

**UNTIL THEY KNOW YOU CARE: THE INFLUENCE OF COACH SERVANT
LEADERSHIP ON MOTIVATIONAL CLIMATE AND ATHLETE
PSYCHOSOCIAL OUTCOMES**

A Dissertation

Presented in Partial Fulfillment of the Requirements for the

Degree of Doctor of Philosophy

with a

Major in Education

in the

College of Graduate Studies

University of Idaho

by

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May 2014

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ABSTRACT

The purpose of this investigation was to examine the relationship among coach leadership factors, perceived motivational climate, and athlete psychosocial outcomes. Servant leadership (SL) is a concept growing in interest and popularity in many domains (Anderson, 2005; Drury, 2004; Rieke, Hammermeister, & Chase, 2008). This research examined the impact of coach SL on perceived motivational climate and athlete psychosocial outcomes among 260 female high school club soccer players. Coaches and athletes assessed coach SL using the RSLP-S (Hammermeister et al., 2008). Athletes answered surveys on perceived motivational climate and a range of psychosocial outcomes, including ability to cope with stress, sport confidence, ability beliefs, intrinsic motivation, motivational orientations, trait anxiety, and individual and team satisfaction. Hierarchical Linear Models were set up to test individual hypotheses. Findings revealed that coaches' SL perceptions differed for coaches and athletes. As a result, coach-perceived SL did not predict increments in motivation climate or athlete psychosocial outcomes. However, the athlete-perceived coach SL enhanced prediction efficiency for perceived mastery climate and most of the positive psychosocial outcomes. While the addition of athlete-perceived SL predicted increments in mastery climate in the HLM model, only the trust/inclusion subscale was significant. If athletes perceive a coach as trustworthy and inclusive, they were more likely to perceive a mastery climate. Additionally, coaches who were older and had higher license levels within US Youth Soccer created a stronger mastery climate. The discrepancy between athlete and coach perceptions is consistent with research in social psychology (Harms and Crede, 2010) and sport (Smith & Smoll, 1999) where leaders such as coaches seem to be inaccurate judges of their own behaviors. Thus, these findings suggest that it may be

important for coaches of this age group to find ways to develop perceptions of trust and inclusion among their athletes.

ACKNOWLEDGEMENTS

Eight long years after beginning my doctorate program at University of Idaho, I have many people to thank and acknowledge. I would have never pursued higher education, but to follow in the footsteps of my father, Bruce Knight. His relentless belief in me, as well as his inspiring intelligence and curiosity in the world gave me the courage and desire to pursue my dreams of a doctorate degree. I am also so thankful for my mother, Kathleen Knight, who demonstrated sacrifice and love for our family and always believed I could be anything I wanted to be.

I would like to acknowledge Dr. Damon Burton for his contribution, support, and knowledge in serving as my major professor and mentor. His guidance and patience throughout my doctoral program is highly appreciated and could never be repaid. I would also like to thank my committee members Dr. Sharon Stoll, Dr. Brian Hopper, and Dr. Justin Barnes for challenging me to become a more complete researcher and practitioner of Sport and Exercise Psychology.

Additionally, I want to thank Dr. Siri Terjesen for her friendship and support since childhood. Dr. Terjesen and her colleague Dr. Jeff Covin offered valuable guidance on the data analysis portion of this project and I am grateful. I am also hugely indebted to Dr. Thomas Bohman for overseeing the data analysis section of this project. His knowledge and assistance were essential to completion with a high standard. I also want to acknowledge guidance and input from Dr. Tony Pickering and Dr. Jon Metzler on this project.

My time in Moscow was enriched greatly by the Moscow United Soccer community. The athletes and coaches were my inspiration to pursue this study. Many thanks in particular to the Sprenger family for always having a couch for me to sleep on and a family to spend

time with. I could not imagine meeting a more amazing family and my life is better for knowing you all. Thank you to Peg and Dina for their friendship. And thanks to all my peers for challenging me and walking this path (Trin, Tyler, Chris, Justin, Dave, Andy, Eva, Heather, Dwight). And thanks to Emma and Alan for housing me and challenging my thinking.

I also want to thank my siblings and their families for support (Jim, Debi, John, Rena, Johanna, Matt, Emily, Erika, Trevor, Zachary, Aiden, Gavin, Courtney, Bryce, and Graham). Thanks to Johanna and Matt for giving me letting me part of their family. My coworkers and boss have been so supportive and encouraging of me while I was finishing this project. I am most thankful for April and Ashley's friendship and Carl's constant reminder to keep working.

My dear friend Dr. Heather Ridnour walked this whole journey with me and kept me focused, positive and with my eye on the prize. Her friendship is transformative and I will always be grateful to her.

Additionally, I want to thank my friends Maya and Jackie for modeling excellence and for their assistance at the end with organization and defense preparation. I am so blessed with talented and intelligent friends. And for the support and mentorship from Karen and Steve Markham.

I want to especially thank my church family at LifeAustin and my small group at the Markham's who took the time to keep me in prayer and get me over the finish line.

Finally, I want to thank all the coaches and athletes who participated in the study. And the parents who gave consent for participation.

DEDICATION

For my Dad- It all worked out and it was marvelous

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CHAPTER 1: Introduction

Sport psychology researchers (Newton, Duda, & Yin, 2000; Seifriz, Duda, & Chi, 1992) have emphasized that motivational climate has a powerful impact on athletes' sport experience. Researchers (Ames, 1992; Seifriz, Duda, & Chi, 1992) have also supported the link between perceived motivational climate and a wide range of athletes' psychosocial outcomes. Because the coach is presumed to be the primary factor in structuring sport environments (Ames, 1992), intervention studies have demonstrated success in guiding coaches on how to alter motivational climate to enhance athlete outcomes (Smith, Smoll, & Cumming, 2007). However, it is not understood what coach leadership characteristics have the greatest influence on motivational climate and subsequent athlete psychosocial outcomes. Researchers (Chelladuari, 1993; Stewart, 1993) have examined leadership characteristics that athletes prefer in their coaches, but they have not identified the specific leadership models that are most likely to impact both motivational climate and athlete outcomes. This research will empirically examine relationships among coaches' servant leadership characteristics, emotional intelligence, ability beliefs, and motivational orientation antecedents of leadership and their influence on motivational climate and athlete consequence variables. Thus, the purpose of this study is to examine how much motivational climate mediates the relationship between coaches' leadership behaviors and athletes' psychosocial outcomes. Three sets of hypotheses will be examined: within coach; between coach and athlete; and within athlete (see Appendix 5).

Servant Leadership

Servant leadership (SL) appears to be a good model to examine coach leadership and this section will explore the SL concept and its characteristics, instruments for measuring

SL, and general and sport research on servant leadership. Additionally, antecedents of servant leadership will be explored, including, emotional intelligence, ability beliefs, and motivational orientation.

Concept and Characteristics

According to Greenleaf (1977), a servant leader is defined as one who leads for the good of all, and not for the benefit of self. Greenleaf (1990) emphasizes that true servant leaders have specific character traits that serve as core values to guide their leadership style, including: (1) a servant leader has an honorable nature; they are truthful with a strong sense of knowing what is right. (2) A servant leader's mission is to serve, to help, to assist, to give, and to share. (3) A servant leader inspires others to "*do right*", and to lead honorable lives. (4) A servant leader has an honorable plan of action that can be understood by others. (5) A servant leader is courageous for what is right and for doing right.

The servant-leader model (Greenleaf, 1977) is based on developing teamwork and community and involving others in decision-making. Servant leadership is strongly based upon ethical and caring behavior that enhances the personal growth of subordinates while improving the caring and quality of a leader's instructions (Spears, 1998). Spears and Lawrence (2002) emphasize that a servant leader does not blindly listen and serve followers, and SL begins only when organizational goals, vision, and direction are established. Spears and Lawrence (2002) has also identified a number of areas where the SL concept has been applied, including: (a) as an institutional philosophy model for not-for-profit corporations, churches, universities, health care, and foundations, (b) boards of directors and trustees within institutions, (c) community leadership, (d) experiential education that advocates

'learning by doing' principles, (e) various education and training programs, and (f) programs related to personal and spiritual growth.

Legendary basketball coach John Wooden defines leadership as:

Leadership is about more than just forcing people to do what you say. A prison guard does that. A good leader creates belief--in the leader's philosophy, in the organization, in the mission. Creating belief is difficult to do where a vacuum of values exists, where the only thing that matters is the end result, whether it's beating the competition on the court or increasing the profit margins in the books...Let me be clear: Results matter. They matter a great deal. But if this is an organization's singular purpose, then the people who sign up are doing it for the wrong reasons, (Wooden & Jamison, 2005, p. 69).

Wooden stresses the importance of coaches believing in their philosophy. Max De Pree (1989, p. xix) stated, "Leaders must be clear about their own beliefs...and have self confidence to 'encourage contrary opinions' to abandon themselves to the strength of others."

Servant leadership goes further than other types of leadership by emphasizing the concept of 'servanthood'. Servant leaders work with highly competent and motivated followers, developing their leadership skills so they can become autonomous leaders themselves (Spears, 1998; Stone, Russell, & Patterson, 2004). In SL, followers are leaders in their own right, with the servant leader playing a role of facilitator in the attainment of the organizational vision. Therefore, the idea that SL can be applied to higher level organizational needs separates it from other leadership styles.

Greenleaf's model (1977) describes servant leaders as putting others' aspirations, needs, and interests above their own because it is the best way to achieve organization goals. In effect, the primary goal of a servant leader is to serve first, and lead second. Leadership experts (Batten, 1998; Buchan, 1998; Page & Wong, 2000; Patterson, 2003; Quay, 1997; Spears; 1995, 1998; Spears & Lawrence, 2002) have converged conceptually on many aspects of SL, and they have recently begun to refine its conceptual characteristics. Batten (1998) describes aspects of SL as including: (a) exemplifying a passion for excellence; (b) asking, listening, and hearing; (c) providing an example of accountability, commitment, and integrity; (d) following a path of empowerment for the self and others; (e) looking for strengths rather than weaknesses in subordinates; (f) cultivating optimum physical, mental, and spiritual fitness; (g) leading as you would like to be led; (h) savoring each moment; and (i) daring to be all you can be. Patterson (2003) describes servant leaders as possessing virtues that include: love, humility, altruism, vision, trust, a heart for serving, and the ability to empower others.

Spears (1998) identified ten major attributes of SL, including: listening, empathy, healing, awareness, persuasion, conceptualization, foresight, stewardship, commitment to individual growth, and building community. First, servant leaders possess the ability to listen and understand the needs and concerns of others. **Listening** also includes the ability to understand themselves and others, and it is seen as a necessary component of leaders' growth. Second, servant leaders work to understand and empathize with their followers, attempting to accept and understand others. **Empathy** is a component needed to build follower's trust and acceptance of leaders. Third, another strength of servant leaders is the ability to heal themselves and others. **Healing** refers to the process of creating 'wholeness'

or a sense of trust in an organization. Spears (1998) emphasizes, "Servant-leaders recognize that they have an opportunity to help make whole those with whom they come in contact" (p. 3).

Fourth, servant leaders have high levels of both self- and general **awareness**, prompting them to develop the ability to view situations from a 'big picture' perspective. Awareness also relates to being aware of ethical issues within the organization. Fifth, servant leaders rely on **persuasion** rather than personal authority or 'coercion' when making decisions, enabling the creation of group consensus. Sixth, servant leaders have a visionary approach or the ability to view a problem from a broader-based conceptual framework. Thus, leaders focus on balancing short-term goals with long-term objectives, and as a result, ensure the accomplishment of organizational vision. Seventh, servant leaders have the ability to '**foresee**' future outcomes based on their ability to understand the past, the present, and the future. They are adept at picking up patterns in the environment and can anticipate consequences of decisions. Eighth, servant leaders make a choice to serve others as well as being accountable for their followers and organization. The leader's primary commitment within the organization is serving the needs of others through persuasion and openness rather than coercion and control. Ninth, servant leaders value and are deeply committed to the overall development and growth of each individual within an organization. They also take a personal interest in the ideas of their followers and encourage development of decision-making skills. Finally, servant leaders strive to create a sense of community within the institutions where they work, with the goal of creating a sense of belonging among followers.

Measuring Servant Leadership

In order to measure SL, researchers (Dennis & Winston, 2003; Hammermeister, Burton, Pickering, Westre, Baldwin & Chase, 2008; Laub, 1999; 2003, Page & Wong, 2000; Wong & Page, 2003) have developed and refined several instruments to identify and operationalize the concept of servant leadership. Page and Wong (2000) developed the Servant Leader Profile (SLP) that measures twelve categories of servant leadership, including: (1) integrity, (2) humility, (3) servanthood, (4) caring for others, (5) empowering others, (6) developing others, (7) visioning, (8) goal-setting, (9) leading, (10) modeling, (11) team building, and (12) shared decision-making. While they posited that the first three categories, integrity, humility, and servanthood are the most descriptive of servant leaders, they did not conduct factor analysis to test this hypothesis. Dennis and Winston (2003) did conduct factor analysis on the SLP and found 3 of the 12 hypothesized factors, including: empowerment, service, and vision.

Wong and Page (2003) revised the SLP and found a seven-factor solution, including empowering, developing, and serving others as well as participatory, inspirational, visionary, and courageous leadership. More recently, Hammermeister and colleagues (2008) conducted a factor analysis of the RSLP with a sport population, and like Dennis and Winston (2003), they found a three-factor structure that included: trust/inclusion, humility, and service. Hammermeister and colleague's (2008) Revised Servant Leader Profile for Sport (RSLP-S) was used to assess SL among soccer coaches in this study.

General Research on Servant Leadership

Researchers in many fields, including religious theology (Anderson, 2005), positive psychology (Sendjaya, Sarros, & Santora, 2008), philosophy (Bowie, 2000), and

organizational leadership (Drury, 2004; Laub, 1999; Patterson, 2003; Russell & Stone, 2002; Wong & Davey, 2007) are investigating SL. Walumbwa, Hartnell, and Oke (2010) contend that problems in the current organizational climate support the need for a SL style.

Walumbwa et al. (2010) emphasize that organizations are plagued by systemic problems such as bullying leadership (Einarsen, 1999), abuse of power (Sankowsky, 1995), unethical practices (Currall & Epstein, 2003), toxic emotions (Frost, 2003), social isolation and alienation in the workplace (Sarros, Tanewski, Winter, Santora, & Densten, 2002), and the violation of employees' psychological well-being and work-life balance (De Cieri, Holmes, Abbott, & Pettit, 2005; Thornwaite, 2004; Wright & Cropanzano, 2004). They further contend that SL extends other leadership models, such as transformational leadership by emphasizing service, moral dimensions and developing leadership skills in their followers.

Despite criticisms, a growing body of research supports the value of SL as a legitimate model in many fields, including teaching, business, and sport (Dennis, 2004; Dingman & Stone, 2006; Irving & Longbotham, 2007; Miers, 2004; Parolini, 2007; Patterson, 2003; Stone & Patterson, 2005). Research (Drury, 2004; Laub, 1999; Patterson, 2003; Russell & Stone, 2002; Wong & Davey, 2007) has also examined SL as a valid theory of organizational leadership.

Researchers (Girard, 2000; Hebert, 2003; Irving, 2005; Laub, 1999; Miers 2004; Thompson, 2003) have demonstrated a link between SL and followers' job satisfaction. Sendjaya and colleagues (2008) found that servant leader behaviors of high school principals predicted teachers' job satisfaction, and Hebert (2003) demonstrated a significant relationship between perceptions of SL and job satisfaction in the workplace. Miers (2004) reported that the more teachers perceived SL behaviors in schools, the higher the level of

individual teacher job satisfaction, whereas Thompson (2003) also revealed significant positive relationships between participants' perceptions of SL characteristics and their level of job satisfaction.

Joseph and Winston (2005) have confirmed SL as an antecedent of leader and organizational trust. Walumbwa and colleagues (2010) found a significant positive relationship between SL and organizational citizenship, supporting previous research (Ehrhart, 2004; Liden, Wayne, Zhao, & Henderson, 2008; Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008). Additionally, research has also demonstrated a significant positive relationship between organization citizenship behaviors and employee performance, organizational productivity, efficiency, and customer satisfaction (Bommer, Dierdorff, & Rubin, 2007; Kirkman, Chen, Farh, Chen, & Lowe, 2009). Furthermore, Walumbwa et al. (2010) suggest that SL is instrumental in developing positive organizational climates that facilitate these outcomes.

Collins (2001) undertook an extensive research project, chronicled in the book *Good to Great*, to examine key factors that help corporations to move from good to exceptional and sustain that performance for at least 15 years. Every organization that was identified as great over time had what he termed a 'Level 5 leader' at the point of transition. Collins describes a Level 5 leader as one with a paradoxical mix of personal humility and professional will. Their ambitions are for the success of the company and not personal gain. In contrast to other leadership types, Level 5 leaders sets up successors for greater success after they are gone, whereas Level 4 leaders often set up their successors for failure. Additionally, Level 5 leaders are modest, unlike two-thirds of the leaders of comparison companies who had large personal egos. Collins and his colleagues (2001) discussed using

“servant” or “service” to describe this leader, but wanted to capture the drive of these leaders, in addition to their humility and service.

The Level 5 leadership Collins (2001) describes goes against the grain of most companies, but it characterizes companies that become great and maintain it over time. Collins’ Level 5 leader is congruent with many of the characteristics of SL. McGee-Cooper and Trammell (2002) have also suggested that servant-leadership is one model of leadership that can shift traditional notions of leadership and organizational structure and shape an environment that can provide a more satisfied and productive workforce.

Sport Research on Servant Leadership Effectiveness

While the servant-leader concept has been accepted in applied business and educational leadership environments, few sport studies have examined the efficacy of the servant-leader model. A number of researchers have recommended more research on this topic in sport (e.g., Chelladurai, 2007; Cote, Salmela & Russell, 1995; Horn, 1985; Peshkin, 1988; Smoll & Smith, 1989; Streat, 1998). While little research has been conducted on servant-leadership in sport contexts, Chelladurai (2007) identified two emerging leadership developments in sport. First, athletes increasingly preferred coaches who were democratic instead of autocratic. Second, coaches perceived most effective by their athletes were ones who considered players’ opinions and feelings. These findings are clearly consistent with SL.

Additionally, Scott (1997) made leadership recommendations to coaches for creating a positive organizational climate, including: (a) collaborating with athletes to establish vision and goals, (b) involving all team members when determining values for team and individual behavior, (c) approaching conflicts with the idea of empowerment and social

justice, and (d) utilizing a reward system that recognizes individual achievement and effort toward accomplishing team goals. Furthermore, in a study of former athletes training to become coaches, Stewart (1993) identified the characteristics that best differentiated most and least favorite coaches. Characteristics of favorite coaches included: honesty, approachability, interest in the athletes beyond sport, a tendency to welcome and use athletes' input, and efforts to make each team member feel valued and important. Characteristics of least favorite coaches included: stressing winning at any cost, lying, being impersonal, and using fear and degradation as motivation.

Contemporary leadership experts (Bass, 1985, 2000; Bennett, 2001; Covey, 2002; Kouzes & Posner, 1999) have encouraged the development of models that are congruent with the patterns Chelladurai, Scott and Stewart identified. These new leadership models should emphasize athlete empowerment and democratic coaching behaviors, while focusing less on the traditional autocratic, fear-based coaching methods. Westre (2003) used qualitative methods to examine the experiences of college coaches identified as possessing servant-leadership characteristics. Athletes seem to prefer coaches who seek their input regarding decisions related to the team; provide positive feedback and recognition; exhibit sincere sensitivity to their needs, both in and out of sport settings; and demonstrate an athlete-centered coaching philosophy (Westre, 2003).

