inquiry that practitioners were not satisfied with the state of the field regarding theoretical paradigms. The majority of practitioners (61.7%) at least somewhat agreed that their practice would benefit from a theoretical paradigm for sport psychology, and two-thirds of practitioners at least somewhat believed that the field would benefit from a

paradigm specifically designed for the field. The interviews suggested that practitioners believed that the state of theoretical paradigms in the field of psychology is in its infancy, and the development of a paradigm may help to further legitimize the field. However, this belief was couched with uncertainty regarding practitioner acceptance of a theoretical paradigm and potential limitations of a singular paradigm for the field (e.g., potential lack of flexibility in the paradigm to meet different styles of practice).

The qualitative participants' views on the state of the field of sport psychology (i.e., shortcomings in the field regarding theoretical paradigms, dissatisfaction with the education on theoretical paradigms, need for more thorough and interdisciplinary research, movement toward performance psychology as primary field) align with Portenga et al.'s (2017) assertion that the field of sport psychology needs to address a variety of issues to further legitimize the profession. Portenga and colleagues (2017) did suggest that the field should move toward the identification with performance psychology as an umbrella field under which sport psychology would reside. Portenga et al. (2017) argue that this shift would more accurately honor the essence of the field (i.e., understanding the psychology of elite performance), as well as acknowledge that the principles of sport psychology apply to other performance settings (e.g., soldiers, police, firefighters, surgeons, musicians, thespians, people in business).

The four key areas Portenga et al. (2017) suggested would move sport psychology from an emerging profession to an established profession were: (1) standardizing a system to teach the knowledge and train the skills necessary to succeed in the profession (i.e., establish academic standards for education); (2) create an standardized examination to validate the knowledge and skills learned in education and training; (3) develop an

organized community to advocate for the profession; and (4) develop a unique body of knowledge specific to the profession. They argue that practitioners need to have a clear theoretical framework beyond mental skills training, and that a standardized system to teach theory and research, as well as skills and abilities, is needed within the profession.

Such a system should be informed by an analysis and description of the knowledge, skills, and abilities needed to effectively and ethically practice in the profession (i.e., JTA). Rosen and Lipkins (2016) completed this analysis and description for AASP with the goal of developing a certification examination that incorporated domains of practice, jobs performed, and knowledge required for the effective application of sport psychology. However, one qualitative participant who participated in this process indicated that the analysis more strongly identified what not to do in practice rather than identifying ways to effectively practice sport psychology. Sport psychology does have a fairly robust community, but the aforementioned fragmentation within the community has not allowed for consensus on the direction of advocacy for the field. Finally, the field has generated a unique body of knowledge specific to the profession. However, the previously mentioned fragmentation in the organization of this knowledge makes it almost impossible for a practitioner to develop a comprehensive framework that is grounded with foundational clarity.

### **Limitations and Strengths**

There were several limitations and strengths of this study. The first limitation of this study was the large scope of the project. The study sought to explore the use, development, and practitioner satisfaction with theoretical paradigms in the field of sport psychology. Each aspect (e.g., theoretical paradigm use, theoretical paradigm

development) of this study warrants its own exploration. Although this project may serve as a guide to further explore each domain with more specificity and depth, the large scope of the project may have hindered a more detailed and rich exploration of these domains.

The second limitation of the study was the use of a locally developed instrument. Given that the origins of this instrument derived from this study, there is scant data on the instrument's psychometric properties, and what psychometric data (e.g., test-retest reliability) was to be collected could ultimately not be collected due to issues with confidentiality. Further exploration of the psychometric properties is warranted, as well as continued refinement of the instrument. Two areas for potential refinement include assessing which theoretical paradigms individuals who are utilizing a common factors approach integrate into their own paradigm, as well as a more robust exploration of practitioner satisfaction with the state of the field regarding theoretical paradigms (e.g., what is your satisfaction with the state of the field regarding theory, theory development, research, education).

A third limitation of the study was the use of convenience sampling for the qualitative portion of the study. The use of convenience sampling limits the generalizability of the target population due to the potential for bias regarding the representation of subgroups in the sample compared to the population of sport psychology practitioners. The use of the Temple listserv and the AASP membership directory may have limited the number of practitioners that are no longer affiliated with these sources (e.g., late-career professionals). The sample may have also limited the number of international practitioners of sport psychology, who may have vastly different experiences with the use, development, and satisfaction with theoretical paradigms.

The final limitation of this study was a potential lack of understanding of the field on theoretical integration, and the imperfect classification system used to determine theoretical paradigm types. Despite the offering of robust definitions for theoretical paradigm types, participants of the qualitative portion of the study had difficulty identifying the theoretical paradigm type that most closely aligns with their theoretical paradigm. One practitioner experienced difficulty finding an accurate representation of her theoretical paradigm, which would indicate that this issue may be more far-reaching than just within the qualitative participant sample.

This study also exhibited several strengths. First, this study represents the first study to research practitioner satisfaction with theoretical paradigms in sport psychology. Second, the study explored the use of theoretical paradigms in sport psychology with significantly more precision and clarity than in the previous research on theoretical paradigm use. Third, the study more holistically explored the use and development of theoretical paradigms. Previous research on the use of theoretical paradigms failed to include practitioners who were not CMPC. This study incorporated all practitioners, regardless of certification standing. The study also provided a quantitative look into the development of theoretical paradigms and expanded the scope of development to practitioners beyond their early career. The final strength of this study was the use of mixed methods. The use of mixed methods in this study provided a richness and depth to quantitative data. It also provided discordant and divergent data, which further illuminates the individual differences of practitioners as well as providing data that were not originally included in the quantitative research questions.

## **Implications**

### **Implications for Education**

There are several implications for the education on theoretical paradigms in sport psychology graduate training. The first implication for graduate education is including a more robust and standardized curriculum on theoretical paradigms in sport psychology, particularly at the master's level. This curriculum would provide both foundational knowledge and experiential learning, which was highly valued by the qualitative participants in the development of their theoretical paradigm.

The foundational knowledge would include more comprehensive instruction on the theoretical paradigms utilized within the field of sport psychology, as well as how to effectively and ethically integrate paradigms. For example, a graduate program in sport psychology would hypothetically offer one, preferably more, course(s) on theories of personality and other psychological theories, which would include such theories as CBT, ACT, humanism, mindfulness, positive psychology, growth mindset (Dweck, 2006), team dynamics, a future theory specifically created for sport psychology, etc., as they are applied to the performance domain. This program would also offer a course on the theories associated with sport science/kinesiology, which would include theories of physiology, motor learning, motor development, motor control, deliberate practice (Ericsson, Krampe, & Tesch-Römer, 1993), etc., as they apply to the psychology of sport. A third class would be offered that taught students how to integrate these theories together, whether that be through assimilative integration, theoretical integration, the common factors approach, or technical eclecticism (Prochaska & Norcross, 2010). This sequence of classes would provide student with the foundational knowledge necessary to



begin the journey of paradigm development. Qualitative participants identified this as a central area lacking within the field, which impacts not only future practitioners within the field but also sport psychology clients.

The experiential learning aspect would include professor and professional demonstration, role-playing (team and individual), and practicum experiences. The experiential learning would intentionally reinforce the aforementioned foundational knowledge to develop the skills and abilities to effectively and comprehensively conceptualize and intervene with athletes, teams, and coaches. These experiences would provide neophyte practitioners with the space to develop their own theoretical paradigm in a deliberate and systematic fashion. Supervision and mentorship, which was the most widely reported influencer for paradigm development among qualitative participants, would aid in the development of a sound theoretical paradigm by offering developmentally appropriate information on their own theoretical paradigm, demonstrating how their theoretical paradigm looks in practice, and asking content and process questions or using Socratic questioning to further develop neophyte practitioner self-reflective practice. These experiential activities would also provide an opportunity for practitioners in training to learn from their peers and clients. However, it would be essential for professors, supervisors, and mentors to teach trainees how to learn from their clients and peers, as well as reinforce the importance of learning from these experiences through self-reflective exercises.

Some graduate programs may already be intentionally and comprehensively addressing some of these areas, but it was the perception of the qualitative participants that these domains were lacking within the field as a whole, particularly at the master's

level. Master's level programs are often two years or fewer, which creates a premium on time and classroom space. The scarcity of time and competition for which courses are offered creates a dilemma program directors. Given the importance of theoretical paradigms in the practice of sport psychology, placing a priority on the education of theoretical paradigms is imperative. Few doctoral programs offer explicit training in sport psychology, and an increase in the number of programs at the doctoral level offering a specialization in the practice of sport psychology may allow for more comprehensive training on theoretical paradigms.

A master's or doctoral program is but one way a practitioner can obtain education. Continuing education is not only an essential part of maintaining licensures or certifications, it is also one way a practitioner can practice lifelong learning. AASP requires CMPCs to complete 75 continuing education units (CEUs) within the 5-year certification period to maintain good standing (AASP, 2019). Of these 75 hours, CMPCs are required to obtain 6 CEUs in professional ethics, diversity, and mentorship/supervision (only required for mentors), which leaves 57 CEUs required in one of the following areas: (1) professional ethics and standards, (2) sport psychology, (3) sport science, (4) psychopathology, (5) helping relationships, (6) statistics and research methods, (7) psychological foundations of behavior, and (8) diversity and culture.