Hammermeister, Chase, Burton, Westre, Pickering, and Baldwin (2008) examined the relationship between servant-leader characteristics of coaches and desirable athlete outcomes. Results indicated that athletes who played for coaches who possessed stronger SL characteristics had desirable psychosocial outcomes, including: (a) higher task orientation,

(b) greater satisfaction, (c) enhanced sport confidence, (d) higher respect for the coach, (e) greater coping skills, (f) and elevated intrinsic motivation.

Researchers at the Center for ETHICS* (Stoll, Beller, VanMullem, Brunner, & Barnes, 2009) created an education program aimed at developing SL characteristics in athletes. Stoll and colleagues (2009) initially developed a four-year curriculum that focused on character in relation to SL, and they also developed the SBB Servant Leadership Judgment Inventory (i.e., SBB Servant; Stoll, Breitbach, & Beller, 2003) to assess the effectiveness of their program on affecting leadership change. The SBB Servant assesses individual- and peer-evaluated moral values associated with character-driven SL for collegiate athletes. Stoll and colleagues (2009) found significant positive relationships between coach ratings and peer evaluations of athletes' SL qualities following the program. Additionally, athletes who rated themselves higher on SL characteristics and had high peer ratings also demonstrated strong agreement with coach ratings. Conversely, athletes with high self-ratings and low peer ratings generally displayed low coach evaluations on SL characteristics. Stoll and colleagues (2009) further researched SL development of coaches and created an online SL coaching course consisting of 10 lessons. The research did not specifically test a change in SL characteristics, although it did support improvement in cognitive moral development following course completion.

While the available SL research is promising, little additional research has examined SL in sport. Westre (2003) suggests that fields that inform athletics and coaching, including, physical education, sport psychology, sport philosophy, and exercise science, have been slow to adopt a servant-leader model.

While SL research in sport has been minimal, transformational leadership (TL) has been examined more extensively in leadership research. SL shares similarities with TL, which has been more generally accepted in leadership contexts. Stone, Russell and Patterson (2004) support the similarity between transformational and servant leaders because of their people-oriented leadership styles, with both styles emphasizing the importance of valuing people, listening, mentoring, teaching, and empowering. Humphreys (2005) asserts a primary difference between the two leadership styles is the motivation of leaders themselves, with servant leaders focusing on follower's emotional welfare and serving them, instead of directing in a more autocratic way, while transformational leaders rely on their charismatic abilities, expertise and the strength of relationships to motivate followers. Charbonneau, Barling and Kelloway (2001) have found that TL has positively enhanced intrinsic motivation, self-efficacy, and self-determination of followers. Charbonneau and colleagues (2001) also revealed that TL predicted both intrinsic motivation and performance, with intrinsic motivation being the mediator between TL and sport performance.

Antecedents of Servant Leadership

Emotional intelligence (EQ), ability beliefs, and motivational orientation seem to be important antecedents of SL. In examining these three SL antecedents, the EQ section will focus on concept and characteristics, measurements of EQ, general EQ research, sport EQ research, and the relationship between SL and EQ. Additionally, the motivation section will highlight ability beliefs, motivational orientation, and the relationship between SL and these two motivation variables.

Emotional Intelligence

Concept and characteristics. Research in education (Cerit, 2009) and business (Caruso & Wolfe, 2004) has looked further into the characteristics of effective leaders, and EQ is one leadership antecedent that has received extensive attention. EQ is defined as an individual's ability to perceive, utilize, understand, and manage emotions (Mayer & Salovey, 1997). Goleman (1995) conceptualizes EQ as “when a person demonstrates the competencies that constitute self-awareness, self-management, social awareness, and social skills at appropriate times and ways in sufficient frequency to be effective in the situation” (Boyatzis, Goleman, & Rhee, 2000; p. 344).

Currently a debate rages in EQ research (Davis, Stankov, & Roberts, 1998; Gignac, Palmer, Manocha, & Stough, 2005; Law & Wong, 2004; Petrides & Furnham, 2000; Salovey, Mayer, Caruso, & Lopes, 2003; Schutte et al., 1998) on how to define and measure this construct. Because it is a relatively new concept, Mayer, Salovey and Caruso (2004) emphasize that two competing models have been hypothesized that conceptualize EQ as (a) an ability or (b) a combination of abilities and personality characteristics. The ability model of EQ focuses on the interaction of intelligence and a number of emotions, while the mixed model proposes a combination of EQ and personality characteristics (i.e., mental and social abilities, dispositions, and traits). The ability model has evolved from Mayer and Salovey's (1997) definition of EQ that focuses on the interaction of intelligence and emotional abilities, whereas the mixed model was conceptualized based on Bar-On's (1997) model of emotional intelligence and includes specific intrapersonal, interpersonal, adaptability, stress management, and general mood characteristics. Goleman's (1995) model of EQ was developed based on Bar-On's mixed model and emphasizes areas such as knowing one's emotions, managing emotions, motivating oneself, recognizing emotions in others and

handling relationships. Davis and colleagues' (1998) ability conceptualization of EQ is comprised of four companion skills, including:

Appraisal and expression of emotion in one's self. This skill relates to ability to understand deep personal emotions and to be able to express emotions naturally. People who are highly skilled in this area sense and acknowledge their emotions better than do teammates and opponents.

Appraisal and recognition of emotion in others. This skill focuses on the ability to perceive and understand the emotions of others. People who are highly skilled in this area are sensitive to the emotions of others as well as able to predict others' emotional responses.

Regulation of personal emotion. This skill emphasizes the ability to regulate personal emotions, enabling a more rapid recovery from psychological distress. A person who is highly skilled in this area would be able to return quickly to normal emotional states after emotional highs and lows. Such performers would also have better control of their emotions and would be less likely to lose their temper, become anxious or experience other negative or unproductive emotions.

Use of emotion to facilitate performance. This skill focuses on the ability to make use of emotions positively to enhance performance. Competitors who are competent in this EQ dimension would be able to encourage themselves to do better consistently and to direct their emotions in positive and productive directions.

Measurement of emotional intelligence. EQ instruments are typically developed to measure EQ based on Goleman's (1995) or Bar-On's (1997) model, but due to the relative infancy of EQ, instruments to measure this construct are still relatively new (Mandell & Pherwani, 2003). Meyer and Fletcher (2007) recommend the use of ability models in sport

psychology because viewing EQ as a mental skill or ability allows it to be malleable so it can be developed with experience and instruction. While a number of instruments have been developed to measure EQ, few are suitable for research with sport coaches (Meyer & Fletcher, 2007). For example, Carson, Carson, and Phillips (1997) developed a 14-item measure of EQ, and Carson and Carson (1998) used this measure to examine the relationship between EQ and career commitment in a sample of 75 nurses. However, the authors only reported internal consistency reliability, without mentioning any other psychometric properties of the measure.

Salovey, Mayer, Goldman, Turvey, and Palfai (1995) developed a 30-item Trait Meta-Mood Scale (TMMS) to measure EQ, and Martinez-Pons (1997) used this measure on 108 parents, teachers, and administrators in two public elementary schools. The TMMS was designed to capture three EQ components: attention to one's moods and emotions, emotional clarity (i.e., the tendency to discriminate among one's emotions and moods), and emotional repair (i.e., the tendency to regulate one's feelings). Unfortunately, these three components do not capture all EQ dimensions in either ability or mixed model EQ conceptualization.

Bar-On (1997) introduced the Bar-On EQ-i instrument, which contains 133 items. However, validation evidence has been demonstrated only by the developer, and his definition of EQ also is slightly different from other researchers. Mayer, Caruso and Salovey (2000) commented that Bar-On's EQi is an alternative conception of emotional intelligence that includes "motivation, non-ability dispositions and traits, and global personal and social functioning" (p. 268).

Goleman (1995) developed a 10-item measure of EQ without any validation evidence. Similarly, Weisinger (1998) constructed a short unvalidated EQ instrument, while

Mayer, Salovey, and Caruso (1997) developed the Multifacet Emotional Intelligence Scale (MEQS), which requires responses to more than 400 items and takes 1 to 2 hours to complete. Moreover, the psychometric properties of the MEQS have not been reported, and it is also scored by a norm-referenced method in which respondents are considered high on EQ when a majority of the participants in the norm samples choose the same answer.

Wong and Law (2002) developed the Wong and Law Emotional Intelligence Scale (WLEIS) and documented its strong psychometric properties, prompting its use with several populations. The WLEIS is a 16-item scale that is an efficient and effective instrument for measuring EQ in an environment where coaches and athletes have limited time for answering questionnaires. The WLEIS is based on the ability model and measures the four EQ components identified by Davies and colleagues (1998). The WLEIS has been used with several different populations and demonstrated strong psychometric properties with each population. Because of the promising research with the WLEIS, as well as its underlying ability-related conceptual framework and brevity, this research project employed the WLEIS to measure EQ.

General research on emotional intelligence. EQ, or an individual's ability to process and regulate emotional information (Goleman, 1995; Goleman, Boyatzis, & McKee, 2002; Mayer & Cobb, 2000; Mayer & Salovey, 1997), may contribute to differences among leaders in how they teach and show investment in their followers. Because leadership involves significant interpersonal interaction with others, emotional awareness and regulation are components that can affect the quality of these interactions. Researchers (Caruso & Wolfe, 2004; Goleman et al., 2002) have linked EQ with effective leadership through a leader's ability to empathize, display optimism, and build morale.

Business research (Cherniss, 2000; Jordan, Ashkanasy, & Charmine, 2002; Salovey, Mayer & Caruso, 2002) has demonstrated positive relationships between emotional intelligence and desirable outcomes (i.e., performance, satisfaction, and coping with stress). Emotional intelligence has also been researched in other fields, such as social and organizational psychology (Fineman, 1993, 2004; Mayer & Salovey, 1997; Schutte et al., 2001), and EQ has been shown to be related to a range of outcomes such as creativity, career success, mental health and physical health (Bar-On & Parker, 1997). Additional research (Rosete & Ciarrochi, 2005; Wong & Law, 2002, Wong, Wong, & Law, 2007) suggests that EQ is also positively related to leadership effectiveness, employee job satisfaction, and job performance. Followers' EQ in business settings has been shown to affect job performance, job satisfaction, organizational commitment, and turnover intention (Wong & Law, 2002). Leaders' EQ affects the leaders own job satisfaction and extra-role behavior (Rosete & Ciarrochi, 2005; Wong & Law, 2002).

Researchers (Extremera & Fernandez-Berrocal, 2002, 2005; Salovey et al., 2002; Schutte et al., 2002; Slaski & Cartwright, 2002) have identified EQ as a mediating factor between stress and health. Salovey, Stroud, Woolery and Epel (2002) suggested "attention to moods, clarity in perceiving mood, and confidence in one's ability to repair negative mood are critical for adaptive psychophysiological coping and subsequent well-being" (p. 613). Additional research (Slaski & Cartwright, 2002) has demonstrated a link between EQ and psychological well-being. Slaski and Cartwright (2002) found that retail managers with higher EQ had significantly better levels of health and psychological well-being than did colleagues with lower EQ. Schutte and colleagues (2002) also demonstrated similar results with employees of retailers, nursing homes, and universities, revealing positive relationships

between EQ and positive mood, self-esteem, and maintenance of positive mood.

Sport research on emotional intelligence. In addition to performance-related applications, Meyer and Fletcher (2007) suggest that EQ can be used to aid coaches and players in assessing the emotional climate of the team and in promoting team dynamics and cohesion, with both instrumental in promoting athletes' health and well-being. Although little research has been conducted on EQ in sport, researchers (Meyer & Fletcher, 2007, Miller, 2003) recommend the use of EQ with coaching populations. Miller (2003) found in a qualitative study that coaches identified the importance of EQ factors in relationship to altruistic leadership, whereas Magyar (2004) found that EQ was a predictor of personal caring among summer camp leaders. Additionally, Zizzi and colleagues (2003) found that some aspects of EQ were related to pitching performance in Division I college baseball players.

Benefits of EQ in coaching are potentially numerous, but for other fields that stress working with others and building relationships, superior job performance is directly related to EQ (Law, Wong, Huang & Li, 2008). Possessing higher degrees of EQ allows individuals to be flexible in dealing with unexpected situations and problems that arise in sport contexts (Van Rooy & Viswesvaran, 2004). Naylor (2007) suggests that athletic trainers high in EQ would be efficient problem-solvers and good at relationship management. Naylor also posits that professionals who understand and manage their feelings and those of others should find greater professional satisfaction than should colleagues who do not understand and manage their feelings. The coaching field faces similar challenges.

Emotional intelligence and servant leadership. Researchers (Goleman, Boyatzis & McKee, 2002; Palmer, Walls, Burgess & Stough, 2001) suggest that effective leaders must possess strong interpersonal skills in order to motivate and inspire others, foster positive attitudes, empower and obtain emotional commitment, create a sense of importance and recognize contributions of followers. Despite the enormous interest in EQ, limited research (Palmer et al., 2001) has been conducted specifying the exact mechanisms by which it works, how it relates to effective leadership, and the extent to which EQ accounts for effective leadership.

Researchers (Goleman, 1998a; Higgs & Aitken, 2003; Srivastava & Bharamanaikar, 2004) suggest that effective leaders possess high levels of emotional intelligence. They also agree that effective leadership requires understanding emotions and development of EQ abilities (Bennis, 2003; Goleman, 1998a, 1998b; Higgs & Aitken, 2003; Prati et al., 2003; Schwartz & Tumbliin, 2002; Sitter, 2005). In fact, several researchers (Goleman, 1998; Goleman et al., 2002; Palmer et al., 2001) postulate that emotional intelligence is an important antecedent of effective leadership.

Both servant leadership and emotional intelligence are relatively new concepts with a paucity of research examining the relationship between these two constructs (Nuttall, 2004). Nuttall (2004) emphasizes that in both EQ and SL, interpersonal relationships are the main components determining performance. Servant leaders focus on the quality of interpersonal relationships with followers, instead of other methods of influence. They conclude that to lead effectively and foster leadership in followers, a servant leader should possess all the components of emotional intelligence. Despite the commonalities between SL and EQ, more

research is needed to determine the exact nature of the relationship between these two concepts.

Limited research has examined the relationship between emotional intelligence and SL. Vidic (2007) found a positive relationship between SL and emotional intelligence for military cadets serving in leadership positions. Transformational leadership has been more extensively researched and shares similarities with SL. Researchers (Atwarer & Yammarino, 1992; Barling, Weber & Kelloway, 1996; Brown & Moshavi, 2005; Gardner & Stough, 2002; Leban & Zulauf, 2004; Mandell & Pherwani, 2003; Palmer et al., 2001; Sivanathan & Fekken, 2002; Srivastava & Bharamanaikar, 2004) have demonstrated that transformational leaders are higher in EQ competencies than less intrinsic leadership styles (i.e., transactional and passive/avoidant).

Only one study (Vidic, 2007) has specifically focused on the four characteristics of emotional intelligence and how they relate to SL. However, there is a strong conceptual rationale for the relationship between EQ and SL.

Appraisal and expression of emotion in one's self. Spears (1998) identified self and general awareness of the organization as one of the primary characteristics of servant leaders. Without self-awareness, servant leaders would be poor managers of themselves and less able to understand and lead others. Thus, components of SL such as listening, empathy, healing, awareness, and persuasion should be related to the self-awareness component of emotional intelligence.

Appraisal and recognition of emotion in others. Because the premise of servant leadership is 'servanthood' or leading through serving others, servant leaders need to possess a high degree of appraisal and recognition of emotions in others. They need to be

attuned to how other's feel, prompting a sense of shared values and priorities within the organization. All characteristics of SL should relate to this component.

Regulation of personal emotion. Although not identified as one of the primary SL characteristics, self-management clearly relates to key components of servant leadership such as listening, empathy, healing, awareness, and persuasion. Moreover, the fact that servant leaders influence and lead others through service requires self-sacrificing behaviors that should be closely identified with effective self-management. Thus, servant leaders are predicted to display higher levels of regulation of personal emotions, which should be related to servant leadership characteristics.

Use of emotion to facilitate performance. While this component is the most divergent from Goleman's four EQ factors, it is similar in some regards to relationship management. When working with teams, the use of emotion to facilitate performance necessitates relationship management. Servant leaders should relate to this component of EQ. Based on previous research (Vidic, 2007) and the conceptual links between EQ and SL, it is hypothesized that coaches' EQ should be related to their SL characteristics.

Coach Hypothesis 1 (CH-1): Emotional intelligence core competencies (i.e., use of emotion to facilitate performance, regulate personal emotion, appraise and recognize emotion in others, and appraise and express emotion in one's self) are expected to positively and significantly relate to SL.

Motivational Correlates

One important aspect of effective leadership is the ability to inspire and motivate followers to achieve organization goals (Bass, 1998; Spiszer, 1999; Winter & Sarros, 2002). Winter and Sarros (2002) believe that effective leadership is the means to improve

motivation and performance in universities, and motivation has also been a central topic in leadership research in a variety of settings (Connelly et al., 2000; Mumford et al., 1993; Xenikou & Simosi, 2006). Motivation is a multifaceted topic, but a number of researchers believe that ability beliefs (Biddle et al., 2003) and achievement goal orientation (Ames, 1992; Duda & Nicholls, 1992; Newton, Watson, Kim & Beacham, 2006) are motivational variables that are critical antecedents to leadership.

Achievement goal theory (Dweck, 1999; Duda & Nicholls, 1992) is a socio-cognitive framework comprised of socio-contextual factors (i.e., societal value systems, educational experiences, etc.) and personal factors (i.e., aptitudes, temperaments, personality, etc.) that serve as antecedents of a variety of self processes (i.e., self-concept, attributions, achievement goals) that ultimately promote a variety of achievement-related behaviors (i.e., leadership, effort, task choice, persistence, goal commitment; Dai, Moon, & Feldhusen, 1998). Achievement goal theory highlights two primary individual dispositions that make a significant contribution to understanding motivation. According to Dweck (1986), individuals adopt different ‘beliefs about talent’ (i.e., capacity and learning beliefs) that are antecedents for motivational orientations (i.e., task and ego orientations). These motivational orientations can then serve as antecedents to a variety of behavioral patterns that can affect leadership.

Ability beliefs. Motivation has been examined extensively in general psychology (Dweck, 1999; Nicholls, 1984; Weiner, 1992) as well as sport and exercise psychology (Biddle, 1997; Harwood, Spray, & Keegan, 2008; Roberts, 2012). Sport research (Duda, 2001; Harwood et al., 2008) has generally adopted a socio-cognitive framework to understand achievement goals. Dweck (1999) furthered the work of Nicholls (1984)

achievement goal theory by examining underlying beliefs about talent and intelligence that influence the pursuit of different goals. She posits that the interpretation of the achievement setting depends on underlying beliefs about competence, termed implicit theories, so that attributes of the self and surroundings are either perceived as fixed, uncontrollable factors (i.e., entity or capacity theory) or malleable and controllable factors (i.e., incremental or learning theory). According to Dweck (1999), individuals' beliefs about ability are thought to be the antecedents of motivational orientations, so they interpret achievement consistent with their underlying implicit theory. Individuals who endorse entity views should be more likely to pursue ego goals, while ones who hold incremental theories should typically pursue task goals.