Although not designated as its own designated knowledge area, theoretical paradigms may be addressed in the *sport psychology*, *sport science*, *psychopathology*, *helping relationships*, *psychological foundations*, and *diversity and culture* knowledge areas. CEUs can be earned through attending the Annual AASP conference, attending a

non-AASP sponsored conference, viewing or attending workshops/presentations/webinars, viewing or attending other AASP sponsored or non-AASP sponsored activities (e.g., online programming, pre-conference workshops), participating in an graduate level academic course, and self-directed study. This gives ample opportunity for one to address theoretical paradigms in continuing education. However, of the 29 archived webinars and virtual conferences, only one primarily addressed theoretical paradigms (AASP Webinars Archive, 2019). This is somewhat surprising given the prevalence of the importance the AASP JTA placed on the knowledge of conceptual orientations (i.e., theoretical paradigms), systems theory, change processes, application of counseling and consulting theory to performance, multi-cultural and diversity issues, leadership development theory and application, theories of performance excellence, mental skills related to performance, and theories of learning effectiveness (Rosen & Lipkins, 2016).

Therefore, more content that specifically addresses theoretical paradigms and theoretical paradigm integration should be officially created and promoted by the “leading organization for sport psychology consultants and professionals who work with athletes...to enhance their performance from a psychological standpoint” (About AASP, n.d.) to more adequately address knowledge areas deemed by AASP to be integral to the practice of sport psychology.

### **Implications for Practice**

The first implication for the practice of sport psychology is the importance of developing a theoretical paradigm that includes the depth and complexity of athletic performance, as well as human performance in general. The quantitative results

highlighted the theoretical paradigm types in use by practitioners, as well as the vast array of theoretical paradigms in use within these paradigm types. It was found that participant satisfaction with their theoretical paradigm increased as the comprehensiveness of their theoretical paradigm increased. This comprehensiveness was also shown in the qualitative data to more effectively enact change within clients.

A second implication for practice is the importance of intentionality when developing a personal theoretical paradigm. The majority of qualitative participants indicated that being intentional about the development of a theoretical paradigm, including the connection to one's personal core beliefs and values, was beneficial both in the conceptualization and intervention with clients. This is in alignment with Poczwardowski et al. (2004), and, to expound on this connection, a theoretical paradigm should also be interdependently linked to one's model of practice, intervention goals, and intervention techniques. This development should not end upon the conclusion of graduate training, but rather continued to be developed throughout a practitioner's career through continuing education and self-reflective practice.

The development of a theoretical paradigm is not a solo journey, rather it is a journey that can be enhanced by mentors, peers, important others, and clients. Utilizing these resources, as well as consistently consuming research and the literature, will further benefit the effective development of a paradigm. Ultimately for practitioners, one's theoretical paradigm is designed to be utilized with clients. Therefore, the effectiveness of one's paradigm should be judged based not on its sophistication or elegance, but rather on its pragmatic utility with clients.

Taken together, these implications for practice suggest a theoretical paradigm specific to sport psychology that addressed the breadth and depth of athletic performance would provide an opportunity for practitioners to identify with a paradigm that not only increased satisfaction through comprehensiveness, but also effectively enact change with clients. The effective development of a paradigm would also ease the burden on practitioners to sift through the vast amount of fragmented data and paradigms in the field to intentionally develop a personal paradigm that addresses important concepts and principles. The paradigm would incorporate principles from both psychology and the sport sciences and would allow enough flexibility to connect with a variety of worldviews as well as models of practice, goals for interventions, and intervention techniques. This paradigm would also provide a framework in which relevant research could be organized in a systematic fashion that align with foundational philosophical principles.

### **Future Directions**

As several participants suggested, this is only the first step in the research on theoretical paradigms in the field of sport psychology. There are several areas in which the research on the use, development, and satisfaction of theoretical paradigms in sport psychology venture further. A potential next step in the research on these areas is conducting more holistic and precise research on each of the domains of this project (i.e., use, development, satisfaction). More precise and holistic research on the use of theoretical paradigms in sport psychology would allow for further exploration on why specific paradigm types and paradigms are chosen to be utilized by practitioners. More precise and holistic research on the development of theoretical paradigms would allow

for the quantitative exploration of the important factors that lead to paradigm development, as well as further mixed methods exploration of the development trajectories of theoretical paradigms within the field. Precise and holistic research on the satisfaction of theoretical paradigms would allow for further development of an instrument that measured theoretical paradigm satisfaction, which could include the satisfaction of theoretical paradigms in a variety of different spaces within the field (e.g., education, research).

The second area for future research on theoretical paradigm use, development, and satisfaction is broadening the scope of this research to include all aspects of performance psychology while at the same time narrowing the scope of the research to include only one domain at a time (e.g., use, development). This will allow for a deeper understanding of each domain. It is recommended that mixed methods be utilized to explore a large sample, while providing the richness and depth that cannot be accomplished through purely quantitative inquiry. It is also recommended that qualitative data nears saturation to provide the most robust analysis of each domain.

Given that the qualitative participants had difficulty identifying the type of theoretical paradigm that most closely described their own theoretical paradigm, future research is needed to determine the comprehension of theoretical integration among sport psychology practitioners. It would also be beneficial to conduct exploratory research (e.g., grounded theory) to determine if a new type of theoretical integration is warranted (e.g., philosophical integration).

This study may also be the first step in the development of theoretical paradigms specific to sport psychology. Although the qualitative participants expressed some

ambivalence about the development of a theoretical paradigm specific to sport psychology, the quantitative results indicated that the majority participants saw potential benefit to the field in the development of a paradigm specific to sport psychology. One potential direction for the development of a theoretical paradigm for sport psychology is utilizing an existing unified framework of psychology that integrates the physical, technical, and tactical aspects provided from sport science. The development of a system that is grounded in both the sport sciences and psychology and comprehensively addresses the complexity of the psychology of athletic performance, or any performance for that matter, would allow for the pragmatic organization of the knowledge already developed within the field. Henriques's (2011) unified theory of psychology offers a logical and coherent resolution to seemingly incompatible philosophical problems in sport psychology, and it weaves together four separable yet interlocking ideas that allow for both broad conceptualization and direct intervention. Within these psychological ideas exists a natural intersection for the integration of the principles developed from the sport sciences. The theory also integrates and assimilates key concepts and principles from the major psychological paradigms, which allow practitioners flexibility in their style of practice (e.g. directive, client-centered).

Two central areas in which the possibility of the intersection of psychology and sport science exists within the theory are in the *architecture of the human mind* and *Character Adaptation Systems Theory* (CAST; Henriques, 2011; 2017). Henriques's (2011) *architecture of the human mind* is a schematic of the human mind (i.e., neuro-information processing system, information embodied in and processed by the system) that aims to connect major psychological phenomena (e.g., sensation, motivation,

planning and inhibition, linguistic expression, emotion, motor responses) in a clear framework. The schematic proposes four distinct and interconnected levels of neuro-information processing that are ordered from most primitive to most recently evolved: (1) sensory-motor; (2) operant experiential; (3) imaginative thought; and (4) linguistic justification.

The most primitive form of neuro-information processing is represented in the sensory-motor level, and it includes basic reflexes (e.g., gag reflex), basic forms of learning (e.g., habituation, sensitization), and sensory-motor behavior patterns (e.g., rooting reflex) (Henriques, 2011). This level is impacted by aspects of the environment and ultimately influence behavior. The operant experiential level includes more complex sensory-motor behaviors, and is characterized by perception, motivation, and emotion. In the schematic of these two levels, sensation is connected to perception. Perceptual input is measured against valued goals states (e.g., approach, avoid) and leads to emotion (output; e.g., satisfying, aversive). This emotion leads to a motor response. Responses that reduce the difference between perception and valued goal states increase positively associated emotions, and responses that increase the difference between perception and valued goal states increase negatively associated emotions. The third level, imaginative thought, includes mental manipulation and planning and inhibition. Imaginative thought is the facility to turn mental representations into simulations of patterns of the investment of time and energy. These patterns are guided by anticipated outcomes that align with valued goal states. The final level is linguistic justification, and it is a purely human capacity. Linguistic justification includes linguistic comprehension (input) and linguistic expression (output) and represents the intersection of language , self-consciousness (i.e.,



language based self-reflective thought), and culture. The imaginative thought and linguistic justification levels are directly linked to perception, motivation, and emotion.

Henriques's (2011) *architecture of the human mind* schematic offers natural integration points for theories from the sport sciences. Physiology most closely aligns with the sensory-motor level, but it also applicable to the operant experiential level. Motor learning and development is primarily aligned with the operant experiential and imaginative thought levels, but advanced skill development begins at the linguistic justification level and may eventually lead all the way down to the sensory-motor level when automaticity is achieved. Motor control can be integrated primarily at the operant experiential and imaginative thought levels, but it also can be connected at the linguistic justification level.

CAST, which is conceptually linked to the *architecture of the human mind*, assimilates and integrates the biopsychosocial (i.e., biological, psychological, social) dimensions of analysis and key insights from the cognitive, behavioral, humanistic, and psychodynamic theoretical paradigms (Henriques, 2017). CAST may provide a clear conceptual map that allows for deep and contextual conceptualization and targeted intervention for sport psychology practitioners.

CAST includes five systems of character adaptation that live within the biophysiological, learning and developmental, and sociocultural contexts (Henriques, 2017). The five systems are: (1) habit system, (2) experiential system, (3) relational system, (4) defensive system, and (5) justification system. The habit system corresponds to the sensory-motor level and includes automaticity. The habit system is conceptually aligned with behavioral theoretical paradigms, and these forms of conceptualization and

intervention can increase adaptive habits and decrease problematic habits. The experiential system corresponds to the operant experiential and level, and it includes the perceptions, motivations, and emotions incorporated in mental experiences. The experiential system is closely aligned with experiential theoretical paradigms (e.g., EFT, person-centered, ACT), and these paradigms can help athletes increase desired emotional states and decrease problematic emotional states.

The relational and defensive systems are linked through their connection to psychodynamic theory. The relational system corresponds to the operant experiential and imaginative thought levels, and it includes social motivations, feeling states, and internal working models of self in relation to other with the fundamental goal of increasing relational value (i.e., feeling known and valued by important others). The defensive system lies in between the nonverbal levels (i.e., sensory-motor, operant experiential, imaginative thought) and the linguistic justification level. The defensive system includes conflicts between the subconscious systems (e.g., experiential) and the justification system. The relational and defensive systems closely align with modern psychodynamic paradigms (e.g., brief psychodynamic, IPT, ACT). These paradigms can aid in the conceptualization of and intervention with developing more beneficial relationships with the self and others.

Finally, the justification system corresponds to the linguistic justification level. The primary function of the justification system is to develop systems of knowledge to make sense of the world, the self, and others. The justification system is fundamentally guided by the preceding architectural levels. This system closely aligns with cognitive

theoretical paradigms, which can increase athletes' ability to becoming aware of, assess, and change maladaptive thoughts.

Taken together, the *architecture of the human mind* and CAST provide deep conceptual models that connect major psychological phenomena, allow for the integration of sport science theory, provides a framework logical framework for the organization of previous and future research in sport psychology, and provides a roadmap for deep and complex conceptualization that informs theoretically supported targeted interventions. Therefore, an approach such as this may be an ideal candidate for the development of the first theoretical paradigm specific to sport psychology.

### **Conclusions**

The purpose of this study was to explore the current theoretical paradigms utilized by sport psychology practitioners, the development of these theoretical paradigms, and the practitioner satisfaction with the current theoretical paradigms utilized in sport psychology. This study illuminated that the majority of practitioners identified with an integrative theoretical paradigm, and that the most commonly used paradigms were CBT, ACT, and humanism. The study also found that theoretical paradigms are being developed across the span of practitioners' careers, and that one's training background significantly impacts the development of theoretical paradigms. Furthermore, it provided the first glimpse into the practitioner satisfaction with their theoretical paradigms and factors associated with increased satisfaction. Prior studies within these domains of sport psychology are now enhanced by the information garnered from this mixed methods study. The results of the study also inform the education of neophyte practitioners, as well as provide practitioners guidelines and methods for further development of their

theoretical paradigms. Finally, this study paves the way for more precise and holistic research in each of the aforementioned domains, and it opens the door to the development of a theoretical paradigm specific to sport psychology.

## References

- AASP (2019). *Certified Mental Performance Consultant (CMPC) candidate handbook*. Retrieved from <https://penandthepad.com/cite-handbook-apa-format-8747267.html>.
- AASP Webinars Archive (2019). Retrieved from <https://appliedsportpsych.org/webinars/>.
- About AASP (n.d.). Retrieved from <https://appliedsportpsych.org/about/>.
- Alderman, R. B. (1980). Sport psychology: Past, present, and future dilemmas. In P. Klavora & K. A. W. Wipper (Eds.), *Psychological and sociological factors in sport* (pp. 3-19). Toronto, ON: University of Toronto.
- Andersen, M. B., & Williams-Rice, B. T. (1996). Supervision in the education and training of sport psychology service providers. *The Sport Psychologist, 10*, 278-290.
- Aoyagi, M. W. (2013). Teaching theories of performance excellence to sport & performance psychology consultants-in-training. *Journal of Sport Psychology in Action, 4*, 139-151. <http://dx.doi.org/10.1080/21520704.2013.792895>
- Aoyagi, M. W., Cohen, A. B., Poczwardowski, A., Metzler, J. N., & Statler, T. (2018). Models of performance excellence: Four approaches to sport psychology consulting. *Journal of Sport Psychology in Action, 9*(2), 94-110.
- Aoyagi, M. W., & Poczwardowski, A. (2012). Models of sport psychology practice and delivery: A review. In S. Hanton & S. D. Mellalieu (Eds.), *Professional practice in sport psychology: A review* (pp. 5-30). New York: NY: Routledge.
- Aoyagi, M. W., & Poczwardowski, A. (2011). Preface. In M. W. Aoyagi & A. Poczwardowski (Eds.), *Expert approaches to sport psychology: Applied theories*

*of performance excellence* (pp. xiiv-xviii). Morgantown, WV: Fitness Information Technology.

Aoyagi, M. W., & Poczwadowski, A. (Eds.). (2011b). *Expert approaches to sport psychology: Applied theories of performance excellence*. Morgantown, WV: Fitness Information Technology.

Aoyagi, M. W., Portenga, S. T., Poczwadowski, A., Cohen, A. B., & Statler, T. (2012). Reflections and directions: The profession of sport psychology, past, present, and future. *Professional Psychology: Research and Practice, 43*(1), 32-38.

Aoyagi, M. W., & Shapiro, J. L. (2011). Ethical practice in sport and performance psychology. *Psychotherapy Bulletin, 46*(2), 37-41.

Association for Applied Sport Psychology (n.d.). *About sport and exercise psychology*. Retrieved from <http://www.appliedsportpsych.org/about/about-applied-sport-and-exercise-psychology/>

Beasley, T. M., & Schumacker, R. E. (1995). Multiple regression approach to analyzing contingency tables: Post hoc and planned comparison procedures. *The Journal of Experimental Education, 64*(1), 79-93.

Beutler, L. E. (2000). Eclectic psychotherapy. In *Encyclopedia of Psychology*. A. E. Kazdin (Ed.). (Volume 3, pp. 128-129). New York, NY: Oxford University Press.

Bruce Ogilvie Award for Professional Practice (n. d.). Retrieved from American Psychological Association: <http://www.apadivisions.org/division-47/awards/ogilvie.aspx?tab=4>

Butler, R. J., & Hardy, L. (1992). The performance profile: Theory and application. *Journal of Applied Sport Psychology, 5*(1), 253-264.

- Carver, C. S., & Scheier, M. F. (1988). A control perspective on anxiety. *Anxiety Research, 1*, 17-22.
- Cashmore, E. (2006). *Sport and exercise psychology: The key concepts*. London: Routledge.
- Charmaz, K. (2014). *Constraining grounded theory: A practical guide through qualitative analysis*. Thousand Oaks, CA: Sage.
- Cohen, A., Pargman, D., & Tennenbaum, G. (2003). Critical elaboration and empirical investigation of the Cusp Catastrophy Model: A lesson for practitioners. *Journal of Applied Sport Psychology, 15*, 144-159.
- Cohen, J. (1992). A power primer. *Psychological Bulletin, 112*, 155-159.
- Collins, Evans-Jones, & O'Connor (2013). Reflections on three neophyte sport and exercise psychologists' developing philosophies for practice. *The Sport Psychologist, 27*, 399-409.
- Coombes, S. A., Janelle, C. M., & Duley, A. R. (2005) Emotion and motor control: Movement attributes following affective picture processing. *Journal of Motor Behavior, 37*(6), 425-436.
- Conroy, D. E., & Smith Benjamin, L. (2001). Psychodynamics in sport performance enhancement consultation: Application of an interpersonal theory. *The Sport Psychologist, 15*, 103-117.
- Corlett, J. (1996). Sophistry, Socrates, and sport psychology. *The Sport Psychologist, 10*, 84-94.
- Cox, R. H. (1985). *Sport psychology: Concepts and applications*. Dubuque, IA: Brown.