Beliefs about talent are the antecedents of performers' motivational orientation (Biddle et al., 1999; Biddle et al., 2003; Dweck, 1986; Dweck & Leggett, 1988; Sarrazin et al., 1996; Seifriz et al., 1992). Dweck (1986) hypothesized that 'task' and 'ego' motivational orientations develop as a result of different beliefs about talent, and subsequent research supported this hypothesis. Both academic and sport researchers (Biddle et al., 1999; Biddle et al., 2003; Sarrazin et al., 2002; Sarrazin et al., 1996; Seifriz et al., 1992) have confirmed the relationship between motivational orientations and ability beliefs, with learning beliefs serving as a foundation for the development of a 'task' orientation, while capacity beliefs promote the development of 'ego' orientations.

Dweck's (1986) model hypothesizes that individuals with entity beliefs believe intelligence is fixed and uncontrollable and cannot be developed and enhanced over time. Dweck and Leggett (1988) suggest that those with an entity view are more likely to have negative reactions when faced with achievement setbacks, whereas individuals with

incremental beliefs view intelligence as malleable and controllable and something that can be developed and improved over time. Erdley and Dweck (1993) found that performers with incremental beliefs focus on task goals making them more likely to seek out challenges, be optimistic, hopeful, persistent, and have high expectations for success.

Dweck's (1986) model found a link between children's beliefs about intelligence, their views of success and failure, and the quality of their academic performance. Dweck and colleagues (Dweck, 1999; Dweck, Chiu & Hong, 1995a; Dweck & Leggett, 1988) found that students who had entity beliefs of intelligence avoided academic challenges and showed declines in academic performance. In contrast, students who held incremental beliefs sought academic challenges and showed increased persistence and problem-solving abilities when faced with difficult problems. Interestingly, children with incremental beliefs perceived the assessment of their ability irrelevant, chose challenging learning tasks, and displayed a task orientation, whereas children with entity beliefs chose tasks and achievement patterns based on their perceived ability.

Implicit theories have been researched in the educational achievement domain to examine their relationship to a variety of factors such as personality (Dweck, 1999), judgment (Dweck, Chiu, & Hong; 1995b, Levy, Stroessner, & Dweck, 1998), and interpersonal relationships (Franiuk, Cohen, & Pomerantz, 2002).

Additional studies (Jourden, Bandura, & Banfield, 1991; Kasimatis, Miller, & Macussen, 1996) have demonstrated a significant relationship between ability beliefs and physical performance variables. Jourden and colleagues (1991) found a positive relationship between incremental beliefs and self-efficacy and perceptual motor performance improvement. Ommundsen (2001a) found that incremental beliefs predicted task

orientations in physical activity classes, and Ommundsen (2001b) also demonstrated positive relationships between incremental beliefs, task orientation, and satisfaction in physical education settings. Biddle and colleagues (2003) revealed relationships between entity and incremental ability beliefs and goal orientations, and amotivation and enjoyment in sport and physical education, with entity beliefs predicting amotivation while incremental beliefs predicted enjoyment.

Spray, Wang, Biddle, Chatzisarantis, and Warburton (2006) designed an experimental study in order to manipulate students' implicit theories in relation to a golf task in order to determine their influence on goal orientations, attributions, affect, and intentions for future participation in golf after failure. Results indicated that students in an entity condition were more likely to endorse normatively reference goals and to attribute failure at the task to ability, whereas classmates who were in the incremental condition were more likely to endorse self-referenced goals in relation to the golf task.

Kasimatis and colleagues (1996) have shown that athletes who are told that athletic coordination is mostly learned instead of genetically determined, displayed higher motivation and self-efficacy, and less negative affect towards exercise in the face of difficulty. Dweck and colleagues (1995) suggest that incremental and entity beliefs can be domain specific, so beliefs in the intellectual domain may be unrelated to those in the physical domain. Further research in sport has shown that incremental beliefs about sport ability have been linked with task goal orientation (Biddle, Soos, & Chatzisarantis, 1999; Biddle, Wang, Chatzisarantis, & Spray, 2003; Cury et al., 2002; Lintunen, Valkonen, Leskinen, & Biddle, 1999; Ommundsen, 2001a, 2001b; Sarrazin et al., 1996).

Across different contexts (Chiu, Dweck, Tong, & Fu, 1997; Chiu, Hong, & Dweck,

1997; Franiuk, Cohen, & Pomerantz, 2002.), support has been demonstrated for existence of entity and incremental beliefs. Dweck and colleagues (1995) documented that individuals can hold both beliefs to different degrees, but it is more likely that one belief is more dominant (Dweck et al., 1995). Researchers (Biddle, Soos, & Chatzisarantis, 1999; Biddle, Wang, Chatzisarantis, & Spray, 2003; Dweck, 1999; Ommundsen 2001a, 2001b) also have shown links between implicit theories and goal orientations in physical education and sport settings.

Motivational orientation. Much of the research on achievement goals and goal orientation in sport is based on concepts developed by Nicholls (1984, 1989). According to Nicholls, ability is central to achievement motivation in education, and ability perception can be demonstrated in two ways. Nicholls (1984) explained that

Achievement behavior is defined as behavior directed at developing or demonstrating high rather than low ability. It is shown that ability can be conceived in two ways. First, ability can be judged high or low with reference to the individual's own past performance or knowledge. In this context, gains in mastery indicate competence. Second, ability can be judged as capacity relative to that of others. In this context, a gain in mastery alone does not indicate high ability. To demonstrate high capacity, one must achieve more with equal effort or use less effort than do others for an equal performance (p. 328).

According to Nicholls (1989) individuals who seek mastery are described as task-involved, while those who want to demonstrate greater capacity than others in a particular context are termed ego-involved. Nicholls (1989) explained that task-oriented individuals possess a mindset in which they evaluate success based on improving knowledge and skill,

exhibiting effort, performing to their personal capabilities, and believing that success comes from hard work and collaboration with peers. These performers focus on achieving mastery, learning, and/or perfecting a task. Sport motivation theorists (Duda, 1996; Newton et al., 2006; Roberts et al., 1996) believe the demonstration of ability for task-oriented individuals is self-referenced, with success being achieved when competency and mastery are demonstrated. Ego-oriented individuals exhibit a concept of ability that focuses on favorable comparison to others (i.e., normative comparison). The demonstration of ability for these individuals hinges on social comparison, with success being achieved when their performance exceeds that of others, especially if little effort is expended (Duda, 1996; Newton et al., 2006; Roberts et al., 1996).

Although the two goal orientations were viewed as independent constructs, more recently researchers (Roberts, 2001; Thomas & Barron, 2006) suggested that individuals could possess both orientations to varying degrees, depending on several factors such as competitive level and cultural variations. However, a number of researchers (Magyar & Feltz, 2003; Roberts et al., 1996; Seifriz et al., 1992; Sosik, Godshalk, & Yammarino, 2004) agree that task-orientation leads to a stronger work ethic, greater persistence in the face of failure, higher confidence, a more proactive and positive attitude, higher satisfaction, greater and more consistent effort and more optimal performance than does ego-involvement.

Research in sport (Duda & Nicholls, 1992; Duda & White, 1992; Jackson & Roberts, 1992; Lochbaum & Roberts, 1993; Ommundsen, 2001a, 2001b) demonstrates numerous links between these dispositional goal orientations and a variety of outcome variables. Researchers have examined the relationship of goal orientations and belief systems (Ommundsen, 2001a), cognitive content (Roberts, 1999), enjoyment (Treasure & Roberts,

2001), and emotional responses in athletes (Ntoumanis, Biddle, & Haddock, 1999). Task orientation is positively related to a belief that hard work is a cause of success in sport and the belief that sport should foster mastery, cooperation, and social responsibility (Duda & Nicholls, 1992; Duda & White (1992) ; Lochbaum & Roberts, 1992, 1993; Roberts, 1993; Roberts & Ommundsen, 1996). High task orientation is also related to increased enjoyment (Ntoumanis & Biddle, 1999), satisfaction (Jackson & Roberts, 1992, Ntoumanis & Biddle, 1999), intrinsic motivation (Duda, Chi, Newton, Walling & Catley, 1995), and flow (Jackson & Roberts, 1992).

Ego orientation is positively correlated with a belief that high ability and deceptive strategies produce success (Duda & Nicholls, 1992; Roberts, Treasure, & Kavussanu, 1996). Researchers (Duda, 1989; Roberts & Ommundsen, 1996) also have demonstrated that ego orientation is linked to a belief that sport is about enhancing popularity, increasing wealth, and achieving greater social status.

Sport researchers (Hall & Kerr, 1997; Newton & Duda, 1995; Ntoumanis & Biddle, 1999) have also demonstrated significant links between goal orientations and the experience and response to stress in sport. Ntoumanis, Biddle, and Haddock (1999) established links between goal orientations and the type of solution strategy employed when experiencing stress or anxiety. They found that task orientation was positively correlated with problem-solving coping strategies, including trying hard, seeking social support and limiting competitive activities. Conversely, ego orientation was positively correlated with the use of emotion-focused coping strategies, including becoming upset, losing their composure, and negative emotional outbursts. Additionally, Hall, Kerr, and Matthews (1998) revealed that

athletes who demonstrated strong ego orientation reported greater neurotic/maladaptive perfectionism than did athletes with high task orientation.

Coach Hypothesis 2 (CH-2): Coaches with incremental learning beliefs about talent and task orientations should have a positive and significant relationship with servant leadership characteristics. Coach Hypothesis 3 (CH-3): Coaches with entity learning beliefs and ego orientations should have a significant negative relationship with servant leadership characteristics.

Consequences of Servant Leadership

Motivational Climate

Motivational climate (MC) is conceptualized as a key mediator between coaches' leadership behaviors and athletes' psychosocial outcomes. This section will review MC concepts and characteristics, measurement of MC, general MC research, and sport MC research. The behaviors coaches engage in help to create a motivational climate, which appears to be a critical element in influencing need satisfaction and motivation of athletes (Amorose, 2003). Motivational climate is identified as the definition of success and failure emphasized in a social environment, such as a classroom or an athletic team (Ames, 1992). Perceptions of MC are influenced by the nature of relationships with important social agents in the sport setting (Smith, Balaguer & Duda, 2006). In sport settings, perceived motivational climate is primarily based upon the climate created by the coach (Newton, Duda, & Yin, 2000; Seifriz, Duda, & Chi, 1992; Walling, Duda, & Chi, 1993). For example, nearly half of the items on the PMCSQ-2 (Newton et al., 2000) refer specifically to the coach, and therefore respondents are encouraged to use the coach as the primary reference point in judging the prevailing motivational climate on their teams. Smith, Balaguer and

Duda (2005) explain that coaches are directly involved in and impact the sport experiences of athletes and therefore are appropriately targeted in sport motivational climate research.

Concept and Characteristics

Achievement goal theory (Ames, 1992; Nicholls, 1989) describes situational and individual difference factors that shape thoughts, emotions, and behaviors within achievement settings. At the personality level, researchers (Nicholls, 1989; Dweck, 1986) emphasize ability beliefs and motivational orientations as dispositions that define success. Smith, Cumming, and Smoll (2008) note that in addition to these approach-oriented achievement states, performers are motivated to avoid perceived failure. As a result of their achievement experiences, competitors develop achievement goal orientations, or dispositions to approach or avoid specific situations (Smith, Ciarrochi, & Heaven, 2008). Avoidance motivation is typically measured by performance anxiety or fear of failure measures (e.g., Conroy, Willow, & Metzler, 2002; Smith, Smoll, & Schultz, 2006).

Researchers (Ames & Archer, 1988; Dweck, 1999; Nicholls, 1989) support the notion that achievement goals are also influenced by situational factors, particularly the motivational climate established by the pattern of normative influences, evaluative standards, rewards and sanctions, interpersonal interactions, and values communicated within the achievement environment. Similar to achievement goal states, motivational climate also is described in task (mastery) or ego (performance) terms. Ames (1992) described a mastery/task climate as one in which teachers, coaches, or parents define success in terms of self-improvement, task mastery, maximum effort and dedication, whereas a performance/ego climate promotes social comparison as a basis for success judgments. Although motivational climate is a multi-faceted construct, a mastery/task climate is

characterized by the leader's emphasis on self-referenced improvement, effort, and a cooperative learning environment, while a performance/ego climate is marked by an emphasis on outperforming others, a focus on outcome, preferential attention to top performers, and punishment of mistakes (Ames & Archer, 1988; Dweck, 1986; 1999).

Research in both educational and sport settings indicates that motivational climate is related to a variety of meaningful variables, including achievement goal orientations (Pensgaard & Roberts, 2000), intrinsic motivation (Newton, Duda, & Yin, 2000), enjoyment (Balaguer, Duda, & Crespo, 1999), ability beliefs (Ommundsen, 2001a), persistence in the face of adversity (Harwood, Spray, & Keegan, 2008), perceived ability (Balaguer et al., 2002), and emotional responses such as anxiety (Treasure & Roberts, 2001).

Measurement of motivational climate. Utilizing the theoretical contributions by Ames and Archer (1988), Duda (1987), Dweck (1986), Epstein (1989), and Nicholls (1989), in educational settings, Seifriz, Duda, and Chi (1992) developed the Perceived Motivational Climate in Sport Questionnaire (PMCSQ) to assess the motivational climate created by coaches in athletic settings. In an attempt to improve the psychometric properties of the PMCSQ and to measure the multiple aspects of mastery/task and performance/ego climates, particularly underlying facets of the mastery/task climate (i.e., cooperative learning, effort-improvement emphasis, and important roles for all participants) and performance/ego climate (i.e., intrateam rivalry, unequal recognition, and punishment for mistakes), Newton, Duda, and Yin (2000) developed a revised 33-item PMCSQ-2. The PMCSQ-2 proved to be a major psychometric improvement over the original PMCSQ and has shown itself to be a reliable and valid measure of motivational climate in sport settings (Chi, 2004; McArdle & Duda, 2002). Smith, Cumming, and Smoll (2008) furthered motivational climate work by

adapting the PMCSQ-2 to a younger audience and shrinking the overall number of items. The Motivational Climate Scale for Youth Sports (MCSYS) is a 12-item measure that has demonstrated acceptable reliability and strong factorial and construct validity (Smith, Cumming, & Smoll, 2008). Due to its strong psychometric properties and overall brevity, the MCSYS used in this research project to assess perceived motivational climate.

General research on leadership and motivational climate. Much of the research on motivational climate is conducted in either the academic classroom (Ames, 1984) or physical education class settings (Papaioannou, 1995). According to Duda (2001), in a mastery/task motivational climate, students tend to adopt adaptive achievement strategies such as selecting challenging tasks, giving maximum effort, persisting in the face of setbacks, and taking pride in personal improvement. Conversely, when teachers create a performance/ego climate, they tend to give differential attention and positive reinforcement to students who are most competent and instrumental to success, and skill development is deemed more important to winning than to personal improvement and self-realization (McArdle & Duda, 2002). They are also more likely to respond to mistakes and poor performance with punitive responses. Several studies (Cury et al. 1996; Dorobantu & Biddle, 1997; Spray, 2000) conducted in physical education classes have shown that motivational climate is a stronger predictor of outcomes such as intrinsic motivation and voluntary activity participation than are students' achievement goal orientations.

Papaioannou and colleagues (2004) studied achievement goal changes in 200 elementary, middle, and high school physical education classes taught by 67 teachers over the course of an academic year. Using a motivational climate questionnaire designed for physical education classes, they found that students' mastery/task climate ratings were

associated with increases in their task orientations, and performance/ego climate ratings were positively related to changes in students' ego orientations.

A paucity of research has examined servant leadership and motivational climate, but researchers (Mageau & Vallerand, 2003; Ommundsen & Kvalo, 2007) in sport and physical education have examined leadership characteristics that are related to the structuring of motivational climate. Ommundsen and Kvalo (2007) investigated the role of teacher behaviors on student outcomes in a physical education setting and demonstrated a positive relationship between teachers who subscribed to autonomy supportive leadership behaviors and a mastery/task motivational climate. According to Reeve (1998), an autonomy supportive leader supports freedom, enables and encourages initiative and choice in followers, and adopts the followers' perspective when solving problems or offering advice. Conversely, Black & Deci (2000) describe a leader who is controlling as one who is directive, authoritarian and pressuring.

Sport research on leadership and motivational climate. The primary factor in creating a motivational climate on a team is assumed to be the coach (Ames, 1992). Pensgaard and Roberts (2002) supported this premise in a study of elite athletes who emphasized that the coach is instrumental and needed for support and confidence. They also found that athletes preferred a coach who structured a mastery/task motivational climate and did not focus on winning.

Limited research has focused on what leads coaches to structure the environment as mastery/task or performance/ego. Research has shown that a coach's personal motivational orientation will influence the climate they create, with coaches higher in task-orientation promoting goals that are more indicative of a mastery/task motivational climate and coaches

who are more ego-oriented emphasizing outcomes consistent with a performance/ego motivational climate.

Sport research (Smith, Smoll, & Cumming, 2009) has established strong links between coaches' behaviors and motivational climate. Mageau and Vallerand (2003) examined coaches' autonomy-supportive interpersonal style and found coaches who embodied these characteristics allowed their athletes more choices, provided meaningful rationale for rules and activities, acknowledged athletes' feelings, provided opportunities for athletes' initiative, utilized noncontrolling performance feedback, avoided overt control, and minimized behaviors that promoted ego-involvement.

Self-determination theory (Deci & Ryan, 2004) looks at the motivational environment and the role of the leader in subscribing to autonomy-supporting or controlling behaviors. According to Deci and Ryan (2004), an autonomy supportive leader (e.g., coach, teacher, parent) recognizes others thoughts and feelings; encourages choice, self-initiation, and self-regulation; and decreases pressure and behaviors used to control others, whereas leaders who subscribe to a controlling interpersonal style, pressures others to think, feel, and act how the leader wants them to act. These behaviors have been shown to impact the motivational climate, as well as the motivation of athletes in sport contexts (Amorose & Anderson-Butcher, 2007; Coatsworth & Conroy, 2009; Mageau & Vallerand, 2003).

Servant leadership is consistent with characteristics of an autonomy-supportive interpersonal style. SL embodies characteristics determined in sport leadership research to be valued by athletes (Chelladurai, 1993; Scott, 1997, Westre, 2003). According to Westre (2003), athletes prefer coaches who are democratic rather than autocratic and who consider

players' opinions and feelings, seek athlete input regarding team decisions, provide positive feedback and recognition, and show sensitivity to players' needs.

Coach-Athlete Hypothesis 1 (CAH-1): Higher levels of Servant Leadership should be associated with greater mastery-oriented motivational climate perceptions. Coach-Athlete Hypothesis 2 (CAH-2): Lower levels of Servant Leadership should be associated with greater athlete performance-oriented motivational climate perceptions. Athlete Hypothesis 3 (AH-3): Athletes' perceptions of the coaches' servant leadership should be positively and significantly related to the mastery climate. Athlete Hypothesis 8 (AH-8): Athletes' perceptions of the coaches' servant leadership should be negatively and significantly related to the performance climate.

Motivational Climate and Impact on Athlete Psychosocial Outcomes

This section examines literature on the relationship between motivational climate and athlete psychosocial outcomes. Specifically, literature on MC and eight psychosocial outcomes will be examined, including: (a) general outcomes, (b) motivational orientations, (c) intrinsic motivation, (d) ability beliefs, (e) trait self-confidence, (f) satisfaction, (g) ability to cope with stress, and (h) trait anxiety.

Motivational Climate and General Outcomes

According to Harwood, Spray and Keegan (2008), motivational variables linked to motivational climate include (a) ability beliefs; (b) beliefs about the purpose of sport; (c) positive affect-enjoyment, intrinsic interest, and satisfaction; (d) negative affect-pressure, tension, anxiety, distress, and worry; (e) perceived competence; (f) adoption of learning versus competitive strategies; (g) goal orientations; (h) moral development; (i) motor learning and development; and (j) the experience of flow. In summary, Harwood, Spray, and

Keegan (2008) believe that a strong case can be made “that the creation of an environment high in mastery cues is likely to produce numerous adaptive and desirable consequences for the participation and development of sport performers. In contrast, when participants perceive performance climates, positive or adaptive motivational patterns are rarely displayed. In fact, perceived performance climates are often associated with undesirable beliefs and patterns of behavior” (p. 178).

Seifriz et al. (1992) examined how high school basketball players perceived the motivational climate their coaches created and found that perceptions of a mastery/task environment promoted higher enjoyment and belief in the importance of effort and cooperation for goal attainment than did a performance/ego climate. Conversely, a performance/ego climate is shown to create pressure and tension and reduce positive affect (Balaguer, Duda, & Crespo, 1999; Boixados, Cruz, Torregrosa & Valiente, 2004; Kavussanu & Roberts, 1996; Liukkonen, Telama & Biddle, 1998; Parish & Treasure, 2003; Treasure & Roberts, 2001; Whitehead, Andree, & Lee, 2004).

Additionally, researchers have shown links between a mastery/task environment and greater perceived competence (Balaguer, Duda, Atienza & Mayo, 2002), respect for the game (Gano-Overway, Guivernau, Magyar, Waldron, & Ewing, 2005), improved motor learning (Valenti & Rudisill, 2004a; 2004b), and flow (Kowal & Fortier, 1999). Walling, Duda, and Chi (1993) also demonstrated that individuals’ perceptions of motivational climate influence their goals, attitudes, and behaviors in achievement focused activities. Numerous studies (Green & Lepper, 1974; Weinberg, 1984; Weiss, Bredemeier, & Shewchuk, 1985) have also demonstrated the link between intrinsic motivation and enhanced task importance, effort, performance, and enjoyment. The motivational climate in

which an activity is conducted can impact subsequent motivational cognitions and behaviors (Duda, Fox, Biddle, & Armstrong, 1992; Duda & Nicholls, 1992; Nicholls, 1984). For example, Weiss and colleagues (1985) demonstrated that motivational climate impacts the importance placed on a task and the attainment value assigned to it.

Motivational Climate and Motivational Orientations

In both academic and sport settings (Ames 1984, 1992; Seifriz, Duda, & Chi, 1992), motivational climate can impact a wide range of cognitive, affective and behavioral outcomes, particularly achievement goal orientations. Ames (1992) found the social environment created in achievement settings can affect the criteria used for defining success at a given moment. When individuals perceive the environment stresses competition with others, they will tend to adopt an ego-orientation in that situation (Ames & Archer, 1988; Pensgaard & Roberts, 2000). On the other hand, if individuals perceive the environment focuses on learning and personal skill mastery, and they are rewarded for effort, they are more likely to utilize a task orientation in that situation.

Correlational studies of adolescents in physical education and sport contexts demonstrated significant positive relationships between a mastery/task climate and a task-orientation and between a performance/ego climate and an ego-orientation (Carr, 2006; Duda, 2005; Roberts, Treasure & Conroy, 2007). Several longitudinal studies have examined the changes in goal orientations over time (Conroy & Coatsworth, 2006; Papaioannou et al., 2004; Smith, Smoll, & Cumming, 2009). Papaioannou and colleagues (2004) examined goal orientations and perceived motivational climate of physical education students after an academic year. They found that mastery/task climate ratings were associated with increases in students' task orientations, and performance/ego climate ratings

were associated with increases in students' ego orientations. Conroy and Coatsworth (2006) were unable to replicate these findings in a shorter-term youth sport setting. They did not find a relationship between mastery/task climates and performance/ego climates and the goal orientations of athletes during a 6-week swimming season. Smith, Smoll, and Cumming (2009) conducted a similar study to Conroy and Coatsworth (2006), but expanded the time interval to 12 weeks, and found that the mastery/task climate scores were positively related with increases in task-orientation, and performance/ego climate scores were positively related with increases in ego-orientation.

Motivational Climate and Intrinsic Motivation

Deci and Ryan (1985, 2000) indicated that environmental factors, including motivational climate, influence the intrinsic motivation of athletes. Deci and Ryan (1985, 2000) developed self-determination theory to describe intrinsic motivation. Their continuum ranges from intrinsic motivation on one end to amotivation on the opposite end, with four types of extrinsic motivation in between that range from most to least self-determining. They describe three needs that must be met for individuals to be intrinsically motivated, including: competence, autonomy, and relatedness. Consistent with Deci and Ryan's (1985) self-determination theory, researchers (McArdle & Duda, 2002; Nicholls, 1989; Ryan & Deci, 2000) posit that a mastery/task climate best meets these three needs and, in turn, enhances intrinsic motivation, while an ego climate may undermine intrinsic motivation. Additional research has supported this link (Gagne, Ryan, & Bargmann, 2003; Seifriz, Duda, & Chi, 1992; Smith, Cumming, & Smoll, 2008; Treasure, Standage, & Lochbaum, 1999).

Sport researchers (Balaguer, Duda, & Crespo, 1999; Boixados, Cruz, Torregrosa & Valiente, 2004; Digelidis, Papaidannou, Lapariduis, & Christodoulidis, 2003; Dorabantu & Biddle, 1997; Kavussanu & Roberts, 1996; Liukkonen, Telama & Biddle, 1998; Newton & Duda, 1999; Newton, Duda, & Yin, 2000; Parish & Treasure, 2003; Seifriz, Duda, & Chi, 1992; Treasure & Roberts, 2001; Whitehead, Andree, & Lee, 2004) have established a positive link between a perceived task climate and greater intrinsic motivation and enjoyment. Perceptions of a mastery climate positively predict intrinsic motivation, while perceptions of a performance climate negatively relate to intrinsic motivation and positively relate to both amotivation and extrinsic motivation (Goudas, 1998; Kavussanu & Roberts, 1996; Newton & Duda, 1999; Newton, Duda, & Yin, 2000; Petherick & Weigand, 2002; Seifriz, Duda, & Chi, 1992; Standage, Dudad, & Ntoumanis, 2003; Theeboom, DeKnop, & Weiss, 1995).

Motivational Climate and Ability Beliefs

Researchers (Biddle et al., 2003) have examined the relationship between incremental beliefs and achievement goal orientations, as well as achievement goals in work settings (Vandewalle, 1997), and educational settings (Elliott & McGregor, 2001). Biddle and colleagues (2003) demonstrated a positive relationship between task orientation and incremental beliefs, as well as ego orientation and entity beliefs. Vandewalle (1997) and Elliot and McGregor (2001) determined that incremental beliefs were positively related to mastery goals, while entity beliefs demonstrated a positive relationship with performance goals.

Few studies have examined the relationship between incremental beliefs and perceived motivational climate. Elliot (1997) posited a trichotomous model to explain the

relationship among antecedents to achievement goals and perceived competence in a given setting. This model recognizes the role of perceived motivational climate and implicit beliefs on achievement goals, yet does not specifically examine the relationship between these two variables. Cury, Fonseca, Rufo, and Sarrazin (2002) utilized Elliot's model and reported similar findings in a physical education setting, with mastery goals positively associated with incremental beliefs and a perceived mastery/task climate and performance goals related to entity beliefs and a perceived performance/ego climate.

Ommundsen (2001a) also examined the relationship between implicit beliefs and perceived motivational climate in physical education classes and results indicated learning environments that are perceived to emphasize competition and social comparison and to raise concern about one's ability seem to induce fixed entity theories of ability. Conversely, a climate in which effort, progress and teacher support of all students is seen as salient seems to generate incremental beliefs.

Motivational Climate and Self Confidence

A paucity of research has examined the relationship between motivational climate and self-confidence. Magyar and Feltz (2003) examined perceived motivational climate and sources of self-confidence among competitive female adolescent volleyball players using Vealey, Hayashi, Garner-Holman, and Giacobbi's Sources of Self Confidence Questionnaire (SSCQ), and they defined 3 subscales as mastery sources of confidence and 3 subscales as performance sources of confidence. Results demonstrated that perceptions of a mastery climate were positively correlated with mastery sources of confidence (i.e., mastery, physical/mental preparation, and vicarious experience). However, contrary to their hypothesis, perceptions of a performance climate demonstrated a significant negative

relationship with coaches' leadership sources and failed to exhibit a significant positive relationship with any of the hypothesized sources of confidence.

Vosloo, Ostrow, and Watson (2009) examined the relationship between achievement goals and motivational climate and its impact on anxiety and self-confidence among competitive high school swimmers. Results failed to demonstrate a relationship between these variables, but athletes who had achievement goals that were compatible with their motivational climate reported higher levels of self-confidence than did those whose goals and climate were incompatible. Vosloo, Ostrow and Watson (2009) suggest this is due to the coaches creating climates that were perceived by the athletes to support and reinforce similar beliefs to those they possessed.

Motivational Climate and Satisfaction

Other researchers (Ames & Archer, 1988; Seifriz et al., 1992) have also confirmed the importance of motivational climate and its influence on satisfaction. Balaguer, Duda, Atienzer, & Duda (2002) reported findings that perceptions of a mastery/task climate predicted greater performance improvement and satisfaction, as well as more positive views of the coach, compared with performance/ego climate.

Motivational Climate and Anxiety and Coping

Previous research (Newton & Duda, 1993; Walling, Duda, & Chi, 1993) has demonstrated that performance/ego climates are positively related to performance anxiety, whereas mastery/task climates are negatively related to performance anxiety. According to McArdle and Duda (2002) in a mastery climate, normative pressures are minimized, mistakes are accepted as learning opportunities, and because effort is emphasized, athletes are less likely to view the demands of the situation as outweighing their personal resources.

Research (Cecchini, Gonzalez, Carmona & Contreras, 2004; Jackson, Kimiecik, Ford, & Marsh, 1998) has shown that there is a relationship between motivational variables and psychosocial outcomes, including pre-competitive anxiety and flow. Specifically, a mastery/task climate reduces anxiety by limiting social comparisons, emphasizing factors that are controllable, (e.g., effort) and by focusing on a supportive team environment (McArdle & Duda, 2002; Smith, Cumming, & Smoll, 2008; Smith, Smoll, & Cumming, 2007; Vazou, Ntoumanis, & Duda, 2005). Smith, Smoll, and Cumming (2007) also reported reduced anxiety levels in young athletes as a result of a coach-training program aimed at creating a mastery/task motivational climate. Researchers (Escarti & Guterrez, 2001; Newton & Duda, 1999; Newton, Duda, & Yin, 2000; Ntoumanis & Biddle, 1998; Papaioannou & Kouli, 1999; Pensgaard & Roberts, 2000; Walling, Duda, & Chi, 1993) have also demonstrated that a perceived mastery/task environment reduces negative affective experiences, while a perceived performance/ego climate fosters anxiety, worry, distress, and dissatisfaction with the team.

Athlete Hypothesis 1 (AH-1): Perceptions of a mastery motivational climate should be positively and significantly related to greater ability to cope with stress, sport confidence, athlete satisfaction, intrinsic motivation, and incremental learning beliefs. Athlete

Hypothesis 2 (AH-2): Perceptions of a mastery motivational climate should be negatively and significantly related to sport anxiety, ego orientation, and entity learning beliefs. Athlete

Hypothesis 6 (AH-6): Perceptions of a performance motivational climate should be negatively and significantly related to coping with stress, sport confidence, athlete satisfaction, intrinsic motivation, and incremental learning beliefs. Athlete Hypothesis 7

(AH-7): Perceptions of a performance motivational climate should be positively and significantly related to sport anxiety, ego orientation, and entity learning beliefs.

Servant Leadership and Athlete Outcomes

A paucity of research examines the specific relationship between coach variables and athlete psychosocial outcomes. In one of the few studies examining these relationships, Hammermeister and colleagues (2008) demonstrated a positive relationship between servant leadership and athlete outcomes, including: task orientation, intrinsic motivation, self-confidence, satisfaction, and ability to cope with stress. Conversely, they demonstrated a negative relationship between servant leadership and anxiety. Presumably, servant leadership of coaches, as influenced by emotional intelligence, ability beliefs, and motivational orientation, should possess similar relationships with athlete psychosocial outcomes, as does the motivational climate.

Coach-Athlete Hypothesis 3 (CAH-3): Higher levels of servant leadership should be positively and significantly related with higher levels of intrinsic motivation, incremental learning beliefs, self-confidence, satisfaction, and abilities to cope with stress. Coach-Athlete Hypothesis 4 (CAH-4): Higher levels of servant leadership should be negatively and significantly related with athletes' ego orientation, entity learning beliefs, and sport anxiety. Athlete Hypothesis 4 (AH-4): Athletes' perceptions of coaches' servant leadership should be positively and significantly related to coping with stress, sport confidence, athlete satisfaction, intrinsic motivation, incremental learning beliefs, and task motivation. Athlete Hypothesis 5 (AH-5): Athletes' perceptions of coaches' servant leadership should be negatively and significantly related to sport anxiety, ego orientation, and entity learning beliefs (see Appendix 5 for a listing of all hypotheses).

CHAPTER 2: Method

Participants

The population for this study was comprised of two samples. The first sample was 30 club soccer coaches of female under-15 (U15) to under-19 (U19) teams from across the United States. The coaches were selected through personal contacts of the researcher as well as systematic email recruitment of club coaches whose teams participated in two tournaments: one in the Pacific Northwest and one in the Southwest. The second sample consisted of 260 female club soccer players, with players from each team in which the coach agreed to participate in the study as part of Sample 1.

Instrumentation

Twelve different self-report instruments were used to collect data in this study. Three instruments assessed exclusively coach data, seven instruments were completed only by athletes and two were used to collect data from both coaches and athletes.

Soccer Club Coaches' Demographic and Background Questionnaire (SCCDBQ). The SCCDBQ was developed for this study to assess specific background and demographic information that includes: age, gender, years coaching, license level, and length of tenure with their current team.

Wong and Law Emotional Intelligence Scale (WLEIS). The WLEIS was developed by Wong and Law (2002) to measure emotional intelligence. This 16-item instrument is comprised of four subscales (i.e., four items each), including: self-emotional appraisal (SEA), others' emotional appraisal (OEA), self-regulation of emotion (RoE), and use of emotion to facilitate performance (UoE). Items are scored on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Each subscale is scored separately,

with scores ranging from 4 to 28, and an overall score is calculated by summing the four subscale scores (i.e., range 16-112). Wong and Law (2002) reported factor analytic results supporting the four-factor structure of the WLEIS and good internal consistency, (i.e., alpha coefficients ranging from .83 to .90 ($M = 80$)). The authors also report satisfactory convergent, discriminant, and incremental validity, as well as second-order confirmatory factor analysis.

The Conceptions of the Nature of Athletic Ability Questionnaire-Version 2 (CNAAQ-2). The CNAAQ-2 (Biddle et al., 2003) examines incremental and entity beliefs of participants in sport contexts. The questionnaire includes 12 items that represent four 3-item subscales. Beliefs about athletic ability are believed to fall into two major categories, entity and incremental beliefs. Entity beliefs are assessed by two 3-item subscales (i.e., stable and natural gift), and incremental beliefs are measured by two similar 3-item subscales assessing learning and improvement. Items are scored on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The entity score is determined by summing the natural gift and stable subscales and the incremental score is determined by summing the learning and improvement subscales. Subscale scores range from 3 to 15, with dimension scores range from 6 to 30. This 12-item beliefs about athletic ability measure was developed to account for the psychometric weaknesses in the original version of the questionnaire, including the removal of general and specific subscales as well as problematic items (Biddle et al., 2003). Biddle and colleagues demonstrated an acceptable level of internal consistency for the entity and incremental dimensions, with alpha coefficients of .74 and .80, respectively. They also demonstrated solid convergent and discriminant validity.

Task and Ego Orientation in Sport Questionnaire (TEOSQ). Duda and Nicholls, (1992) developed the 13-item TEOSQ to measure goal orientations or how individuals define success in terms of performance improvement (i.e., task) or outcome/social comparison (i.e., ego) in sport settings. The instrument is comprised of two subscales, a 7-item task subscale and a 6-item ego subscale. The items are rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores demonstrating higher levels of task- or ego-involvement. A mean score is generated for each subscale, to equate for different subscale lengths, with subscale scores ranging from 1 to 5. The TEOSQ has been shown to be reliable and valid as a measure of motivational orientation in physical domains (Duda, 1996). Alpha reliability coefficients across different samples averaged .79 for the task subscale and .81 for the ego subscale (Duda & Whitehead, 1998). The TEOSQ has also demonstrated acceptable factorial, concurrent, and predictive validity (Duda, Fox, Biddle, & Armstrong, 1992; Duda & Whitehead, 1998).

Revised Servant Leadership Profile for Sport (RSLP-S). The RSLP-S was developed by Hammermeister et al. (2008) as a sport modification of the Revised Servant Leadership Profile (Page & Wong, 2000). The RLSP-S assesses characteristics of servant-leadership possessed by coaches, and it consists of 22-items rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The questionnaire consists of three subscales, including: 11-item trust/inclusion; 6-item humility; and 5-item service subscales. Because of unequal subscale length, a mean score is calculated for each subscale ranging from 1 to 7. Factor analysis conducted by Hammermeister and colleagues identified only 3 of the original 7 RLSP factors were relevant in sport. Alpha coefficients for the three factors

ranged from .85 to .94, and initial sport research demonstrated solid preliminary validity for this instrument.

Club Soccer Players' Demographic and Background Questionnaire (CSPDBQ).

The CSPDBQ was developed for this research study to examine background characteristics of high school club soccer players. The questionnaire is comprised of basic demographic and background questions, including: age, gender, years of experience in sport, highest level of competition, highest achievement, tenure with current team, and tenure with current coach.

Athletic Coping Skills Inventory (ACSI-28). Smith, Smoll, Schutz, and Ptacek (1995) developed the ACSI-28, which measures athletes' use of seven coping skills during athletic performance, including: (1) coping with adversity, (2) peaking under pressure, (3) goal setting/mental preparation, (4) concentration, (5) freedom from worry/confidence, (6) achievement motivation, and (7) coachability. The ACSI-28 consists of 28 items rated on a 4-point Likert scale ranging from 1 (almost never) to 4 (almost always), with subscale scores ranging from 4 to 16. This research used only the coping with adversity and peaking under pressure subscales. Smith and colleagues (1995) report test-retest reliability coefficients range from .47 to .87 and alpha internal consistency coefficients range from .62 to .86. Smith and colleagues (1995) also report factorial validity for the ACSI-28 through good confirmatory factor analysis fit indices, and they also report solid convergent and discriminant validity and promising predictive validity.

Sport Confidence Inventory (SCI). The SCI was developed by Vealey (2002) to assess three types of sport confidence, including: physical skills and training, cognitive efficacy, and resilience. The SCI asks athletes to rate their athletic abilities in relation to

their perceptions of confidence about success. The SCI is a 14-item, self-report questionnaire comprised of a 5-item physical skills and training subscale, a 5-item cognitive efficacy subscale, and a 4-item resilience subscale. Responses are rated on a 7-point Likert scale ranging from 1 (can't do it at all) to 7 (totally certain), and a mean score is calculated for each of the subscales to equate for unequal subscale length, resulting in subscale scores ranging from 1 to 7. The SCI has acceptable internal consistency, with alpha reliability coefficients ranging from .84 to .87 (Vealey, 2002) with each type of confidence having also been shown to significantly relate to competitive anxiety and athletic coping skills. Solid preliminary validity has been demonstrated for the SCI.