- Claspell, E. (2010). Cognitive-behavioral therapies. In S. J. Hanrahan & M. B. Andersen (Eds.), *Routledge handbook of applied sport psychology*, (pp. 131-140). New York, NY: Routledge.
- Craft, L. L., Magyar, M., Becker, B. J., & Feltz, D. L. (2003). The relationship between the Competitive State Anxiety Inventory-2 and sport performance: A meta-analysis. *Journal of Sport and Exercise Psychology*, 25, 44-65.
- Cratty, B. J. (1989). *Psychology in contemporary sport* (3<sup>rd</sup> ed.). Englewood Cliffs, NJ: Prentice Hall.
- Creswell, J. W. (2014). *Research design. Qualitative, quantitative, and mixed methods approaches* (4<sup>th</sup> ed.). Thousand Oaks, CA: Sage
- Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research* (2<sup>nd</sup> ed.). Thousand Oaks, CA: Sage.
- Dimond, R. E., & Havens, R. A. (May 1975). Restructuring psychotherapy: Toward a precriptive eclecticism. *Professional Psychology*, 6(2), 193-200.
- Doyle, J., & Parfitt, G. (1996). Performance profiling and predictive validity. *Journal of Applied Sport Psychology*, 8(2), 160-170.
- Dweck, C. S. (2006). *Mindset: The new psychology of success*. New York: Random House.
- European Federation of Sport Psychology. (1996). Position statement of the European Federation of Sport Psychology (FEPSAC): I. Definition of sport psychology. *The Sport Psychologist*, 10, 221-223.



- Ericsson, K. A., Krampe, R. T., & Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review, 100*(3), 363-406.
- Fetters, M. D., Curry, L. A., & Creswell, J. W. (2013). Achieving integration in mixed methods designs: Principles and practices. *Health Services Research, 48*(6 pt. 2), 2134–2156.
- Fifer, A., Henschen, K., Gould, D., & Ravizza, K. (2008). What works when working with athletes. *The Sport Psychologist, 22*, 356-377.
- Gardner, F. L., & Moore, Z. E. (2004). A mindfulness-acceptance, commitment-based approach to athletic performance enhancement: Theoretical considerations. *Behavior Therapy, 35*, 707-723.
- Gardner, F. L., & Moore, Z. E. (2010). Acceptance-based behavioral therapies and sport. In S. J. Hanrahan & M. B. Andersen (Eds.), *Routledge handbook of applied sport psychology* (pp. 186-193). New York, NY: Routledge.
- Gardner, F. L., & Moore, Z. E. (2006). *Clinical sport psychology*. Champaign, IL: Human Kinetics.
- Gill, D. L. (1986). *Psychological dynamics of sport*. Champaign, IL: Human Kinetics.
- Goodwin, C. J. (2009). E. W. Scripture: The application of “new psychology” methodology to athletics. In C. D. Green & L. T. Benjamin (Eds.), *Psychology gets in the game: Sport, mind, and behavior, 1880-1960* (pp. 78-97). Lincoln, NE: University of Nebraska Press.

- Green, C. D., & Benjamin, L. T. (2009). The “proper” history of sport psychology. In C. D. Green & L. T. Benjamin (Eds.), *Psychology gets in the game: Sport, mind, and behavior, 1880-1960* (pp. 283-293). Lincoln, NE: University of Nebraska Press.
- Greene, J. C., & Hall, J. N. (2010). Dialectics and pragmatism: Being of consequence. *Sage Handbook of Mixed Methods in Social and Behavioral Research*, 119-144. Thousand Oaks, CA: Sage.
- Hanin, Y. L. (1980). A study of anxiety on sports. In W. F. Straub (Ed.), *Sport psychology: An analysis of athlete behavior* (pp. 236-249). Ithaca, NY: Movement.
- Hanrahan, S. J., & Andersen, M. B. (Eds.). (2010). *Rutledge handbook of applied sport psychology*. New York, NY: Routledge.
- Hasker, S. M. (2011). Evaluation of the mindfulness-acceptance-commitment (MAC) approach for enhancing athletic performance. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, 71(9-B), 5790.
- Hays, S. C., Strosahl, K., & Wilson, K. G. (1999). *Acceptance and commitment therapy: An experiential approach to behavior change*. New York, NY: The Guilford Press.
- Hays, K. F. (2012). The psychology of performance in sport and other domains. In S. M. Murphy (Ed.), *The Oxford handbook of sport and performance psychology* (pp. 24-45). New York, NY: Oxford University Press.
- Heale, R., & Twycross, A. (2015). Validity and reliability in quantitative studies. *Evidence Based Nursing*, 18(3), 66-67.

- Helsinki 1952 Olympics: Nations Medals (n. d.). Retrieved from Olympian Database  
<http://www.olympiandatabase.com/index.php?id=20274&L=1>
- Henriques, G. (2011). *A new unified theory of psychology*. New York: Springer.
- Henriques, G. (2017). Character adaptation systems theory: A new big five for personality and psychotherapy. *Review of General Psychology, 21*(1), 9-22.
- Hill, K. E. (2001). *Frameworks for sport psychologists: Enhancing sport performance*. Champaign, IL: Human Kinetics.
- Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using mixed-methods sequential explanatory design: From theory to practice. *Field Methods, 18*(1), 3-20.
- Keegan, R. J. (2014). Developing a philosophy and theoretical framework: Mapping a rich and complex landscape for the brave explorer. In J. G. Cremades & L. S. Tashman (Eds.), *Becoming a sport, exercise, and performance psychology professional: A global perspective* (pp. 61-68). New York: NY: Taylor & Francis.
- Keegan, R. J. (2016). Developing a philosophy and theoretical framework: Two cases that changed my approach to consulting style. In J. G. Cremades & L. S. Tashman (Eds.), *Global practices and training in applied sport, exercise, and performance psychology* (pp. 58-68). New York, NY: Routledge.
- Kerr, J. H. (1993). An eclectic approach to psychological interventions in sport: Reversal theory. *The Sport Psychologist, 7*, 400-418.
- Kontos, A., & Feltz, D. L. (2008). The nature of sport psychology. In T. S. Horn (Ed.) *Advances in sport psychology* (3<sup>rd</sup> ed.). Champaign, IL: Human Kinetics.
- Kornspan, A. S. (2007). E. W. Scripture and the Yale Psychology Laboratory: Studies related to athletics and physical activity. *The Sport Psychologist, 21*, 152-169.

- Kornspan, A. S. (2007b). The early years of sport psychology: The work and influence of Pierre de Coubertin. *Journal of Sport Behavior, 30*(1), 77-93.
- Kornspan, A. S. (2012). History of sport and performance psychology. In S. Murphy (Ed.), *The Oxford handbook of sport and performance psychology* (pp. 3-23). New York: Oxford University Press.
- Landers, D. M. (1995). Sport psychology: The formative years, 1950-1980. *The Sport Psychologist, 9*, 406-417.
- Lewin, K. (1951). *Field theory in social science: Selected theoretical papers*. New York: NY: Harper & Row.
- Lindsay, Breckon, Thomas, & Maynard (2007). In pursuit of congruence: A personal reflection on methods and philosophy in applied practice. *The Sport Psychologist, 21*, 335-352.
- Loganbill, C., Hardy, E., & Delworth, U. (1982). Supervision: A conceptual model. *The Counseling Psychologist, 10*, 3-42.
- Marx, M. H., & Goodson, F. E. (1976). *Theories in contemporary psychology* (2nd ed.). Oxford, Eng: MacMillan.
- May, J. R., & Brown, L. (1989). Delivery of psychological services to the U.S. alpine ski team prior to and during the Olympics in Calgary. *The Sport Psychologist, 3*, 320-329.
- McArdle, S., & Moore, P. (2012). Applying evidence-based principles from CBT to sport psychology. *The Sport Psychologist, 26*, 299-310.
- McCann, S. (2011). Dr. Sean McCann: United States Olympic Committee. In M. W. Aoyagi & A. Poczwadowski (Eds.), *Expert approaches to sport psychology:*

- Applied theories of performance excellence* (pp. 107-127). Morgantown, WV: Fitness Information Technology.
- Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation* (4<sup>th</sup> ed.). San Francisco, CA: Jossey-Bass.
- Moore, Z. E. (2009). Theoretical and empirical developments of the Mindfulness-Acceptance-Commitment (MAC) approach to performance enhancement. *Journal of Clinical Sports Psychology, 4*, 291-302.
- Morrow, S. L. (2005). Quality and trustworthiness in qualitative research in counseling psychology. *Journal of Counseling Psychology, 52*(2), 250-260.
- Müller, N. (Ed.). (2000). *Pierre de Coubertin: Olympism selected writings*. Lausanne: International Olympic Committee.
- Nideffer, R. M. (1976). Test of attentional and interpersonal style. *Journal of Personality and Social Psychology, 34*, 394-404.
- Norcross, J. C. (Ed.). (1982). *Handbook of eclectic psychotherapy*. New York, NY: Oxford University Press.
- Nordstokke, D. W., Zumbo, B. D., Cairns, S. L., & Saklofske, D. H. (2011). The operating characteristics of the nonparametric Levene test for equal variances with assessment and evaluation data. *Practical Assessment, Research & Evaluation, 16*(5), p. 2.
- Nutt Williams, E., & Morrow, S. L. (2009). Achieving trustworthiness in qualitative research: A pan-paradigmatic perspective. *Psychotherapy Research, 19*(4-5), 576-582.