Athlete Satisfaction Questionnaire (ASQ). The Athlete Satisfaction Questionnaire (ASQ) was developed by Riemer and Chelladurai (1998) and assesses various dimensions of athletes' satisfaction in sport domains. This 56-item instrument is comprised of 15 subscales (ranging from 3-6 items), including: individual performance, team performance, ability utilization, strategy, personal treatment, training and instruction, group's task contribution, group's social contribution, team's ethics, team integration, personal dedication, budget, medical personnel, academic support services, and external agents. This research only used team and individual performance subscales. Items are rated on a 7-point Likert scale from 1 (not at all satisfied) to 7 (extremely satisfied), resulting in subscale scores ranging from 3 to 21. The ASQ has been shown to be a psychometrically reliable and valid instrument in sport domains, with alpha reliability scores ranging from .78 to .95 (Riemer & Chelladurai, 1998; Riemer & Toon, 2001). The authors also demonstrated acceptable construct validity through confirmatory factor analysis, as well as preliminary predictive validity evidence (Riemer & Chelladurai, 1998).

Sport Motivation Scale-6 (SMS-6). The SMS-6 developed by Mallett et al. (2007) improved upon the factorial and discriminant validity the original Sport Motivation Scale (Pelletier et al., 1995) documented in previous research (Martens & Webber, 2002). The SMS-6 examines the reasons athletes participate in sport and is comprised of six 4-item motivation subscales, including: amotivation, external regulation, introjected regulation, identified regulation, integrated regulation, and intrinsic motivation. This 24-item self-report measure rates items on a 7-point Likert scale, ranging from 1 (does not correspond at all) to 7 (corresponds exactly), with subscale scores ranging from 4 to 28. This research utilize 5 of the 6 subscales, excluding amotivation. Mallet and colleagues (2007) report satisfactory internal consistency and validity. Alpha reliability coefficients ranged from .70 to .86, with a mean of .78, whereas solid construct validity was reported based on confirmatory factor analysis as well as concurrent validity.

The Sport Anxiety Scale-2 (SAS-2). The SAS-2 was developed by Smith, Smoll, Cumming, and Grossbard (2006) to expand the Sport Anxiety Scale (Smith, Smoll, & Schultz, 1990) to younger sport populations. The instrument is a multidimensional measure of cognitive and somatic trait anxiety in sport performance settings. The SAS-2 is a 15-item self-report measure rated on a 4-point Likert scale from 1 (not at all) to 4 (very much). It consists of three five-question subscales, including: somatic, worry, and concentration/disruption. The SAS-2 is scored by summing scores for each subscale, with subscale scores ranging from 5 to 20. Smith et al. (2006) report higher CFA factorial validity fit indices than the original instrument as well as good construct validity.

Perceived Motivational Climate in Sport Questionnaire-2 (PMCSQ-2). The PMCSQ-2 was developed by Newton, Duda, & Yin (2000) to assess athletes' perceptions of

the task and ego climates present in athletic contexts. The 29-item PMCSQ-2 consists of two higher-order dimensions comprised of a 15-item mastery/task (TI) and a 14-item performance/ego (EQ) climate. Each dimension is comprised of three subscales, including: 7-item cooperative learning, 4-item effort, and 4-item important role subscales for TI climate and 3-item intra-team rivalry, 6-item unequal recognition, and 5-item punishment for mistakes subscales comprising EQ climate. Items are rated on a 5-point Likert-type scale from 1 (strongly disagree) to 5 (strongly agree), with subscale scores calculated as means to equate for unequal subscale length, yielding subscale scores from 1 to 5 and climate scores between 3 and 15. Newton and colleagues (2000) report satisfactory internal consistency and reliability. Internal consistency alpha coefficients of .87 were demonstrated for mastery/task climate and .89 for performance/ego climate. Additional research has demonstrated acceptable internal consistency alpha scores (Balauger et al., 1997; Cervello & Santos-Rosa, 2001; Cervello et al., 2007). Newton and colleagues (2000) also report solid validity based on a reasonable model fit shown by confirmatory factor analysis and good concurrent validity.

Procedure.

Following IRB approval (i.e., #IRB00000843) of the study, permission was obtained by contacting coaches individually to solicit their participation and gain access to their teams. Coaches were asked at one of two soccer tournaments to participate in the study and a time was arranged to speak with their players and players' parents in person. Once parents provided consent, the athletes completed the surveys and the parental consent forms and surveys from the athletes were collected. Only athletes with parental permission completed the survey, and players gave their assent through a similar informed consent form at the

beginning of the questionnaire. Athletes answered the 115-item comprehensive questionnaire comprised of nine separate instruments, including: (a) the Club Soccer Player Demographic and Background Questionnaire; (b) two subscales of the Athletic Coping Skills Inventory-28 (ACSI-28); (c) the Sport Confidence Inventory; (d) the Conceptions of the Nature of Athletic Ability Questionnaire-2 (CNAAQ-2); (e) the Task and Ego Orientation in Sport Questionnaire (TEOSQ); (f) two subscales of the Athlete Satisfaction Questionnaire (ASQ), (g) five subscales of the Sport Motivation Scale-6 (SMS-6), (h) the Sport Anxiety Scale-2 (SAS-2) and (i) the Perceived Motivational Climate in Sport Questionnaire-2 (PMCSQ-2). The 115-item athlete questionnaire took between 15 and 30 minutes to complete.

The coaches also completed a comprehensive 60-item questionnaire comprised of five separate instruments, including: (a) the Soccer Coach Demographic and Background Questionnaire (CSCDBQ); (b) the Wong and Law Emotional Intelligence Scale (WLEIS); (c) the Conceptions of the Nature of Athletic Ability Questionnaire-Version 2 (CNAAQ-2); (d) the Task and Ego Orientation in Sport Questionnaire (TEOSQ), and (e) the Revised Servant Leadership Profile for Sport (RSLP-S). Completion of the 60-item coach questionnaire required 10 to 20 minutes.

Data Analysis.

The study examined relationships between coaches' demographic and leadership characteristics, motivational climate and athlete psychosocial outcomes. Basic demographic data (i.e., means, standard deviations) were computed for 30 coaches and 260 athletes, and correlation results among all variables were computed separately for coaches and athletes. Instrument internal consistency was examined using alpha reliability coefficients for all

subscales. Bivariate correlations were utilized to investigate relationships hypothesized between model variables which tested Coach Hypotheses 1 and 2 and Athlete Hypotheses 1-8.

For within coach analyses, OLS regression results examined predictors of coach self-reported servant leadership (Coach Hypotheses 1 and 2). Covariates included age, coaching certificate level, years coaching the team and gender. Key predictors were divided into three sets: (a) EQ, (b) incremental beliefs about talent and task orientation, and (c) entity beliefs about talent and ego orientation. A hierarchical regression strategy was used in which the demographic predictors were entered as a set into the model and with each of three sets of coach characteristics entered as a second set. An F test was used to test whether the second set of predictors entered into the model explained statistically significant incremental variance in coaches' servant leadership above and beyond the initial predictor variables.

For analysis of athlete perceptions of mastery and performance climate and their own self-perceived status, a hierarchical linear modeling (HLM) approach was used to account for the variation in participants' outcomes due to the potential similarity in scores as a result of being an athlete with a particular coach. The following variables were entered sequentially: Model 1: intercept only; Model 2: athlete status characteristics, Model 3: athlete perceptions of coach servant leadership; Model 4: coach status characteristics; Model 5: coach self-report servant leadership. This HLM modeling statistical approach avoids the potential increased chance of detecting a statistically significant difference due to the decreased standard error resulting from non-independence in scores (Kreft & De Leeuw, 1998). For example, assuming 25 athletes per coach and 10% of the variation in athlete

scores being due to their particular coach, the actual operating alpha level would be .29 for statistical tests performed at the nominal level of .05 (Hox, 2002).

To best account for the within-coach correlations in scores, an unstructured residual variance/covariance model was used. All predictors were grand-mean centered except for coach gender. Grand-mean centering enables interpretation of the intercept as the expected score for an average athlete and/or average coach. The models were fit using the SAS MIXED procedure.

To test the hypotheses involving both athletes' and coaches' perceptions of coaches' servant leadership qualities, a similar set-wise model comparison strategy was used. Six models were used to test the "additional" or "incremental" predictive power for each theoretically meaningful group of variables. Instead of the F test to determine whether additional sets of predictors added statistically significant prediction, Likelihood ratio tests were used which take the difference in log-likelihoods (multiplied by -2), which is distributed as a chi-square statistic (Kreft & De Leeuw, 1998). Table 1 shows the overall set of models with the predictors included in each set shown by an 'x' placed next to the variables tested by that model.

CHAPTER 3: Results

Demographic Results

Coaches' demographic results. Thirty coaches participated in the study.

Descriptive statistics are provided for the final sample characteristics and the measures used in the study.

Results displayed in Table 2 show that coaches were predominantly male, with license levels 1-3. For other analyses, one was subtracted from recorded values so that a license level of 1 was set to zero.

In Table 3, the descriptive statistics, including descriptive means, standard deviations, and minimum and maximum values, are provided for additional coach demographic characteristics and self-reported psychosocial variables. All of these variables except for servant leadership were mean-centered before use in analysis.

Athletes' demographic results. Descriptive statistics are provided based on the final 260 athletes sample for characteristics and the measures used in this study. Table 4 shows the means, standard deviations, minimums and maximums for athlete demographic data. Table 5 shows the means, standard deviations, minimums and maximums for athlete outcomes data.

Correlational Results

Coaches' correlational results. Table 6 shows the Pearson bivariate correlations between coach measures. SLTrust/inclusion was positively and significantly related to SL service, incremental learning beliefs, task orientation, and three of the four emotional intelligence subscales (i.e., self emotion appraisal, others' emotion appraisal, and use of emotion). Service was significantly and positively related to trust/inclusion, incremental

learning beliefs, and three of the four emotional intelligence subscales (i.e., self emotion appraisal, others' emotion appraisal, and use of emotion). Humility was only significantly and positively related to service.

Athletes' correlational results. Table 7 shows the Pearson correlations between athlete measures. For the 20 individual athlete measures, 141 out of the 189 relationships were significant, with almost all of the relationships in the expected direction. For example, positive psychosocial outcomes, such as the coping with stress subscale, sport confidence subscales, task orientation, and intrinsic motivation are positively and significantly related to mastery climate. Negative psychosocial outcomes were not significantly related to mastery climate, but were in the hypothesized direction. One unexpected result is mastery and performance climate are positively and significantly related.

Coach-athlete correlational results. Table 8 shows the Pearson correlations between athlete-perceived coach servant leadership and coach-perceived servant leadership. Results revealed significant relationships among (a) athletes' perceptions of three coach SL dimensions and (b) coaches' perceptions of their own servant leadership qualities, but there was no significant relationship between the two sets of perceived servant leadership variables (see correlations in bold).

Hierarchical Linear Modeling Results

Coach HLM results. Coach Hypotheses 1, 2 and 3 (CH-1, CH-2 and CH-3) were examined within-coach predictors of coach self-reported servant leadership. Results are reported by hypothesis.

CH-1 predicted that coaches' emotional intelligence (EI) core competencies should be positively related to coaches' servant leadership (SL) after adjusting for coach personal

characteristics (see Table 9). Based on the hierarchical regression analysis, results demonstrated the coefficients and incremental r-squared values for the demographic and emotional intelligence variables. Although coach personal characteristics in Model 1 explained almost 18% of the variation in servant leadership, the F test was non-significant [$F(4,25)=1.34, p = .28$; see Table 9], a finding which is likely due to the relatively small sample size. Although not statistically significant, male coaches reported lower servant leadership scores than did their female counterparts.

The results from Model 2 shown in Table 9 reveal that emotional intelligence predictors do contribute to the statistically significant prediction of servant leadership [$F(4,21)=6.89, p < .001$]. The combined emotional intelligence predictors were able to explain an additional 47% of the variation in servant leadership. Examining individual predictors, results revealed that self emotion was positively related to servant leadership, adjusting for all other predictors in the model.

CH-2 predicted that coaches' incremental beliefs about talent and task orientation should be positively related to coaches' SL after adjusting for coach personal characteristics (see Table 10). Using a similar hierarchical regression analysis, results revealed the coefficients and incremental r-squared values for the demographic and coaches' incremental talent beliefs and task orientation (see Table 10). The results from Model 2 demonstrate that coaches' incremental talent beliefs and task orientation predictors provide statistically significant prediction of coaches' SL [$F(2,23)=5.76, p < .001$]. The combined coaches' incremental talent beliefs and task orientation predictors were able to explain an additional 31% of the variation in SL. Examining individual predictors, incremental beliefs,

but not task orientation, were positively related to SL, adjusting for all other predictors in the model.

CH-3 predicted that coaches' entity talent beliefs and ego orientations should be weakly and non-significantly related to coaches' SL, after adjusting for coach personal characteristics (see Table 11). Hierarchical regression results from Model 2 reveal that

coaches' entity beliefs and ego orientation predictors did not add to the statistically significant prediction of servant leadership [$F(2,23)=1.31$, $p = .29$; see Table 11].

Additionally, no individual predictors were related to SL adjusting for all other predictors in the model, in part because the combined coaches' entity beliefs and ego orientation predictors were only able to explain an additional 8% of the variation in servant leadership.

Coach-athlete HLM results. Coach-Athlete Hypothesis 1-4 (CAH-1; CAH-2; CAH-3; and CAH-4) examined the joint athlete and coach predictors of athlete self-reported outcomes. Results are reported by hypothesis.

CAH-1 predicted that higher levels of coach servant leadership should be associated with greater athlete mastery-oriented motivational climate perceptions (see Table 12). Four HLM models were estimated to examine this hypothesis. Model 1, which included just the grand intercept, shows the expected mastery climate value for the entire athlete sample without any predictors in the model. The intra-class correlation, which represents the percent of athlete scores due to between coach variations, was 10%. Model 1 is also estimated to obtain the -2 Log-Likelihood value to use in calculating the Chi-square test of the Difference in Log-Likelihoods between consecutive models (e.g., Model 1 compared to Model 2, etc.).

Model 2 tested whether the addition of athlete characteristics (i.e., age, years with team, years with coach) added significant prediction of athletes' mastery climate scores. Results failed to demonstrate a statistically significant Likelihood Difference Test for the addition of the combined Model 2 predictors, although the individual tests of predictors showed the longer the athlete was with the team, the higher the reported mastery climate score ($b = .06$, $p < .05$). The variance estimates remained unchanged.

Model 3 tested whether the addition of coach characteristics (i.e., age, gender, years with team, license level) added significant prediction of athletes' mastery climate scores, controlling for predictors entered in prior models. Results revealed a statistically significant Likelihood Difference Test for the addition of the combined Model 3 predictors [$\chi^2(4) = 15.94$, $p < .001$]. Individual tests of predictors showed additional years of coach's age related to higher athlete mastery climate scores ($b = .02$, $p < .05$), while the higher the license level (i.e., going from 0-8), the higher the reported mastery climate score ($b = .06$, $p < .05$). Also, the addition of coach characteristics completely explains the between coach variation in athletes' mastery climate scores (variance estimate = 0).

Model 4 tested whether the addition of coach servant leadership characteristics (i.e., trust/ inclusion, humility, and service) added significant prediction of athletes' mastery climate scores, controlling for predictors entered in prior models. Model results demonstrated no statistically significant Likelihood Difference Test for Model 4, and no individual predictors were statistically significant.

Overall, only the addition of the four coach demographic and background characteristics in Model 3 added to the statistically significant joint prediction variation in

athlete mastery climate scores. Also, adjusting for the coach variables enabled athlete age to be a positive predictor of athlete mastery climate in both Model 3 and Model 4.

CAH-2 predicted that lower levels of coach servant leadership should be associated with greater athlete performance-oriented motivational climate perceptions. Four HLM models were estimated to examine this hypothesis. Models 1 and 2 are the same as for CAH-1.

Model 3 tested whether the addition of coach characteristics (i.e., age, gender, years with team, license level) added significant prediction of athletes' performance climate scores, controlling for predictors entered in prior models. Results revealed no statistically significant results.

Model 4 tested whether the addition of coach servant leadership characteristics (i.e., trust/ inclusion, humility, and service) added significant prediction of athletes' performance climate scores, controlling for predictors entered in prior models. Model results demonstrated no statistically significant Likelihood Difference Test for Model 4, and no individual predictors were statistically significant.

CAH-3 hypothesized that higher levels of coach servant leadership should be positively and significantly related with athletes' abilities to cope with stress and higher levels of sport confidence, athlete satisfaction, task orientation, intrinsic motivation and incremental learning beliefs.

Additionally, CAH-4 predicted that higher levels of coach servant leadership should be negatively and significantly related with athletes' ego orientation, entity learning beliefs, and sport anxiety.

Six HLM models were used to test CAH-3 and CAH-4. The first 5 models controlled for athlete variables and coach demographic and background characteristics. Model 6 tested Hypothesis CAH-3 and CAH-4 on whether the addition of coach servant leadership characteristics (i.e., trust/inclusion, humility, service) added significant prediction of athletes' outcome scores, controlling for predictors entered in prior models. Results revealed a statistically significant Likelihood Difference Test for Model 6 for two of the variables: coping with adversity [see Table 13; $\chi^2(5)=10.70, p < .05$], and performance under pressure [see Table 14; $\chi^2(5)=17.54, p < .05$]. For coping with adversity, none of the three individual predictors were statistically significant, yet higher service scores were marginally related to lower coping with adversity scores ($b=-.15$). For performance under pressure, all three individual predictors were statistically significant. Higher service scores were related to higher performance under pressure scores ($b=.24$), while lower trust/inclusion ($b=-.46$) and humility ($b=-.22$) scores were related to higher performance under pressure scores. For the majority of the athlete variables, the SL subscales did not add significantly to model prediction.

Athlete HLM results. Six HLM models were estimated to address Athlete Hypotheses 1, 2, 7, and 8 (AH-1, AH-2, AH-7, and AH-8) see Tables 13-28). These hypotheses focus on mastery climate in Model 3, whereas five HLM models were estimated to address Athlete Hypotheses 3 and 4 (AH-3, AH-4; see Tables 29-36). These hypotheses include the performance climate in Model 3. Models 1 and 2 are the same for both sets of models. Model 1, which included just the grand intercept, shows the expected athlete outcome value (i.e., coping with stress subscale; sport confidence subscales; athlete satisfaction subscale; intrinsic motivation; incremental learning beliefs; task orientation; and sport anxiety

subscales) within the athlete sample without any predictors in the model. The intra-class correlations represent the percent of athlete scores due to the between coach variation. Table 15 shows each percentage by athlete variable. Model 1 provided the -2 Log-Likelihood values used in calculating the Chi-Square Test of the Difference in Log-Likelihoods between consecutive models (e.g., Model 1 compared to Model 2).

Model 2 tests whether the addition of athlete characteristics (i.e., age, years with team, years with coach) added significant prediction of athletes' psychosocial outcomes (i.e., coping with adversity, sport confidence, intrinsic motivation, athlete satisfaction, incremental learning beliefs, task orientation, or sport anxiety). The Likelihood Difference Test was not statistically significant for any of the athlete variables.