Ogilvie, B., & Tutko, T. A. (1966). *Problem athletes and how to handle them*. London: Pelham.

Olympic Review (1968). Olympic congresses. *Olympic Review*, 357-358.

Orlick, T. (1989). Reflections on sport psych consulting with individual and team sport athletes at Summer and Winter Olympic Games. *The Sport Psychologist*, 3, 358-365.

Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services Research*, 42(5), 533-544.

Patterson, C. H. (1989). Eclecticism in psychotherapy: Is integration possible?

*Psychotherapy: Theory, Research, Practice, Training*, 26(2), 157-161.

Patton, M. Q. (1980). *Qualitative evaluation methods*. Beverly Hills, CA: Sage.

Paul, G. L. (1967). Strategy of outcome research in psychotherapy. *Journal of Consulting Psychology*, 31(2), 109-118.

Pereira, M. E. (2004). *History of the psychology: A timeline of psychological ideas*.

Poczwardowski, A., & Sherman, C. P. (2011). Revisions to the Sport Psychology Service Delivery (SPSD) heuristic: Explorations with experienced consultants. *The Sport Psychologist*, 25, 511-531.

Poczwardowski, A., Sherman, & Henschen, K. P. (1998). A sport psychology service delivery heuristic: Building on theory and practice. *The Sport Psychologist*, 12, 191-207.

- Poczwardowski, A., Sherman, C. P., & Ravizza, K. (2004). Professional philosophy in the Sport Psychology Service Delivery: Building on theory and practice. *The Sport Psychologist, 18*, 445-463.
- Pollio, H. R., Henley, T., & Thompson, C. B. (1997). *The phenomenology of everyday life*. New York, NY: Cambridge University Press.
- Portenga, S. T., Aoyagi, M. W., & Cohen, A. B. (2017). Helping to build a profession: A working definition of sport and performance psychology. *Sport Psychology in Action, 8*(1), 47-59.
- Prochaska, J. O., & Norcross, J. C. (2010). *Systems of psychotherapy: A transtheoretical analysis* (7<sup>th</sup> ed.). Belmont, CA: Brooks/Cole
- Puni, A. C. (1963). Psihologicheskaya podgotovka sportsmena k sorevnovaniyu [Psychological preparation of athletes for a competition]. *Theory and Practice of Physical Culture, 2*, 52–56.
- Raskin, N. J., & Rogers, C. R. (2000). Person-centered therapy. In R. J. Corsini & D. Wedding (Eds.), *Current psychotherapies* (6<sup>th</sup> ed.), pp. 133-167. Itasca, IL, F. E. Peacock.
- Ravizza, K. (2002). A philosophical construct: A framework for performance enhancement. *International Journal of Sport Psychology, 33*, 4-18.
- Ravizza, K., & Hanson, T. (1995). *Heads-up baseball. Playing the game one pitch at a time*. Indianapolis, IN: Masters Press.
- Rejeski, W. J., & Brawley, L. R. (1983). Attribution theory in sports: Current status and new perspectives. *Journal of Sport Psychology, 5*, 77-99.

- Rønnestad, M. H., & Skovholt, T. M. (2003). The journey of the counselor and the therapist: Research findings and perspectives on professional development. *Journal of Career Development, 30*, 5-44.
- Rosen, G. A., & Lipkins, R. H. (2016). *Sport psychology certification job task analysis and validation*. Indianapolis, IN: Association for Applied Sport Psychology in partnership with The American College of Sports Medicine.
- Ryba, T. V., Stambulova, N. B., & Wrisberg, C. A. (2005). The Russian origins of sport psychology: A translation of an early work of A. C. Puni. *Journal of Applied Sport Psychology, 17*(2), 157-169.
- Schmider, E., Ziegler, M., Danay, E., Beyer, L., & Bühner, M. (2010). Reinvestigating the robustness of ANOVA against violations of the normal distribution assumption. *Methodology, 6*(4), 147-151.
- Schmidt, R. A. (1975). A schema theory of discrete motor skill learning. *Psychological Review, 82*, 225-260.
- Segal, Z. V., Williams, J. M. G., & Teasdale, J. D. (2002). *Mindfulness-based cognitive therapy for depression*. New York, NY: The Guilford Press.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist, 55*(1), 5-14.
- Shafran, R., Egan, S., & Wade, T. (2010). *Overcoming perfectionism: A self-help guide using cognitive behavioral techniques*. London: Robinson.
- Singer, R. N. (1978). Sport psychology: An overview. In W. F. Straub (Ed.), *Sport psychology: An analysis of athletic behavior* (pp. 3-14). Ithaca, NY: Monument.



- Singer, R. N. (1989). Applied sport psychology in the United States. *Journal of Applied Sport Psychology, 1*(1), 61-80.
- Skovholt, T. M., & Rønnestad, M. H. (1992). *The evolving professional self: Stages and themes in therapist and counselor development*. New York, NY: Wiley.
- Sbrocco, T., & Barlow, D. H. (1996). Conceptualizing the cognitive component of sexual arousal: Implications for sexuality research and treatment. In P. M. Salkovskis (Ed.), *Frontiers of cognitive therapy* (pp. 419-449). New York, NY: Guilford Press.
- Stambulova, N. B., Wrisberg, C. A., & Ryba, T. V. (2006). A tale of two traditions in applied sport psychology: The heyday of Soviet sport and wake-up calls for North America. *Journal of Applied Sport Psychology, 18*, 173-184.
- Stoltenberg, C. D. (2005). Enhancing professional competence through developmental approaches to supervision. *American Psychologist, 60*, 857-864.
- Strean, W. B., & Strean, H. S. (1998). Applying psychodynamic concepts to sport psychology practice. *The Sport Psychologist, 12*, 208-222.
- Sullivan, E. (2008). Selecting a theoretical orientation: Tips and interdisciplinary considerations. *The Behavior Therapist, 31*(2), 36-39.
- Taylor, J. (1994). Examining the boundaries of sport science and psychology trained practitioners in applied sport psychology: Title usage and area of competence. *Journal of Applied Sport Psychology, 6*, 185-195.
- Tod, D. (2007). The long and winding road: Professional development in sport psychology. *The Sport Psychologist, 21*, 94-108.

- Tod, D., Andersen, M. B., & Marchant, D. B. (2009). A longitudinal examination of neophyte applied sport psychologists' development. *Journal of Applied Sport Psychology, 21*, S1-S16.
- Tod, D., & Bond, K. (2010). A longitudinal examination of a British neophyte sport psychologist's development. *The Sport Psychologist, 24*, 35-51.
- Turk, D. C., Heimberg, R. G., & Hope, D. A. (2001). Social anxiety disorder. In D. H. Barlow (Ed.), *Clinical handbook of psychological disorders* (3<sup>rd</sup>. ed., pp 114-153). New York, NY: Guilford Press.
- Van Raalte, J. L., & Andersen, M. (2005). Supervision I: From models to doing. In M. B. Andersen (Ed.), *Doing sport psychology* (pp. 153-165). Champaign, IL, Human Kinetics.
- Vargha, A., & Delaney, H. D. (1998). The Kruskal-Wallis test and stochastic homogeneity. *Journal of Educational and Behavioral Statistics, 23*(2), 170-192.
- Vernacchia, R. (2003). *Inner strength. The mental dynamics of athletic performance*. Palo Alto, CA: Warde Publishers.
- Vine, S., & Wilson, M. R. (2010). Quiet eye training: Effects on learning and performance under pressure. *Journal of Applied Sport Psychology, 22*, 361-376.
- Weingberg, R. S., & Gould, D. (2015). *Foundations of sport and exercise psychology* (6<sup>th</sup> ed.). Champaign, IL: Human Kinetics.
- Winter, S., & Collins, D. J. (2016). Applied sport psychology: A profession? *The Sport Psychologist, 30*, 89-96.
- Wolanin, A. T. (2005). Mindfulness-Acceptance-Commitment (MAC) based performance enhancement for Division I collegiate athletes: A preliminary

investigation (Doctoral Dissertation, La Salle University, 2003). *Dissertation Abstracts International-B*, 65(7), 3735-3794.

Wylleman, P., Harwood, C. G., Elbe, A., Reints, A., & de Caluwe (2009). A perspective on education and professional development in applied sport psychology. *Psychology of Sport & Exercise*, 10, 435-446.

Yarrow, K., Brown, P., & Krakauer, J. W. (2009). Inside the brain of an elite athlete: The neural processes that support high achievement in sports. *National Review of Neuroscience*, 10, 585-596.

## Appendix A: Definition of Terms

*Assimilative integration.* Primarily utilizing one theoretical paradigm, but a willingness to incorporate practices and views from other paradigms (Prochaska & Norcross, 2010).

*Common factors.* Seeking the core ingredients that different therapies share in common, with the eventual goal of creating more parsimonious and efficacious treatments based on those commonalities (Prochaska & Norcross, 2010, p. 9).