Model 5 (mastery climate models) examined whether the addition of coach characteristics (i.e., age, gender, years with team, license level) added significant prediction of athlete variable scores, controlling for the athlete level predictors entered in prior models. The Likelihood Difference Test was significant for physical sport confidence (see Table 16; $\chi^2(4)=11.10, p<.05$). Coach age was negatively related to physical sport confidence ($b=-.02$), as well as athlete age ($b=-.17$). License level was positively related to physical sport confidence ($b=.07$). For the rest of the variables tested, no significant prediction was added.

Model 4 (performance climate models) examined whether the addition of four coach characteristics added significant prediction of athlete variable scores, controlling for the athlete level predictors entered in prior models. Results demonstrated no significant prediction enhancement to the model.

AH-1 hypothesized that perceptions of a mastery motivational climate should be positively and significantly related to coping with stress, sport confidence, athlete satisfaction, intrinsic motivation, task orientation, and incremental ability beliefs.

AH-2 predicted that perceptions of a mastery motivational climate should be negatively related to sport anxiety, ego orientation, and entity ability beliefs. Model 3 provides the key test of Hypotheses AH-1 and AH-2, which showed that mastery climate has a statistically significant relationship to nine of the fifteen athlete variables based on the Likelihood Difference Test, as seen individually in Tables 13-28. The variables included are: (a) coping with adversity (Table 13), (b) performance under pressure (Table 14), (c) physical sport confidence (Table 16), (d) cognitive sport confidence (Table 17), (e) resilience confidence (Table 18), (f) team satisfaction (Table 19), (g) athlete satisfaction (Table 20), (h) intrinsic motivation (Table 21), (i) and task orientation (Table 22). For example, the variable coping with adversity has a significant relationship with mastery climate based on the Likelihood Difference Test [$\chi^2(1)=6.66, p < .05$], with mastery climate positively related to coping with adversity ($b=.18$). For AH-1, all predictions were found significant except incremental learning beliefs, whereas for AH-2, no significant predictors were found, however the relationship was in the negative direction for entity learning beliefs (Table 24), ego orientation (Table 25), somatic trait anxiety (Table 26), trait worry (Table 27), and trait concentration disruption (Table 28).

AH-3 hypothesized that perceptions of a performance motivational climate should be negatively related to coping with stress, sport confidence, athlete satisfaction, intrinsic motivation, and incremental ability beliefs.

AH-4 predicted that perceptions of a performance motivational climate should be positively related to sport anxiety, ego orientation, and entity ability beliefs. (see Tables 29-36). Model 3 provided a key test of AH-3 and AH-4, demonstrating that performance motivational climate was significantly related to cognitive sport confidence (Table 31), resilience sport confidence (Table 32), team performance satisfaction (Table 33), somatic trait anxiety (Table 34), worry trait anxiety (Table 35), and concentration disruption (Table 36) based on the Likelihood Difference Test. Performance motivational climate was negatively related to cognitive sport confidence ($b = -.16$), resilience confidence ($b = -.24$), and team performance satisfaction ($b = -.31$). Performance motivational climate was positively related to somatic trait anxiety ($b = .23$), worry trait anxiety ($.39$), and trait concentration disruption ($b = .39$). No significant relationship was demonstrated between performance motivational climate and nine athlete variables: coping with adversity, performance under pressure, physical sport confidence, individual performance satisfaction, incremental ability beliefs, intrinsic motivation, task orientation, ego orientation, and entity ability beliefs.

AH-5 hypothesized that after adjusting for athlete characteristics, athletes' perceptions of the coaches' servant leadership should be positively and significantly related to the mastery climate. (see Table 29). The results from Model 3 demonstrate that the athlete-perceived coach servant leadership provided statistically significant prediction of the mastery climate [$\chi^2(3) = 78.73$, $p < .001$]. Examining individual predictors, athlete-reported coach trust/inclusion was significantly and positively related to the mastery climate adjusting for all other predictors in the model. Athlete-reported coach humility and service were not significant and were in the negative direction, as individual predictors.

AH-6 hypothesized that after adjusting for athlete characteristics, the athletes' perceptions of the coaches' servant leadership should be negatively and significantly related to the performance climate (see Table 37). The results from Model 3 demonstrate that athlete-perceived coach servant leadership provided statistically significant prediction of the performance climate [$\text{Chi}^2(3)=29.88, p < .001$]. Examining individual predictors, athlete-reported coach trust/inclusion was significantly and negatively related to the performance climate, adjusting for all other predictors in the model. Athlete-reported coach humility was not significant and related in a negative direction, whereas service also was not significant and in the positive direction.

Similarly, AH-7 predicted that after adjusting for athlete characteristics, perceptions of motivational climate, and coach characteristics, athletes' perceptions of coaches' servant leadership should be positively and significantly related to coping with stress, sport confidence, athlete satisfaction, intrinsic motivation, incremental ability beliefs, and task motivation.

Additionally, AH-8 hypothesized that after adjusting for athlete characteristics, perceptions of motivational climate, and coach characteristics, athletes' perceptions of coaches' servant leadership dimensions should be negatively related to sport anxiety, ego orientation, and entity ability beliefs (see Tables 13-28).

Model 4 tested Hypothesis AH-7 and AH-8 whether the addition of athlete-reported coach servant leadership dimensions predicts athlete psychosocial outcomes. Overall, for AH-7, the three dimensions of athlete-reported coach servant leadership were significantly and positively related to coping with adversity (Table 13), performance under pressure (Table 14), physical sport confidence (Table 16), cognitive sport confidence (Table 17),

resilience sport confidence (Table 18), team satisfaction (Table 19), individual satisfaction (Table 20), intrinsic motivation (Table 21), task orientation (Table 22), and incremental ability beliefs (Table 23) based on the Likelihood Difference Test. For AH-8, the three measures of athlete-reported coach servant leadership were significantly and negatively related to three of the five subscales: entity ability beliefs (Table 24), trait worry (Table 27), and trait concentration disruption (Table 28) based on the Likelihood Difference Test. However, there was variability in individual subscale relationships. Coping with adversity (Table 13; $\chi^2(3)=11.65, p<.05$) showed a significant relationship with all three subscales but a positive relationship was evident with trust/inclusion ($b=.13$) and humility ($b=.09$) and a negative relationship with service ($b=-.13$). Performance under pressure (see Table 14; $\chi^2(3)=10.96, p < .05$) revealed only athlete-reported coach humility was related to higher performance under pressure scores ($b=.11$). The regression coefficient indicates that a one unit increase in humility was related to a .11 increase in PUP. The addition of athlete-reported coach servant leadership explained 0% of the remaining between-coach variance and another 5% of the within-student variance in PUP scores. Physical sport confidence (Table 16; $\chi^2(3)=15.11; p < .05$) showed that athlete-reported coach service was the only significant subscale score ($b=.13$). Cognitive sport confidence (Table 17; $\chi^2(3)=16.80, p < .001$) demonstrated no individual subscales that were significant predictors. With the addition of athlete-reported coach servant leadership scores, athlete age was a significant negative predictor of resilience sport confidence ($b=-.15$). Additionally, the model was significant [Table 18; $\chi^2(3)=11.36, p < .01$], with trust/inclusion the only subscale that was a significant predictor ($b=.20$). Both subscales for satisfaction were predicted by athlete-reported coach servant leadership. Individual satisfaction was significant (Table 20;

$\chi^2(3)=17.34, p < .001$), with trust/inclusion the only subscale reaching significance ($b=.27$). Team satisfaction (Table 19; $\chi^2(3)=22.57, p < .001$) also revealed that trust/inclusion was the only subscale that was a significant predictor ($b=.33$). Intrinsic motivation (Table 21) was significantly predicted by the addition of athlete-reported servant leadership scores [$\chi^2(3)=23.79, p < .001$], with humility ($b=.16$) and service ($b=.39$) significant predictors. Task orientation (Table 22) was predicted overall as well [$\chi^2(3)=19.96, p < .001$], with trust/inclusion the only subscale reaching significance ($b=.14$). Incremental ability beliefs (Table 23) was predicted individually by service ($b=.11$) and overall by the addition of the athlete-reported coach servant leadership variables [$\chi^2(3)=15.76, p < .001$]. Athlete-reported coach servant leadership predicted entity beliefs (Table 24; $\chi^2(3)=8.83, p < .05$), although none of the individual subscales were significant predictors and they were all related in a negative direction. Trait worry (Table 27; $\chi^2(3)=11.99, p < .01$) and trait concentration disruption (Table 28; $\chi^2(3)=10.72, p < .05$) were both significantly predicted by the athlete-reported SL scores, with trust/inclusion showing a significant negative relationship ($b=-.21$ and $b=-.12$, respectively). Ego orientation and trait somatic anxiety were the only two variables not predicted by the inclusion of athlete-reported coach servant leadership dimensions.

CHAPTER 4: Discussion

This study examined the impact of coach leadership variables on motivational climate and athlete psychosocial outcomes. Analyses were used to examine several specific relationships, as specified by study hypotheses. Each hypothesis is discussed separately and limitations and applications to future research and practice identified.

This research had four foci: (1) to examine the relationship among perceived coach leadership and emotional intelligence dimensions, (2) to investigate the relationship between perceived coach leadership dimensions and motivational climate, (3) to assess the relationship between motivational climate and athlete psychosocial outcomes, and (4) to examine the direct relationship between perceived coach leadership and athlete psychosocial outcomes. All hypotheses also included investigating the influence of a variety of coach and athlete demographic variables (e.g., age and coach license level).

Three categories of hypotheses are discussed. The first category examines relationships among coach-only variables. Category 2 investigates relationships among coach and athlete variables. Finally, the third category assesses associations among athlete-only variables. These results suggest there are five major findings. A key finding that was not originally hypothesized was the lack of relationship between coach self-perceptions of servant leadership and the athletes' perceptions of the coaches' servant leadership. This finding is consistent with research that coaches are not accurate judges of their own behaviors (Smith & Smoll, 1999). Researchers (Harms & Crede, 2010; Mersman, & Donaldson, 2000; Nilsen & Campbell, 1993) have concluded inconsistencies are common between self and other ratings in a variety of areas, including, contextual performance, task performance, leader effectiveness, and other constructs, including emotional intelligence.

One method to circumvent this issue is to conduct 360-degree analyses in which perceptions are obtained from multiple sources (i.e., usually three or more respondents, with self, superiors, peers, and subordinates rating the dimension of interest). A meta-analysis on emotional intelligence and leadership relationships revealed strong correlations only when both surveys were taken by the same source, either self/self or other/other (Harms & Crede, 2010). Within this research, the discrepancy found among coach and athlete ratings of coach servant leadership explains, in part, the lack of significant relationships on some of the following results. Within the following three sections of hypotheses reviewed, major and minor findings will be delineated and discussed.

Coach Hypotheses (CH)

Major Findings.

No major findings were demonstrated for the coach hypotheses. Coach self-perceived servant leadership failed to demonstrate any major significant findings with athlete-perceived motivational climate or a range of athlete psychosocial outcomes. While it is interesting to note how different coach constructs relate to each other, if they do not impact perceived motivational climate or key athlete outcomes, then the relationships identified seem of secondary relevance.

Minor Findings:

CH-1: Emotional intelligence subscales predict coaches' servant leadership scores. Pearson bivariate correlations demonstrate significant positive relationships among three of the four EI subscales (i.e., self-emotion appraisal; others emotion appraisal, and use of emotion) and overall coach servant leadership scores (see Table 6).

Through hierarchical linear modeling, results demonstrated that coaches' emotional intelligence predicted their servant leadership scores. Model 1 included coach demographic variables and Model 2 included coach emotional intelligence subscales (see Table 9). Examining individual predictors shows that self-emotion was positively related to servant leadership, adjusting for all other predictors in the model, and the combined emotional intelligence predictors were able to explain an additional 47% of the variation in servant leadership.

These results suggest that emotional intelligence is a skill that contributes to effective leadership (Goleman, 1998; Goleman et al., 2002; Palmer et al., 2001) and is consistent with previous research (Nuttall, 2004). Increasing emotional intelligence may promote servant leadership characteristics in coaches, which should be a desirable outcome, particularly for youth and development-focused coaches. As predicted, coaches who were higher in emotional intelligence were also higher in servant leadership. Coaches' perceptions of their ability to regulate emotions were not significantly related to overall coach servant leadership. This finding may suggest that regulation of emotion is a more challenging skill that takes more time and focus to develop. Additionally, coaches may not be intentionally regulating emotions because they are utilizing strong levels of emotions, (i.e. excitement or anger), as important motivational tools that demonstrate a positive investment in team climate and culture and athlete development.

CH-2: Coaches with strong task orientation and incremental learning beliefs should display higher levels of servant leadership. As predicted, correlation results revealed that coaches' incremental beliefs about talent and task orientations demonstrated significant positive relationships with their servant leadership scores. Additionally,

hierarchical linear modeling results showed that the addition of incremental learning beliefs and task orientation in the model enhanced prediction of coaches' servant leadership. Model 1 included coach demographic variables, but they were not significant predictors of coaches' servant leadership. Model 2 added incremental learning beliefs and task orientation (Table 10). While the addition of both variables showed a significant increment in prediction of coach servant leadership, examining individual predictors revealed that incremental beliefs significantly contributed to the relationship but task orientation did not. Several factors provide plausible reasons why task orientation was not individually a significant contributor to the model. It may be that task orientation did not add enough additional variance above incremental learning beliefs in the regression analysis because the two variables are highly correlated (i.e., $r = .55$, $p < .01$; Table 6). This explanation is consistent with theory and research that supports conceptual predictions that ability beliefs are antecedents of motivational orientation (Dweck, 1999).

Coaches who possess greater learning beliefs about talent and task orientations were anticipated to have higher servant leadership scores. These results support the hypothesis that coaches who believe that their abilities and intelligence can be changed over time with effort and persistence, and who place a higher priority on improving, learning, mastering skills, and striving to best their own performance standards should be better servant leaders compared to colleagues with more fixed mindsets.

CH-3: Coaches with entity learning beliefs and ego orientations should display significant negative relationships with servant leadership. Initial correlation results did not find significant negative relationships among entity learning beliefs, ego orientations, and overall coach servant leadership. However, the relationships were in the negative

direction, meaning that coaches with entity learning beliefs and ego orientations had lower overall servant leadership scores.

Hierarchical regression results revealed similar findings, with no significant relationships between ego orientations, entity ability beliefs, and servant leadership, even though the relationship was negative in direction (see Table 11). Model 1 included coach demographic variables and failed to significantly predict coach SL, whereas Model 2 including coaches' entity ability beliefs and ego orientation was also negative and nonsignificant. The mean age of the athletes in this study was 14.5 years and most of the coaches possessed a license from U.S. Soccer, which includes training in developmentally-appropriate information for how to best coach this age group using learning-based strategies. It is likely that the 30 coaches were more focused on developing a mastery climate with this population, which would include more incremental ability beliefs and task orientation, thus prompting coaches to primarily focus on teaching and training. These results would be expected to become more polarized at the college level, prompting a significant negative relationship between entity learning beliefs and ego orientation with overall coach servant leadership (Biddle et al., 2003, Biddle et al., 1999).

Coach-Athlete Hypotheses (CAH)

Major Findings

Because athletes' and coaches' perceptions differed on coach servant leadership scores, the hypotheses between the coach-perceived servant leadership and the athlete-perceived motivational climate and psychosocial outcomes showed no significant relationships. Again, the most likely explanation would be due to inaccuracies in coaches'

self-perceptions due to social desirability and the small sample size employed. Although not specifically hypothesized, the significant relationship between coach age, license level, and mastery climate was interesting. The higher the license level and the older the coach, the more likely athletes were to perceive the climate as mastery-oriented. It was initially believed that coaches' characteristics would influence the environment, and this finding supports the idea that coaches' beliefs will impact the motivational climate they create. Soccer licensing courses focus on developmentally appropriate activities for each age group and also include some sport psychology (*Introduction to coaching education*, 2013). Through training, coaches are also exposed to better coaches and recognize that when the right environment is created, athletes improve more quickly and effectively. The overall coach license courses vary from 4-9 days, depending on level, and include participating and designing appropriate drills and practices. A mastery climate is modeled for coaches, and they are afforded the opportunity to experience it and, in turn, are taught how to create it. Typically a coach with a higher license level has participated in several coaching courses, thus further reinforcing these principles. Practical implications of these results focus on the possible role ability beliefs and motivational orientations may play in the leadership development process.

Minor Findings

CAH-1: Coach servant leadership should be positively associated with higher mastery motivational climate scores. Correlations were not run when looking at coach servant leadership and mastery climate because the coach and athlete populations represent vastly different sample sizes. Five models were set up to test the relationship among coach-perceived servant leadership subscales and athlete-perceived mastery motivational climate

(see Table 12), with only one model providing a significant increment in prediction efficiency. Model 2 includes athlete demographic variables, which added no significant prediction to mastery climate scores, but Model 3 included coach demographic variables, which did add significant prediction to mastery climate. The older the coach and the higher the license level the stronger the mastery climate. Model 4 examined the coaches' servant leadership, but those variables did not add any significant prediction to the model. It was initially surprising that coaches' servant leadership scores did not support our hypothesis that higher scores would predict a mastery climate. However, coaches may not be accurate judges of their own behavior, as indicated by previous research (Smith and Smoll, 1997). Current research suggests that the athletes' perceptions of their coaches are more significant predictors of psychosocial outcomes, than are coaches' self-perceptions. Smoll and Smith (1989) also note that "the ultimate effects that coaching behaviors exerts are mediated by the meaning that players attribute to them" (p. 1527).

CAH-2: Coach servant leadership should be negatively associated with higher performance motivational climate scores. CAH-2 examined the relationship between coach-perceived servant leadership and athlete-perceived performance motivational climate, with the hypothesis predicting a significant negative relationship. Hierarchical models did not reveal any significant relationships (see Table 37). It is plausible that again coaches are not accurate judges of their own servant leadership, consistent with previous research (Smith and Smoll, 1997). If the initial scores on servant leadership were not accurate, this would explain why there was not a significant relationship with perceived motivational climate, as rated by the athletes. Additionally, Horn's (2002) working model of coaching effectiveness

notes that athletes' self-perceptions, attitudes, motivation, and performance are mediated by their perceptions of coaches' behavior.

CAH-3: Higher levels of servant leadership should be positively and significantly related to positive psychosocial outcomes. CAH-4: Higher levels of servant leadership should be negatively and significantly related with athletes' ego orientation, entity beliefs, and sport anxiety. CAH-3 and CAH-4 examined whether high levels of servant leadership would predict both positive and negative psychosocial outcomes for athletes, including: coping with adversity, performance under pressure, physical sport confidence, cognitive sport confidence, resilience sport confidence, team performance satisfaction, individual performance satisfaction, task orientation, intrinsic motivation, incremental ability beliefs, ego orientation, entity ability beliefs, and sport anxiety. Four models were set up to test each category of psychosocial outcomes (see Tables 13-22). Neither Model 2 that included the athlete demographic variables, nor Model 4 that included coach demographic variables, contributed significantly to model prediction efficacy. Model 5 examined the addition of coach-perceived servant leadership subscales, but they were significant model predictors for only two of the psychosocial outcomes, coping with adversity and performance under pressure. Again, the best explanation for these results is that coaches' servant leadership does not predict athlete outcomes because coaches don't accurately judge their own leadership behaviors (Smith and Smoll, 1997). It is presumed that coaches' perceptions are less likely to change how athletes do things than athletes' own perceptions.