*Eclecticism.* Altering treatment methods based upon private inclinations of the moment, following no identifiable or consistent principles or guidelines, and the rules that guide treatment application are neither articulated nor replicable (Norcross, 1986).

*Epistemology.* The philosophical study of the nature, origin, and limits of human knowledge, also known as the theory of knowledge.

*Ontology.* The philosophical study of being, particularly related to becoming, existence, and reality.

*Professional philosophy.* The consultant's beliefs and values concerning the nature of reality (sport reality in particular), the place of sport in human life, the basic nature of a human being, the nature of human behavior change, and also the consultant's beliefs and values concerning his or her potential role in, and the theoretical and practical means of, influencing their clients toward mutually set intervention goals (Poczwadowski, Sherman, & Ravizza, 2004, p. 449).

*Sport psychology.* The application of psychological principles of human performance in helping athletes consistently perform in the upper range of their capabilities and more thoroughly enjoy the sport performance process. Sport psychology

practitioners are uniquely trained and specialized to engage in a broad range of activities including the identification, development and execution of the mental and emotional knowledge, skills, and abilities required for excellence in athletic domains; the understanding, assessment, and managing of the psychological, cognitive, emotional, behavioral, and psychophysiological inhibitors of consistent, excellent performance; and the improvement of athletic contexts to facilitate more efficient development, consistent execution, and positive experiences in athletes (Portenga, Aoyagi, & Cohen, 2017, p. 52).

*Technical eclecticism.* An actuarial foundation that is guided primarily by data on what has worked best for others in the past with similar problems and similar characteristics (Prochaska & Norcross, 2010).

*Theoretical integration.* Synthesizing two or more theoretical paradigms in the hope that the integration will increase effectiveness of practice (Prochaska & Norcross, 2010).

*Theoretical paradigm.* Highly abstract, global theories that explain behavior (e.g., psychodynamic theory, cognitive-behavioral theory), and guide models, intervention goals, and interventions techniques and methods.

## Appendix B: Quantitative Consent

### **Identification of Investigators & Purpose of Study**

You are being asked to participate in a research study conducted by Christopher E. Bilder, MA from James Madison University. The purpose of this study is to explore the use, development, and practitioner satisfaction of theoretical paradigms in sport psychology. This study will contribute to the researcher's completion of his doctoral dissertation.

### **Research Procedures**

This study consists of an online survey that will be administered to individual participants through Qualtrics. You will be asked to provide answers to a series of questions related to your use, development, and satisfaction of your theoretical paradigm in sport psychology. Should you decide to participate in this confidential research you may access the confidential survey by following the web link located under the "Giving of Consent" section.

### **Time Required**

Participation in this study will require 10-15 minutes of your time.

### **Risks**

*The investigator does not perceive more than minimal risks from your involvement in this study (that is, no risks beyond the risks associated with everyday life).*

### **Benefits**

There are no direct benefits from participation in this study. However, potential benefits of the research include: a better understanding of the use of theoretical paradigms in sport psychology, how theoretical paradigms are developed by practitioners of sport psychology, the perceived essential components for an effective theoretical paradigm in sport psychology, practitioner satisfaction of current theoretical paradigms in sport psychology, potential applications to training, and more targeted and effective practice in sport psychology.

### **Confidentiality**

The results of this research will be presented at the researcher's dissertation defense, and it may be presented at conferences and in an academic journal. While individual responses are anonymously obtained and recorded online through Qualtrics (a secure online survey tool), data is kept in the strictest confidence. Responding participant's email addresses will be tracked using Qualtrics for follow-up notices, but names and email addresses are not associated with individual survey responses. The researchers will know if a participant has submitted a survey, but will not be able to identify individual responses, therefore maintaining anonymity for the survey. The results of this project will be coded in such a way that the respondent's identity will not be attached to the final form of this study. Aggregate data will be presented representing averages or generalizations about the responses as a whole. All data will be stored in a secure location

accessible only to the researcher. Upon completion of the study, all information will be destroyed. Final aggregate results will be made available to participants upon request.

### **Participation & Withdrawal**

Your participation is entirely voluntary. You are free to choose not to participate. Should you choose to participate, you can withdraw at any time without consequences of any kind.

### **Questions about the Study**

If you have questions or concerns during the time of your participation in this study, or after its completion or you would like to receive a copy of the final aggregate results of this study, please contact:

Christopher E. Bilder, MA  
Department of Graduate Psychology  
James Madison University  
Email Address: [bilderce@dukes.jmu.edu](mailto:bilderce@dukes.jmu.edu)

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### **Questions about Your Rights as a Research Subject**

Dr. Taimi Castle  
Chair, Institutional Review Board  
James Madison University  
(540) 568-5929  
[castletl@jmu.edu](mailto:castletl@jmu.edu)

### **Giving of Consent**

I have read this consent form and I understand what is being requested of me as a participant in this study. I freely consent to participate. The investigator provided me with a copy of this form through email. I certify that I am at least 18 years of age. By clicking on the link below, and completing and submitting this confidential online survey, I am consenting to participate in this research.

[http://jmu.co1.qualtrics.com/jfe/form/SV\\_ewEdedDuroWDBVH](http://jmu.co1.qualtrics.com/jfe/form/SV_ewEdedDuroWDBVH)

***This study has been approved by the IRB, protocol # 19-1029***

## Appendix C: Qualitative Consent

### **Identification of Investigators & Purpose of Study**

You are being asked to participate in a research study conducted by Christopher E. Bilder, MA from James Madison University. The purpose of this study is to explore the use, development, and practitioner satisfaction of theoretical paradigms in sport psychology. This study will contribute to the researcher's completion of his doctoral dissertation.

### **Research Procedures**

Should you decide to participate in this research study, you will be asked to sign this consent form once all your questions have been answered to your satisfaction. This study consists of an interview that will be administered to individual participants at the location of your choosing, over the phone, or via video conferencing. You will be asked to provide answers to a series of questions related to your use, development, and satisfaction of your theoretical paradigm for sport psychology. The interview will be audio recorded for transcription purposes.

### **Time Required**

Participation in the interview portion of this study will require 30-60 minutes of your time. You will also be provided with a completed transcript of the interview to ensure accuracy of the transcription. Transcription-checking and editing will require 15-30 minutes of your time. Overall, it is estimated that participation in this study will require 40 min-1.5 hours of your time.

### **Risks**

*The investigator does not perceive more than minimal risks from your involvement in this study (that is, no risks beyond the risks associated with everyday life).*

### **Benefits**

There are no direct benefits from participation in this study. However, potential benefits of the research include: a better understanding of the use of theoretical paradigms in sport psychology, how theoretical paradigms are developed by practitioners of sport psychology, the perceived essential components for an effective theoretical paradigm in sport psychology, practitioner satisfaction of current theoretical paradigms in sport psychology, potential applications to training, and more targeted and effective practice in sport psychology.

### **Confidentiality**

The results of this research will be presented at the researcher's dissertation defense, and it may be presented at conferences and in an academic journal. The results of this project will be coded in such a way that the respondent's identity will not be attached to the final form of this study. The researcher retains the right to use and publish non-identifiable data. All data will be stored in a secure location accessible only to the researcher. Upon completion of the study, all information that matches up individual respondents with their answers, including audio recordings, will be destroyed.



**Participation & Withdrawal**

Your participation is entirely voluntary. You are free to choose not to participate. Should you choose to participate, you can withdraw at any time without consequences of any kind.

**Questions about the Study**

If you have questions or concerns during the time of your participation in this study, or after its completion or you would like to receive a copy of the final aggregate results of this study, please contact:

Christopher E. Bilder, MA  
 Department of Graduate Psychology  
 James Madison University  
 Email Address: bilderce@dukes.jmu.edu

Gregg Henriques, Ph.D.  
 Department of Graduate Psychology  
 James Madison University  
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**Questions about Your Rights as a Research Subject**

Dr. Taimi Castle  
 Chair, Institutional Review Board  
 James Madison University  
 (540) 568-5929  
[castletl@jmu.edu](mailto:castletl@jmu.edu)

**Giving of Consent**

I have read this consent form and I understand what is being requested of me as a participant in this study. I freely consent to participate. I have been given satisfactory answers to my questions. The investigator provided me with a copy of this form. I certify that I am at least 18 years of age.

I give consent to be audio recorded during my interview. \_\_\_\_\_ (initials)

\_\_\_\_\_  
 Name of Participant (Printed)

\_\_\_\_\_  
 Name of Participant (Signed)

\_\_\_\_\_  
 Date

\_\_\_\_\_  
 Name of Researcher (Signed)

\_\_\_\_\_  
 Date

***This study has been approved by the IRB, protocol # 19-1029***

## Appendix D: Theoretical Paradigm Survey

Thank you for taking part in this survey. You will be asked demographic questions, and questions regarding your theoretical paradigm for sport psychology, the development of your theoretical paradigm, components perceived to be necessary for an effective theoretical paradigm in sport psychology, your satisfaction of your theoretical paradigm, and the potential benefit of a theoretical paradigm specific to sport psychology.