CAH-4 predicted a significant negative relationship between coach-reported servant leadership scores and less-desirable athlete psychosocial outcomes, including:

entity ability beliefs, ego orientation, worry trait anxiety, somatic trait anxiety, and trait concentration disruption (see Tables 23-28). In other words, the higher a coach's servant leadership, the lower athletes should score on these negative outcomes. The four models for each outcome were set up similarly to the CA-3 hypothesis. Contrary to the hypothesis, results indicated no significant relationships. Coach SL perceptions were probably inaccurate due to social desirability, and these developmental coaches were less likely to prompt negative psychosocial outcomes.

Athlete Hypotheses (AH)

Major Findings

Many of the findings within athlete hypotheses were of great interest. Because the athletes answered all of the surveys, including coach servant leadership, perceived mastery climate, and psychosocial outcomes, there were numerous significant relationships. Of the most interest was AH-3. When athletes' perceptions are the focus the relationships among servant leadership, motivational climate and athlete psychosocial outcomes, all demonstrate significant increments in prediction efficiency.

AH-3: Athletes' perceptions of the coaches' servant leadership should show a significant positive relationship with mastery climate. AH-3 predicted that athlete perceptions of coaches' servant leadership would show a significant positive relationship with mastery climate. As expected, coaches who had athletes who perceived them as higher in servant leadership were more likely to create a mastery motivational climate (see Table 29), and the addition of athlete-perceived coach servant leadership significantly added to prediction efficiency of mastery climate scores. Interestingly, only the trust/inclusion subscale was a significant predictor among the three SL subscales. Humility and service

were related in a negative direction and nonsignificant. The RSLP-S was developed using college athletes, so potentially the younger athletes ($M=14.5$) in this study did not relate to or understand the meaning of these questions. Additionally, at the younger ages where a mastery climate is more important, service and humility may not be valued or needed by athletes. It may be more important that athletes can ask, “Can I trust you?” and “Will you include me?” at this age level. Potentially, coaches who are higher in the service and humility subscales should be more valued at higher competitive levels where competency is higher and outcomes are more important. An example of a subscale question for humility is, “I don’t look to my position as one of power”. Potentially younger athletes might want a coach who is more directive and seen as the primary decision-maker, whereas older athletes may desire more autonomy. Another possibility is females may prefer a more autocratic leadership style at this age. Previous research (Pratt & Eitzen 1989) examined coaching styles among high school basketball coaches and the impact on win-loss records and found differences between male and female athletes. There was no difference between coaches with more democratic and authoritarian styles on win-loss records among high school males. However, coaches with a more authoritarian style and low tolerance for insubordination had greater organizational effectiveness over time than coaches with a democratic leadership style among high school females.

AH-1: Perceptions of a mastery motivational climate should reveal a significant positive relationship with coping with stress, sport confidence, athlete satisfaction, intrinsic motivation, and incremental learning beliefs. Another major finding consistent with previous research was AH-1. AH-1 predicted that mastery motivational climate would predict positive psychosocial outcomes; including: ability to cope with stress, sport

confidence, individual and team satisfaction, incremental learning beliefs, task orientation, and intrinsic motivation (see Tables 13,14; 16-23). As predicted, athlete-perceived mastery climate was significantly related in the hypothesized direction with nine of the ten positive athlete psychosocial outcomes. A mastery climate is one that emphasizes learning and growth, so it was hypothesized that athletes in a mastery climate would be higher in coping with adversity, performance under pressure, sport confidence, athlete satisfaction, intrinsic motivation, and task orientation (Balaguer, Duda, & Crespo, 1999; Balaguer et al., 2002; Harwood, Spray, & Keegan, 2008; Newton, Duda, & Yin, 2000; Ommundsen, 2001a; Pensgaard & Roberts, 2000; Treasure & Roberts, 2001). Mastery climate was not significantly related to incremental ability beliefs, a not completely surprising finding. Research demonstrates that beliefs about talent and perceptions of motivational climate are independent motivational constructs that both impact cognitive, affective, and behavioral outcomes (Roberts, 2001). Roberts and Treasure (1992) posited that at younger ages, perceptions of the motivational climate influence outcomes more than personal beliefs, because they are still in the process of developing personal theories of achievement.

Minor Findings

AH-2: Perceptions of a mastery motivational climate should demonstrate a significant negative relationship with sport anxiety, ego orientation, and entity learning beliefs. AH-2 predicted that a mastery climate would demonstrate a significant negative relationship with negative psychosocial outcomes, including: entity ability beliefs, ego orientation, somatic trait anxiety, worry trait anxiety, and trait concentration disruption (see Tables 24-28). Again, no significant relationships were found for these negative psychosocial outcomes. However, the results were all in the negative direction. Although

these results were contrary to predictions, mastery climate may be less impactful on negative psychosocial outcomes due to the younger age of the athletes in this study. Additionally, relatedness as one of the needs of intrinsic motivation may impact these outcomes. Teenage girls may care about what their teammates or social network thinks, so the mastery environment may not be strong enough to override social perceptions.

AH-4: Athletes' perceptions of coaches' servant leadership should reveal a significant positive relationship with coping with stress, sport confidence, athlete satisfaction, intrinsic motivation, incremental learning beliefs, and task motivation.

As predicted, results for AH-4 were largely supported. It was predicted that athlete-perceived coach servant leadership would predict positive athlete psychosocial outcomes (see Tables 13-22). The addition of athlete-perceived coach servant leadership in the model predicted significant increments in prediction for nine of ten positive psychosocial outcomes, including: performance under pressure, cognitive sport confidence, physical skills confidence, resilience confidence, individual satisfaction, team satisfaction, intrinsic motivation, task orientation, and incremental ability beliefs. These results are consistent with Horn's (2002) working model of coaching effectiveness that posits athletes' perceptions of coaches' behaviors should mediate their self-perceptions, attitudes, motivation, and performance. These findings are also consistent with previous research conducted by Hammermeister and colleagues (2006) that found a connection between athlete-perceived coach servant leadership and athlete psychosocial outcomes.

AH-5: Athletes' perceptions of coaches' servant leadership should demonstrate a significant negative relationship with sport anxiety, ego orientation, and entity ability beliefs. AH-5 predicted that athlete-perceived coach servant leadership would be inversely

related with negative psychosocial outcomes (see Tables 23-28). The findings were varied. A significant negative relationship was found between SL and entity ability beliefs, worry trait anxiety, and trait concentration disruption, whereas no relationship was found between SL and ego orientation and somatic trait anxiety. Additionally, the proposed negative relationship was not consistent among all the servant leadership subscales. Trust/Inclusion was the only subscale to contribute significant prediction efficacy for worry trait anxiety and trait concentration disruption. The trust/inclusion subscale items address whether the coach is trustworthy and includes the athlete so they engage on the team in a personally meaningful way. It would seem logical that if athletes can trust the coach and feel included that they could reduce negative thoughts, which are the focus of worry trait anxiety and trait concentration disruption.

AH-6: Perceptions of a performance motivational climate (PMC) should show a significant negative relationship with coping with stress subscales, sport confidence subscales, athlete satisfaction, intrinsic motivation, task orientation and incremental ability beliefs. The results for AH-6 were varied. Only four of the ten subscales were predicted more accurately by the perception of a performance climate. Results revealed a significant negative relationship among PMC, cognitive and resilience sport confidence, as well as team satisfaction (see Tables 31-33). More coaches in the study created a perceived mastery climate, prompting it to be more powerful on athlete outcomes than the performance climate, although all relationships were in the predicted negative direction. Consistent with previous research, performance climate was not related to coping with adversity, performance under pressure, individual satisfaction, intrinsic motivation, and task orientation (Balaguer, Duda, & Crespo, 1999; Boixados, Cruz, Torregrosa & Valiente, 2004;

Kavussanu & Roberts, 1996; Liukkonen, Telama & Biddle, 1998; Parish & Treasure, 2003; Treasure & Roberts, 2001; Whitehead, Andree, & Lee, 2004).

AH-7: Perceptions of a performance motivational climate should reveal a significant positive relationship with sport anxiety, ego orientation, and entity ability beliefs.

As predicted in AH-7, the perception of performance motivational climate demonstrated a significant positive increment in prediction for all three subscales of sport anxiety (see Tables 34-36). This finding is consistent with research that shows a motivational climate based on outcomes, and not growth, increases anxiety for athletes (Newton, Duda, & Yin, 2000; Newton & Duda, 1999; Ntoumanis & Biddle, 1998; Escarti & Guterrez, 2001; Papaioannou & Kouli, 1999; Pensgaard & Roberts, 2000; Walling, Duda, & Chi, 1993). Additionally, anxiety would seem to be more likely to be changed quickly compared to entity ability beliefs and ego orientation.

AH-8: Athletes' perceptions of the coaches' servant leadership should demonstrate a significant negative relationship with performance climate. AH-8 examined whether athlete-perceived coach servant leadership would have a significant negative relationship with performance motivational climate (see Table 37). As predicted, coach SL significantly contributed to model prediction for athlete-perceived motivational climate. The only individually significant subscale was trust/inclusion in the negative direction. In other words, if coaches were not perceived by their athletes as being trustworthy or inclusive, they were likely to structure a stronger performance climate that focused on outcomes over skill mastery.

Summary

Of greatest interest was the lack of congruence between coach and athlete ratings on coach servant leadership. Initially using coach-perceived servant leadership scores for analysis, proposed relationships were not found between coach leadership and motivational climate or athlete psychosocial outcomes. However, when using the athlete perceptions of coach servant leadership, most of the proposed relationships were supported. Athlete-perceived coach servant leadership predicted mastery climate, and mastery climate predicted most of the hypothesized athlete psychosocial outcomes. Additionally, the athlete-perceived coach servant leadership predicted most of the athlete psychosocial outcomes directly. Another major finding was the demographic data; with the coach age and license level significant predictors of mastery climate. Consistent with previous research, mastery climate predicted positive psychosocial outcomes. Finally, the trust/inclusion subscale was the only SL subscale predictor of mastery climate and performance climate. It seems that athletes don't care what the coaches know, until they know that coaches care.

Limitations

Self-report measures were used to assess coaches' servant leadership and emotional intelligence rather than more objective assessment strategies. Athletes varied widely in age from 13 to 18. The small coach sample size (coaches $n=30$) was also a limitation that needs corrected in future research. The instruments employed in this study were not all created for this age group and may not apply to the adolescent soccer environment as much as needed to demonstrate consistent relationships. The Revised Servant Leadership in Sport (RSLP) scale was written for college-aged athletes, and the subscales might not all have been appropriate for younger athletes, focusing more on development-related aspects of sport.

Data collection at a tournament may have had an impact on the quality of responses. The focus may not have been understanding and answering questions, because the players were between games and focused on other things. The survey was also fairly long for the athletes (100 questions), taking approximately 20 minutes, so fatigue or boredom may have influenced responses. Some respondents may not have fully read all the questions, leading to response inaccuracy, and different instructions and subscale lengths across the survey may have also impacted motivation and/or understanding.

Future Directions

This research reinforced current research (Balaguer, Duda, & Crespo, 1999; Boixados, Cruz, Torregrosa & Valiente, 2004; Kavussanu & Roberts, 1996; Liukkonen, Telama & Biddle, 1998; Parish & Treasure, 2003; Treasure & Roberts, 2001; Whitehead, Andree, & Lee, 2004) on the importance of motivational climate on appropriate athlete psychosocial outcomes. It also highlights the importance of finding accurate coach measures and the need to analyze this type of data using more sophisticated strategies such as HLM when athletes are nested within coaches. Previous statistical methods that don't account for multi-levels are limited due to inability to accurately measure specific effects that are not contaminated by other factors, thus inflating Type I error. Finding ways to capture how the individual experiences the context created by the coach must be a priority, prompting greater use of hierarchical methods. Also, capturing accurate data is important. So finding ways to use a 360-degree analysis of the coach (i.e., athletes, coach, assistant coaches, and supervisor) as well as using concrete observable behaviors to assess key constructs of interest may be advised. Use of a 360-degree approach to assess coach servant leadership and emotional intelligence has been recommended by scale developers. Isolating research to

a specific age range and use of a larger sample of coaches is also needed. Different developmental stages are evident over the course of adolescence, and it may be more appropriate to isolate to a 1-2 year age range when initially assessing leadership factors that impact athlete psychosocial outcomes. A need to examine different sports and genders is also recommended for future research.

This data suggests that US Youth Soccer licensing courses are effective at creating a mastery climate. Research that identifies what specifically is being done to teach that mastery climate process is needed. Research needs to stay at the forefront of coach development to ensure that coaches understand and can develop skills that will provide athletes with the appropriate motivational climate to assist growth on and off the field. Research also should look to monitor the education process across the board so the best and most appropriate strategies are consistently taught within all sports and across gender and age groups in order to inform practice.

It is particularly interesting to note that how coaches view their own servant leadership and how the athletes view the coaches' servant leadership was highly inconsistent. When examining factors that contribute to athlete psychosocial outcomes, it is most salient to consider a composite (i.e., 360 degree analysis) perception of the environment and coaches leadership. Underlying much of the motivational climate is the leadership of the coach, particularly whether the athlete can trust and count on the coach in the environment. Research that examines ways that coaches can increase the perception of trust/inclusion is important for follow-up studies.

Practical implications for athletic directors, directors of coaching, and coach supervisors is to discuss rater discrepancies with the coaches. Brutus, Fleenor, and Tisak

(1996) suggest that identification of discrepancies are an important part of the coach developmental process, and future research is needed to better inform the standardization of the rating process, emphasizing coach development rather than evaluation.

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Table 1

Model Building Strategy for Testing Hypotheses.

Predictor	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>
Intercept	x	x	x	x	x
Athlete Demographic					
Athlete Age		x	x	x	x
Time with Team		x	x	x	x
Time with Coach		x	x	x	x
Athlete Self-Perceptions					
Motivational Climate			x	x	x
Coach Demographics					
Age				x	x
Gender				x	x
License Level				x	x
Years with Team				x	x
Coach Servant Leadership					
Trust/Inclusion					x
Service					x
Humility					x

Table 2

Frequencies for Coach Gender and License Level.

Coach	Frequency	Percent
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Gender

Female	7	23.33
Male	23	76.67

License Level

1	5	16.67
2	10	33.33
3	7	23.33
4	2	6.67
5	4	13.33
9	2	6.67

Table 3

Descriptive Statistics for Coach Variables.

<i>Variable</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Minimum</i>	<i>Maximum</i>
Coach Age	39.37	9.09	25.00	57.00
Years with Team	2.82	1.86	1.00	8.00
Years Coaching	14.87	8.38	4.00	37.00
Servant Leadership	5.89	.55	5.05	6.95
Coach SL Trust/Inclusion	6.06	.60	5.09	7.00
Coach SL Humility	5.43	.68	4.33	6.83
Coach SL Service	6.07	.86	4.00	7.00
EI Self-Emotion Appraisal	5.71	1.03	3.25	7.00
EI Others Emotional Appraisal	5.42	.97	3.25	7.00
EI Use of Emotion	5.82	.87	4.00	7.00
EI Regulation of Emotion	5.36	.99	2.75	7.00
Incremental Beliefs	4.38	.52	2.83	5.00
Task Orientation	4.04	.48	3.17	5.00
Entity Beliefs	2.23	.69	1.00	3.50
Ego Orientation	2.47	.53	1.33	3.17

Table 4

Means, Standard Deviations, Minimums and Maximums for Athlete Demographic Data and Perceived Motivational Climate.

Variables	Mean	SD	Minimum	Maximum
Athlete age	14.45	1.17	13.00	17.00
Years on current team	2.45	1.63	.00	7.00
Years with current coach	2.08	1.70	.00	10.00
Mastery motivational climate	4.29	.58	2.33	5.00
Performance motivational climate	1.97	.64	1.00	4.33

Table 5

Means, Standard Deviations, Minimums and Maximums for Athlete Psychosocial Outcomes

Variables.

Variable	<i>M</i>	<i>SD</i>	Minimum	Maximum
Coping with Adversity	2.68	.65	1.00	4.00
Peaking under Pressure	2.69	.73	1.00	4.00
Physical Skills Training Sport Confidence	5.75	.83	1.75	7.00
Cognitive Efficacy Sport Confidence	5.55	.81	2.75	7.00
Resilience Sport Confidence	5.28	1.00	2.00	7.00
Team Performance Satisfaction	5.47	1.06	1.00	7.00
Individual Performance Satisfaction	4.95	1.44	1.00	7.00
Intrinsic Motivation	5.41	1.11	1.00	7.00
Incremental Talent Beliefs	4.47	.57	2.17	5.00
Entity Talent Beliefs	4.47	.57	2.17	5.00
Trait Somatic Anxiety	1.62	.67	1.00	4.00
Trait Worry	2.34	.88	1.00	4.00
Trait Concentration Disruption	1.44	.58	1.00	3.80
Task Orientation	4.10	.57	1.86	5.00
Ego Orientation	2.00	.83	1.00	4.83

Table 6

Correlation Matrix for Coach Variables.

	1	2	3	4	5	6	7	8	9	10
1. Coach SL Trust/Inclusion										
2. Coach SL Humility	.26									
3. Coach SL Service	.69**	.45*								
4. Entity Beliefs	-.28	-.25	-.16							
5. Incremental Beliefs	.56**	.17	.36*	-.30						
6. Ego Orientation	.08	-.23	-.15	.22	.02					
7. Task Orientation	.58**	.08	.34	-.31	.45*	-.10				
8. EI Self Emotion Appraisal	.71**	.22	.65**	-.24	.41*	.11	.55**			
9. EI Others' Emotion Appraisal	.56**	.19	.55**	-.16	.36	.12	.34	.57**		
10. EI Use of Emotion	.69**	.03	.61**	-.23	.55**	.13	.53**	.71**	.72**	
11. EI Regulation of Emotion	.36	-.00	.29	-.14	.60**	.33	.16	.37*	.50**	.59**

• = 0.05 level of significance; **= 0.01 level level of significance.

Table 7

Athlete Correlation Matrix.

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Coping with Adversity																			
2. Peaking under Pressure	.14*																		
3. Physical Sport Confidence	.15*	.25**																	
4. Cognitive Sport Confidence	.30**	.36**	.57**																
5. Resilience Sport Confidence	.45**	.31**	.49**	.65**															
6. Entity Beliefs	-.17**	-.08	-.32**	-.27**	-.31**														
7. Incremental Beliefs	.22**	.14*	.34**	.27**	.28**	-.34**													
8. Task Orientation	.28**	.20**	.30**	.36**	.33**	-.21**	.41**												
9. Ego Orientation	-.08	.00	-.05	-.10	-.06	.28**	-.10	.06											
10. Intrinsic Motivation	.03	.22**	.20**	.20**	.17**	-.11	.35**	.54**	.014										
11. Trait Somatic Anxiety	-.22**	-.13*	-.27**	-.27**	-.36**	.29**	-.12*	-.04	.001	.05									
12. Trait Worry	-.25**	-.17**	-.38**	-.32**	-.39**	.24**	-.06	-.13*	.11	.04	.58**								
13. Trait Concentration Disruption	-.18**	-.16*	-.30**	-.43**	-.31**	.29**	-.25**	-.22**	.18**	-.13*	.52**	.39**							

14. Team Performance Satisfaction	.16*	.16*	.33**	.38**	.28**	-.27**	.20**	.28**	-.05	.19**	-.15*	-.21**	-.19**						
15. Individual Performance Satisfaction	.10	.13*	.14*	.14*	.10	-.19**	-.03	.10	-.15*	.05	-.00	-.01	-.03	.40**					
16. Mastery Climate	.16**	.27**	.14*	.15*	.16**	-.13*	.11	.29**	-.11	.30**	-.01	-.11	-.12	.29**	.16**				
17. Performance Climate	-.12	-.03	-.10	-.12	-.16**	.23**	.04	-.08	.19**	-.06	.20**	.29**	.21**	-.20**	-.11	.29**			
18. SL Trust/Inclusion	.16**	.25**	.23**	.24**	.23**	-.17**	.21**	.34**	-.14*	.32**	-.08	-.11	-.20**	.38**	.24**	.51**	-.30**		
19. SL Humility	.12*	.21**	.15*	.20**	.14*	-.14*	.14*	.23**	-.02	.32**	.00	.10	-.05	.17**	.15*	.22**	-.14*	.47**	
20. SL Service	.01	.14*	.25**	.26**	.17**	-.21**	.25**	.23**	-.11	.33**	-.06	.04	-.15*	.25**	.17**	.32**	-.15*	.64**	.63**

Note. * = 0.05 level of significance; **= 0.01 level level of significance.