1. Gender
  - Woman
  - Man
  - Transgender man
  - Transgender woman
  - Gender-variant/non-conforming
  - Not listed \_\_\_\_\_
  - Prefer not to answer
2. Highest degree completed
  - Undergraduate
  - Master's
  - Doctorate
  - Not listed \_\_\_\_\_
  - Prefer not to answer
3. Educational status
  - Education completed
  - Current master's student
  - Current doctoral student
  - Not listed \_\_\_\_\_
4. Years since completion of highest degree
  - 5 years or less
  - 6-10 years
  - 11-15 years
  - 16-20 years
  - 21-25 years
  - 26-30 years
  - 31 years or more
5. Years practicing applied sport psychology
  - 5 years or less
  - 6-10 years
  - 11-15 years
  - 16-20 years
  - 21-25 years
  - 26-30 years
  - 31 years or more
6. Country of Practice
  - United States
  - Canada

- Australia
  - Hong Kong
  - China
  - Japan
  - Britain
  - Not listed \_\_\_\_\_
7. Primary training background
- Sport science
  - Psychology
  - Both sport science and psychology
  - Not listed \_\_\_\_\_
8. Licensure/Certification (select all that apply)
- Certified Mental Performance Consultant (CMPC)
  - Licensed Psychologist
  - Licensed Counselor
  - Licensed in another healthcare profession \_\_\_\_\_
  - Not listed \_\_\_\_\_
9. Primary employment setting
- Academic/educator
  - Employed by team/organization
  - Private practice
  - University athletic department
  - Not listed \_\_\_\_\_
10. Current job title
- \_\_\_\_\_
11. Percentage of time spent practicing sport psychology
- 1-20%
  - 21-40%
  - 41-60%
  - 61-80%
  - 81-100%
12. Please select your theoretical paradigm (i.e., theoretical orientation, framework, system)
- **Single school** – adherence to a single theoretical paradigm in the consultation with, or treatment of, a client
  - **Integrated** – the integration of elements from different theoretical paradigms in the consultation with, or treatment of, a client
    - **Please note the different types of integration**
    - i. **Theoretical Integration** – In this form of synthesis, two or more theories are integrated in the hope that the result will be better than the constituent theories alone. As the name applies, there is an emphasis on integrating the underlying theories along with the integration of intervention techniques from each.
    - ii. **Common Factors** – This approach seeks to determine the core ingredients that different theories share in common, with the eventual goal of creating a more parsimonious and efficacious

treatments based on those commonalities. This search is predicated on the belief that commonalities are more important in accounting for consulting success than the unique factors that differentiate among them.

- iii. **Assimilative Integration** – This form of integration entails a firm grounding in one system of consulting but with a willingness to selectively incorporate practices and views from other systems. In doing so, assimilative integration combines the advantages of a single, coherent theoretical system with the flexibility of a broader range of technical interventions from multiple systems.
- iv. **Technical Eclecticism** – A non-theoretical foundation that is guided primarily by data on what has worked best for others in the past with similar problems and similar characteristics
- **Eclectic** - Altering treatment methods based upon private inclinations of the moment, following no identifiable or consistent principles or guidelines, and the rules that guide treatment application are neither articulated nor replicable
- No theoretical paradigm

*(If single school is selected)*

- Please select the theoretical paradigm you use for sport psychology (select one)
  - Psychoanalytic Theory
  - Psychodynamic Theory
  - Interpersonal Theory
  - Behavior Theory
  - Cognitive Theory
  - Cognitive Behavioral Theory (CBT)
  - Acceptance Commitment Theory (ACT)
  - Humanistic Theory
  - Gestalt Theory
  - Existential Theory
  - Emotion Focused Theory (EFT)
  - Integrated Model of Athletic Performance (IMAP)
  - Psychological Skills Training (PST)
  - Systems Theory
  - Not listed \_\_\_\_\_

*(If integrated is selected)*

- Please select the type of integration you use (select one) (descriptions from Norcross, 2010)
  - **Theoretical Integration** – In this form of synthesis, two or more theories are integrated in the hope that the result will be better than the constituent theories alone. As the name applies, there is an

emphasis on integrating the underlying theories along with the integration of intervention techniques from each.

- **Common Factors** – This approach seeks to determine the core ingredients that different theories share in common, with the eventual goal of creating a more parsimonious and efficacious treatments based on those commonalities. This search is predicated on the belief that commonalities are more important in accounting for consulting success than the unique factors that differentiate among them.
- **Assimilative Integration** – This form of integration entails a firm grounding in one system of consulting but with a willingness to selectively incorporate practices and views from other systems. In doing so, assimilative integration combines the advantages of a single, coherent theoretical system with the flexibility of a broader range of technical interventions from multiple systems.
- **Technical Eclecticism** – A non-theoretical foundation that is guided primarily by data on what has worked best for others in the past with similar problems and similar characteristics

*(If theoretical integration is selected)*

- Please select the theoretical paradigm you use for sport psychology (select all that apply)
  - Psychoanalytic Theory
  - Psychodynamic Theory
  - Interpersonal Theory
  - Behavior Theory
  - Cognitive Theory
  - Cognitive Behavioral Theory (CBT)
  - Acceptance Commitment Theory (ACT)
  - Humanistic Theory
  - Gestalt Theory
  - Existential Theory
  - Emotion Focused Theory (EFT)
  - Integrated Model of Athletic Performance (IMAP)
  - Psychological Skills Training (PST)
  - Systems Theory
  - Not listed \_\_\_\_\_

*(If common factors is selected) – move to question 12*

*(If assimilative integration is selected)*

- Please select the primary theoretical paradigm you use for sport psychology (select one)
  - Psychoanalytic Theory

- Psychodynamic Theory
  - Interpersonal Theory
  - Behavior Theory
  - Cognitive Theory
  - Cognitive Behavioral Theory (CBT)
  - Acceptance Commitment Theory (ACT)
  - Humanistic Theory
  - Gestalt Theory
  - Existential Theory
  - Emotion Focused Theory (EFT)
  - Integrated Model of Athletic Performance (IMAP)
  - Psychological Skills Training (PST)
  - Systems Theory
  - Not listed \_\_\_\_\_
- Please select the theoretical paradigm(s) you assimilate into your primary theoretical paradigm for sport psychology (select all that apply)
- Psychoanalytic Theory
  - Psychodynamic Theory
  - Interpersonal Theory
  - Behavior Theory
  - Cognitive Theory
  - Cognitive Behavioral Theory (CBT)
  - Acceptance Commitment Theory (ACT)
  - Humanistic Theory
  - Gestalt Theory
  - Existential Theory
  - Emotion Focused Theory (EFT)
  - Integrated Model of Athletic Performance (IMAP)
  - Psychological Skills Training (PST)
  - Systems Theory
  - Not listed \_\_\_\_\_

*(If technical eclecticism is selected)*

- Please select the theoretical paradigms you utilize in your practice of sport psychology (select all that apply)
- Psychoanalytic Theory
  - Psychodynamic Theory
  - Interpersonal Theory
  - Behavior Theory
  - Cognitive Theory
  - Cognitive Behavioral Theory (CBT)
  - Acceptance Commitment Theory (ACT)
  - Humanistic Theory
  - Gestalt Theory

- Existential Theory
- Emotion Focused Theory (EFT)
- Integrated Model of Athletic Performance (IMAP)
- Psychological Skills Training (PST)
- Systems Theory
- Not listed \_\_\_\_\_

*(If eclectic is selected) – move to question 12*

12. Where did your current theoretical paradigm develop (select all that apply)
- Prior to attending university
  - Undergraduate
  - Master's
  - Doctoral
  - Early-career
  - Mid-career
  - Late-career
13. What percentage would you attribute to the development of your theoretical paradigm
- Prior to attending university \_\_\_\_\_
  - Undergraduate \_\_\_\_\_
  - Master's \_\_\_\_\_
  - Doctoral \_\_\_\_\_
  - Early-career \_\_\_\_\_
  - Mid-career \_\_\_\_\_
  - Late-career \_\_\_\_\_
14. A sport psychology practitioner's theoretical paradigm should include principles from:

---

100% Psychology 50/50 100% Sport Science

15. What components should be included in a theoretical paradigm for sport psychology (select all that apply)
- Arousal regulation
  - Athlete-athlete relationships
  - Beliefs and values
  - Biological factors
  - Biomechanics
  - Coach-athlete relationships
  - Cognitions
  - Creativity
  - Decision making
  - Defenses
  - Emotions
  - Environment

- Evolutionary principles
  - Genetics
  - Goal setting
  - Habits
  - Imagery
  - Individual achievement
  - Interpersonal relationships
  - Learning
  - Mental disorders/illness
  - Motivation
  - Motor control
  - Motor development
  - Motor movement
  - Optimal performance
  - Perceptions
  - Personality
  - Physical development
  - Physiology
  - Preperformance routines
  - Psychological development
  - Self-talk
  - Sensations
  - Service delivery
  - Skill acquisition
  - Sociology of sport
  - Strategy
  - Strength and conditioning
  - Systems
  - Team dynamics
  - Team achievement
  - Technology
  - Well-being
  - Not listed \_\_\_\_\_
16. My theoretical paradigm meets the above components selected
- Likert: 1) strongly disagree, 2) disagree, 3) slightly disagree, 4) neutral, 5) slightly agree, 6) agree, 7) strongly agree
17. I am satisfied with my theoretical paradigm for practicing sport psychology
- Likert: 1) strongly disagree, 2) disagree, 3) slightly disagree, 4) neutral, 5) slightly agree, 6) agree, 7) strongly agree
18. A theoretical paradigm specific to sport psychology would benefit my practice of applied sport psychology
- Likert: 1) strongly disagree, 2) disagree, 3) slightly disagree, 4) neutral, 5) slightly agree, 6) agree, 7) strongly agree

Would you be willing to participate in the next phase of this research?

- Yes



- No
  - Enter email address \_\_\_\_\_

Thank you for your time participating in this survey and thank you for your thoughtfulness in answering all questions. If you have any future questions or concerns, you can contact the lead investigator at [bilderce@dukes.jmu.edu](mailto:bilderce@dukes.jmu.edu).

## Appendix E: Interview Protocol

Thank you for taking part in this interview. I'm going to ask you some questions about your practice of sport psychology, and your use of theoretical paradigms in practice. Do you have any questions before we begin?

1. Would you describe the duties you perform when you practice sport psychology?
2. How would you describe your theoretical paradigm (e.g., single school, integrative, eclectic) for sport psychology?
  - *If integration*: What type of integration (i.e., theoretical, assimilative, common factors, technical eclecticism) do you use?
  - What theoretical paradigm(s) (e.g., CBT, psychodynamic) do you utilize when practicing sport psychology?
  - Do you utilize different paradigms for conceptualization and intervention?
  - *If counselor or psychologist*: How does this differ from your theoretical paradigm for counseling or clinical psychology?
3. I'd like to have you go back to a time in your life that you've probably not thought about for some time. Remember when you were first introduced to psychological theory as it applied to sport? There were likely many things you had to consider for how you would eventually develop your own paradigm. What did you imagine developing your own paradigm to be like?
  - How did your training background (i.e., sport science, psychology, both sport science and psychology) impact the development of your theoretical paradigm?
  - How did your graduate training/early-career/mid-career/late-career impact the development of your theoretical paradigm?
  - What individuals (e.g., mentors, peers, authors, ect.) impacted the development of your theoretical paradigm?
  - How is your paradigm connected to your philosophy for working with clients?
4. In your opinion, what conceptual principles (e.g., sport science, psychology, other) should be included in an effective theoretical paradigm for sport psychology?
  - How does your current theoretical paradigm address these principles?
5. How satisfied are you with your current theoretical paradigm?
  - What has impacted your satisfaction level with your theoretical paradigm?
  - How satisfied are you with the state of theoretical paradigms in the field of sport psychology?
6. What would you like to see for the future of theoretical paradigms in sport psychology?
  - What would you like to see in the development of theoretical paradigms?
  - What would you like to see in the training of theoretical paradigms?
  - What would you like to see in the research of theoretical paradigms?

Thank you for your time and thoughtfulness. If you have any future questions or concerns, you can contact me via telephone or email. You can expect a copy of the transcript upon completion of transcription to check for accuracy.

## Appendix F: Lead Investigator Researcher-as-instrument Statement

In qualitative inquiry, the researcher is also an instrument of the research (Morrow, 2005). A self-reflective journal was utilized throughout the research process to promote reflexivity (i.e., self-awareness), which included an ongoing record of my experiences, reactions, and emerging awareness of potential assumptions or biases. I began this journal with my own experience with the chosen population, my interest in the topic, and my training and experience in qualitative methods. The following is an excerpt from the journal.

“I began my journey in sport psychology while finishing my undergraduate degree at Northwest Christian University. After consulting with a prominent sport psychologist, I applied to the University of Denver and was admitted. At the University of Denver, I became interested in the topic of theory after dissatisfaction with the state of theory both within sport psychology and the larger field of psychology. I became interested in theoretical integration, and I chose to apply to work under a faculty member at James Madison University who specialized in theoretical unification. I strongly identify with his theoretical paradigm, and my first dissertation idea was to create a theory of sport psychology using his theory as a framework. However, I decided that it was important to gauge the state of the field prior to introducing a theory. Given the gaps in the literature of the field, this research would also allow me to explore what theoretical paradigms are in use in the field, how they are developed, and how satisfied are practitioners with their theoretical paradigms. Originally, I had planned a quantitative study. However, after taking a course on mixed methods and qualitative research, I found

that my study would benefit from the depth and richness that qualitative data could add to quantitative results. It was these points that led to the current study.”

A bracketing interview was also conducted by a colleague educated in qualitative interviewing. The interviewer conducted the qualitative interview with me as the participant in a similar fashion that the qualitative participants would be interviewed. The interview was then transcribed and analyzed to determine any biases or presuppositions I might have concerning theoretical paradigms in sport psychology. The following is a bias statement that summarizes my own biases concerning the theoretical paradigms in sport psychology. I remained cognizant of these potential biases throughout the research process.

“Several themes emerged from my bracketing interview. The first major theme that emerged was “theoretical integration.” I identify as one who uses integration, and I believe that theoretical integration is the method that allows me to comprehensively and ethically work with clients. I utilize a variety of different paradigms in my theoretical integration including CBT, psychodynamic, emotion focused, ACT, humanistic, and systems theories. A second theme that emerged was “importance of mentors.” I have had a wide variety of mentors throughout my time in graduate school, and they have helped me to shape my theoretical paradigm. These mentors span from my master’s training at the DU, my doctoral training at JMU, and my doctoral internship at Lehigh. The third theme that emerged was “comprehensive training.” Alongside the importance of mentorship, I feel that the comprehensive training I’ve received in sport and performance psychology as well as clinical psychology has informed and shaped my theoretical paradigm. The fourth theme was “continual growth.” I have an expectation for myself

that I will continue to learn, improve, and consistently reevaluate my theoretical paradigm. It is this mindset that will allow me to stay present in my work and will hopefully lead to more effective and ethical work with my clients. The final theme that emerged was “satisfied but not content.” I am currently satisfied with my theoretical paradigm given my developmental stage. However, I aim to continue to learn and grow in an intrinsic fashion.

During the research process, I consistently returned to the results of my bracketing interview and researcher-as-instrument journal entry with the aim of maintain my focus during the interview process and capture the authentic experiences of the qualitative participants.

## Appendix G: Quantitative Recruitment Email

Dear sport psychology practitioner,

I am attempting to provide deeper insight into theoretical paradigms (i.e., theoretical orientation, system, framework) in the field of applied sport psychology. My purpose is to identify the what theoretical paradigms are utilized, how these paradigms are developed over time, and practitioner satisfaction of theoretical paradigms in the field. This research will fill the gap in the sport psychology literature. Providing a nuanced and more holistic picture of theoretical paradigms will benefit sport psychology educators by providing a more complete view of theoretical paradigms in applied sport psychology, which will allow for a greater understanding of a critical component in the field. It will benefit practitioners by providing a clearer picture of what other practitioners are utilizing in their practice, how and when theoretical paradigms are developed over time, and transparency of other practitioners' satisfaction of theoretical paradigms. The study will also benefit researchers by provided clear lines of future research on what theoretical orientations are utilized, how they are developed, and it potentially provides more clarity on the perceived need of a theoretical paradigm specifically developed for sport psychology.

I recognize how busy you are and how tedious questionnaires can be, but without a high response rate from practitioners in the field, whether CMPC or not, I cannot put much faith in the results. Please take 10-15 minutes right now to fill out the survey at this link: [http://jmu.co1.qualtrics.com/jfe/form/SV\\_ewEdedDuroWDBVH](http://jmu.co1.qualtrics.com/jfe/form/SV_ewEdedDuroWDBVH)

While you may receive several emails about this study, please only complete the survey one time.

Your data will not be individually identified; all results will be grouped into large categories (i.e., student, early career professional, mid-career professional, late-career professional). Responding to the questionnaire indicates your voluntary consent to participate in this research. This research study has been approved by the Institutional Review Board at James Madison University.

If you have further questions concerning matters related to this research, please contact: Christopher E. Bilder, MA., Department of Graduate Psychology (phone: 541-680-6222; email: [bilderce@dukes.jmu.edu](mailto:bilderce@dukes.jmu.edu)) or Dr. Gregg Henriques (email: [henriqgx@jmu.edu](mailto:henriqgx@jmu.edu)). If you have any questions concerning your rights as a possible participant in this research, please contact the Institutional Review Board Chair, Dr. Tami Castle (email: [castletl@jmu.edu](mailto:castletl@jmu.edu)).

Thank you in advance for your help with this important project!

Sincerely,  
Christopher E. Bilder, MA