Table 8

Coach and Athlete Servant Leadership Correlations.

	1	2	3	4	5
1. Athlete-Perceived SL Trust/Inclusion					
2. Athlete-Perceived SL Humility	.57*				
3. Athlete-Perceived SL Service	.69*	.59*			
4. Coach Trust/ Inclusion	.26	.24	.08		
5. Coach Humility	.26	-.06	.04	.25	
6. Coach Service	.33	.24	.29	.68*	.45*

Note. * = 0.05 level of significance; **= 0.01 level level of significance.

Table 9

Hierarchical Regression Results for Prediction of Servant Leadership Using Coach Demographic and Emotional Intelligence Variables.

Predictors	<i>Model 1</i>		<i>Model 2</i>	
	Coefficient	<i>p</i>	Coefficient	<i>p</i>
Intercept	6.38	.000	6.20	.00
Coach Age	.02	.22	.02	.04
Coach Gender	-.49	.07	-.28	.20
Coach Years with Team	-.04	.51	.00	.95
License Level	-.05	.33	-.04	.29
EI Self-Emotion Appraisal			.36	.01
EI Others Emotion Appraisal			.10	.43
EI Use of Emotion			-.06	.76
EI Regulation of Emotion			.01	.93
Incremental R ²	.18	.28	.47	.001

Table 10

Hierarchical Regression Results for Prediction of Servant Leadership Using Coaches' Demographic Variables, Incremental Talent Beliefs and Coaches' Task Orientation as Predictors.

Predictors	<i>Model 1</i>		<i>Model 2</i>	
	Coefficient	<i>p</i>	Coefficient	<i>p</i>
Intercept	6.38	.00	6.30	.00
Coach Age	.02	.22	.01	.04
Gender	-.49	.07	-.45	.20
Coach Years with Team	-.04	.51	-.01	.95
License Level	-.05	.33	-.03	.29
Coach Incremental Beliefs			.35	.01
Coach Task Orientation			.34	.43
Incremental R ²	.18	.28	.31	.10

Table 11

Hierarchical Regression Results for Prediction of Servant Leadership Using Coaches' Demographic Variables, Entity Beliefs, and Ego Orientations as Predictors.

Predictors	<i>Model 1</i>		<i>Model 2</i>	
	Coefficient	<i>p</i>	Coefficient	<i>p</i>
Intercept	6.38	.00	6.37	.00
Coach Age	.02	.22	.01	.38
Gender	-.49	.07	-.42	.13
Coach Years with Team	-.04	.51	-.04	.48
License Level	-.05	.33	-.08	.25
Coach Entity Beliefs			-.21	.17
Coach Ego Orientation			-.14	.61
Incremental R ²	.17	.28	.08	.29

Table 12:

Hierarchical Linear Modeling Results for Predicting Athletes' Mastery Climate Using Coach Demographic and Servant Leadership Variables as Predictors.

<i>Predictor Variables</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	4.29	<.001	4.29	<.001	4.55	<.001	4.62	<.001
Athlete Age			.02	.64	.08	.04	.09	.02
Athlete Years with Team			.06	.04	.04	.10	.04	.13
Athlete Years with Coach			-.01	.60	-.02	.52	-.01	.56
Coach Age					.02	.003	.02	.002
Coach Gender					-.13	.17	-.18	.11
Coach Years with Team					-.03	.22	-.03	.17
License Level					-.07	<.001	-.08	.001
Coach SL Trust/Inclusion							-.04	.68
Coach SL Humility							-.06	.33
Coach SL Service							-.01	.92
-2 Log Likelihood	443.8	.(1)	438.3		422.3		420.0	
Chi ² Difference Test		.(2)	5.54	.14	15.94	.003	2.29	.51

Table 12 (continued)

<i>Predictor Variables</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Between Coach Variance	.03	.04	.03	.044	.00	.(3)	.00	
Residual	.30	<.001	.30	<.001	.30	<.001	.29	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1.

Table 13

Hierarchical Linear Modeling Results for Predicting Athletes' Coping with Adversity (AC) Using Coach and Athlete Demographic, Mastery Climate, and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	2.69	<.001	2.69	<.001	2.68	<.001	2.69	<.001	2.61	<.001	2.74	<.001
Athlete Age			-.06	.11	-.07	.07	-.08	.04	-.08	.07	-.09	.06
Athlete Years with Team			.04	.18	.03	.30	.04	.21	.04	.14	.03	.32
Athlete Years with Coach			-.05	.07	-.05	.07	-.04	.15	-.04	.15	-.03	.27
Athlete-Perceived Mastery Climate					.18	.10	.09	.23	.10	.20	.07	.34
Athlete-Reported Coach SL Trust/Inclusion							.13	.01	.13	.01	.15	.01
Athlete-Reported Coach SL Humility							.09	.03	.09	.03	.10	.02
Athlete-Reported Coach SL Service							-.13	.01	-.13	.01	-.13	.01
Coach Age									-.01	.14	-.01	.39
Coach Gender									.18	.12	.03	.80
Coach Years with Team									.04	.12	.03	.27
License Level									-.03	.16	-.04	.17
Coach SL Trust/Inclusion											.02	.89
Coach SL Humility											-.02	.73
Coach SL Service											-.16	.06

Table 13 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
-2 Log Likelihood	506.8		500.8		494.1		482.5		474.1		463.4	
Chi ² Diff Test			6.05	.11	6.66	.01	11.65	.10	8.42	.08	10.70	.01
UN(1,1)	.03	.08	.02	.18	.01	.25	.01	.19	.01	.31	.00	
Residual	.39	<.001	.39	<.001	.38	<.001	.36	<.001	.36	<.001	.35	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1; (3) No p-value is reported for Model 6's between coach variance estimate because it was identified as zero.

Table 14

Hierarchical Linear Modeling Results for Predicting Athletes' Performance Under Pressure (PUP) Using Coach Demographic, Mastery Climate and Perceived Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	2.70	<.001	2.70	<.001	2.70	<.001	2.70	<.001	2.75	<.001	2.89	<.001
Athlete Age			0.03	0.56	0.02	0.69	0.01	0.89	0.02	0.72	0.07	0.17
Athlete Years with Team			0.04	0.26	0.02	0.54	0.03	0.42	0.03	0.42	0.03	0.34
Athlete Years with Coach			-0.06	0.06	-0.06	0.07	-0.05	0.11	-0.04	0.15	-0.05	0.07
Athlete-Perceived Mastery Climate					0.32	<.001	0.21	0.01	0.22	0.01	0.22	0.01
Athlete-Reported Coach SI Trust/Inclusion							0.11	0.07	0.11	0.07	0.11	0.06
Athlete-Reported Coach SL Humility							0.11	0.02	0.11	0.02	0.13	0.00
Athlete-Reported Coach SL Service							-0.08	0.15	-0.09	0.12	-0.11	0.04
Coach Age									0.00	0.89	0.00	0.60
Coach Gender									-0.07	0.67	-0.09	0.49
Coach Years with Team									-0.08	0.03	-0.07	0.01
License Level									-0.00	0.93	-0.06	0.05
Coach SL Trust/Inclusion											-0.46	<.001
Coach SL Humility											-0.22	0.01
Service											0.24	0.01

Table 14 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
-2 Log Likelihood	563.4		559.6		542.7		531.7		526.2		508.7	
Chi2 Diff Test			3.80	0.28	16.95	<.001	10.96	0.01	5.49	0.24	17.54	<.001
UN(1,1)	0.07	0.03	0.07	0.03	0.05	0.05	0.05	0.04	0.04	0.06	0.00	
Residual	0.47	<.001	0.46	<.001	0.44	<.001	0.42	<.001	0.41	<.001	0.41	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1; (3) No p-value is reported for Model 6's between coach variance estimate because it was identified as zero.

Table 15

Percent of Athlete Scores Due to between Coach Variation.

Athlete Variable	Percentage
Coping with Adversity	7.7
Performance under Pressure	14.9
Physical Sport Confidence	3.0
Cognitive Sport Confidence	6.3
Resilience Sport Confidence	4.2
Team Performance Satisfaction	7.7
Individual Performance Satisfaction	59.5
Intrinsic Motivation	0.0
Incremental Learning Beliefs	3.2
Somatic Trait Anxiety	4.7
Trait Worry	1.3
Concentration Disruption	7.1

Table 16

Hierarchical Linear Modeling Results for Predicting Athletes' Physical Sport Confidence Using Coach and Athlete Demographic, Mastery Climate and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	5.75	<.001	5.75	<.001	5.75	<.001	5.75	<.001	5.68	<.001	5.67	<.001
Athlete Age			-.04	.37	-.05	.35	-.06	.26	-.17	.00	-.16	.01
Athlete Years with Team			.02	.59	.01	.84	.01	.74	.02	.67	.02	.62
Athlete Years with Coach			-.01	.80	-.00	.90	-.00	.94	.00	.95	.00	.99
Athlete-Perceived Mastery Climate					.21	.02	.04	.68	.09	.38	.09	.36
Athlete-Reported Coach SL Trust/Inclusion							.11	.12	.12	.08	.12	.09
Athlete-Reported Coach SL Humility							-.03	.60	-.03	.57	-.03	.57
Athlete-Reported Coach SL Service							.13	.05	.12	.06	.12	.07
Coach Age									-.02	.01	-.02	.01
Coach Gender									-.10	.47	-.08	.61
Coach Years with Team									.05	.12	.05	.12
License Level									.07	.03	.06	.07
Coach SL Trust/Inclusion											-.02	.87
Coach SL Humility											-.01	.87
Coach SL Service											.04	.70

Table 16 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
-2 Log Likelihood	638.0		637.0		631.6		616.4		605.3		605.1	
Chi ² Diff Test			.97	.81	5.44	.02	15.11	.002	11.10	.03	.21	.98
UN(1,1)	.02	.22	.02	.26	.02	.18	.03	.17	.00		.00	
Residual	.66	<.001	.66	<.001	.64	<.001	.61	<.001	.60	<.001	.60	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1; (3) No p-value is reported for Model 6's between coach variance estimate because it was identified as zero.

Table 17

Hierarchical Linear Modeling Results for Predicting Athletes' Cognitive Sport Confidence Using Coach and Athlete Demographic, Mastery Climate and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	5.55	<.001	5.55	<.001	5.55	<.001	5.56	<.001	5.48	<.001	5.49	<.001
Athlete Age			-.06	.23	-.06	.20	-.07	.16	-.08	.16	-.08	.19
Athlete Years with Team			-.00	.92	-.02	.66	-.01	.77	-.01	.87	-.01	.84
Athlete Years with Coach			-.01	.86	-.00	.91	-.00	.96	.00	.92	.00	.90
Athlete-Perceived Mastery Climate					.23	.01	.06	.54	.07	.48	.07	.50
Athlete-Reported Coach SL Trust/Inclusion							.09	.20	.09	.18	.09	.18
Athlete-Reported Coach SL Humility							.02	.71	.02	.69	.02	.68
Athlete-Reported Coach SL Service							.12	.06	.11	.07	.11	.07
Coach Age									-.01	.15	-.01	.19
Coach Gender									.12	.45	.10	.55
Coach Years with Team									.00	.99	-.00	.98
Coach License Level									-.01	.76	-.01	.79
Coach SL Trust/Inclusion											-.01	.97
Coach SL Humility											.01	.96
Coach SL Service											-.02	.89

Table 17 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
-2 Log Likelihood	627.9		626.2		619.6		602.8		599.8		599.7	
Chi ² Diff Test			1.70	.64	6.63	.01	16.8	<.001	2.98	.56	.07	.10
UN(1,1)	.04	.12	.03	.15	.03	.14	.03	.11	.02	.20	.02	.21
Residual	.63	<.001	.63	<.001	.61	<.001	.57	<.001	.57	<.001	.57	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1

Table 18

Hierarchical Linear Modeling Results for Predicting Athletes' Resilience Sport Confidence Using Coach and Athlete Demographic, Mastery Climate, and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	5.29	<.001	5.28	<.001	5.28	<.001	5.29	<.001	5.21	<.001	5.29	<.001
Athlete Age			-.13	.03	-.13	.02	-.15	.02	-.20	.003	-.22	.002
Athlete Years with Team			.02	.59	.01	.85	.02	.70	.02	.65	.00	.93
Athlete Years with Coach			-.01	.89	-.00	.94	.01	.89	.02	.66	.03	.49
Athlete-Perceived Mastery Climate					.29	.01	.08	.52	.12	.34	.09	.46
Athlete-Reported Coach SL Trust/Inclusion							.20	.02	.21	.01	.22	.01
Athlete-Reported Coach SL Humility							.02	.75	.02	.74	.03	.60
Athlete-Reported Coach SL Service							.02	.81	.01	.94	.01	.93
Coach Age									-.02	.02	-.02	.03
Coach Gender									.06	.72	-.03	.86
Coach Years with Team									.03	.53	.01	.72
Coach License Level									.00	.90	.01	.82
Coach SL Trust/Inclusion											-.06	.74
Coach SL Humility											.09	.41
Coach SL Service											-.16	.23

Table 18 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
-2 Log Likelihood			4.46	.22	7.41	.01	11.36	.01	5.90	.21	5.97	.11
Chi ² Diff Test			1.70	.64	6.63	.01	16.8	<.001	2.98	.56	.07	.10
UN(1,1)	.04	.14	.02	.26	.02	.27	.04	.12	.01	.32	.00	
Residual	.95	<.001	.95	<.001	.92	<.001	.87	<.001	.87	<.001	.86	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1; (3) No p-value is reported for Model 6's between coach variance estimate because it was identified as zero.

Table 19

Hierarchical Linear Modeling Results for Predicting Athletes' Team Performance Athlete Satisfaction Using Coach and Athlete Demographic, Mastery Climate, and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	5.46	<.001	5.46	<.001	5.46	<.001	5.47	<.001	5.68	<.001	5.56	<.001
Athlete Age			-.06	.40	-.07	.25	-.10	.08	-.11	.12	-.18	.01
Athlete Years with Team			.00	.92	-.02	.64	-.01	.88	-.02	.70	-.02	.60
Athlete Years with Coach			.01	.89	.01	.74	.03	.48	.02	.58	.03	.45
Athlete-Perceived Mastery Climate					.52	<.001	.22	.08	.20	.12	.20	.10
Athlete-Reported Coach SL Trust/Inclusion							.33	<.001	.32	<.001	.32	<.001
Athlete-Reported Coach SL Humility							-.01	.93	.01	.92	-.00	.96
Athlete-Reported Coach SL Service							.01	.94	.01	.93	.02	.77
Coach Age									.01	.23	.01	.53
Coach Gender									-.25	.17	-.23	.23
Coach Years with Team									.02	.71	.01	.75
Coach License Level									-.00	.94	.05	.27
Coach SL Trust/Inclusion											.21	.24
Coach SL Humility											.26	.03
Coach SL Service											-.20	.14

Table 19 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
-2 Log Likelihood	763.1		762.5		741.4		718.8		715.3		709.0	
Chi ² Diff Test			.68	.88	21.10	<.001	22.57	<.001	3.52	.48	6.32	.10
UN(1,1)	.08	.06	.07	.08	.04	.15	.03	.21	.02	.32	.00	
Residual	1.04	<.001	1.04	<.001	.98	<.001	.90	<.001	.90	<.001	.89	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1; (3) No p-value is reported for Model 6's between coach variance estimate because it was identified as zero.

Table 20

Hierarchical Linear Modeling Results for Predicting Athletes' Performance Satisfaction Using Coach and Athlete Demographic, Mastery Climate, and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	4.95	<.001	4.96	<.001	4.95	<.001	4.97	<.001	5.26	<.001	5.04	<.001
Athlete Age			-.14	.22	-.15	.18	-.16	.15	-.23	.06	-.28	.03
Athlete Years with Team			-.05	.37	-.08	.17	-.06	.28	-.07	.22	-.07	.20
Athlete Years with Coach			.00	.94	.01	.79	.02	.69	.02	.74	.02	.72
Athlete-Perceived Mastery Climate					.42	.001	.12	.41	.12	.40	.13	.39
Athlete-Reported Coach SL Trust/Inclusion							.27	.01	.27	.01	.27	.01
Athlete-Reported Coach SL Humility							.06	.40	.07	.40	.07	.39
Athlete-Reported Coach SL Service							.02	.84	.02	.83	.02	.82
Coach Age									.03	.20	.02	.45
Coach Gender									-.59	.16	-.39	.37
Coach Years with Team									.06	.49	.06	.48
Coach License Level									.09	.31	.11	.20
Coach SL Trust/Inclusion											-.17	.66
Coach SL Humility											.50	.07
Coach SL Service											-.10	.73

Table 20 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
-2 Log Likelihood	849.7		846.9		836.5		819.1		813.7		809.8	
Chi ² Diff Test			2.78	.43	10.40	.001	17.34	<.001	5.48	.241	3.86	.28
UN(1,1)	.75	<.001	.70	.001	.67	<.001	.69	<.001	.53	.002	.42	.004
Residual	1.26	<.001	1.25	<.001	1.20	<.001	1.11	<.001	1.12	<.001	1.12	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1.

Table 21

Hierarchical Linear Modeling Results for Predicting Athletes' Intrinsic Motivation (IM) Using Coach and Athlete Demographic, Mastery Climate, and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	5.41	<.001	5.41	<.001	5.41	<.001	5.41	<.001	5.56	<.001	5.63	<.001
Athlete Age			.12	.04	.12	.04	.11	.06	.02	.83	.03	.69
Athlete Years with Team			-.02	.74	-.05	.31	-.04	.35	-.06	.22	-.05	.25
Athlete Years with Coach			.02	.72	.02	.64	.02	.59	.03	.43	.04	.41
Athlete-Perceived Mastery Climate					.59	<.001	.39	.002	.42	.001	.42	.002
Athlete-Reported Coach SL Trust/Inclusion							.04	.64	.04	.62	.04	.64
Athlete-Reported Coach SL Humility							.16	.02	.17	.02	.17	.02
Athlete-Reported Coach SL Service							.12	.14	.11	.17	.11	.18
Coach Age									-.01	.16	-.01	.38
Coach Gender									-.29	.10	-.36	.08
Coach Years with Team									.04	.35	.04	.39
Coach License Level									.04	.32	.03	.53
Coach SL Trust/Inclusion											.08	.65
Coach SL Humility											-.15	.20
Coach SL Service											.01	.95

Table 21 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
-2 Log Likelihood	792.2		787.5		762.6		738.8		732.3		730.2	
Chi ² Diff Test			4.61	.23	24.99	<.001	23.79	<.001	6.48	.17	2.12	.55
UN(1,1)	.00		.00		.00		.00		.00		.00	
Residual	1.23	<.001	1.21	<.001	1.10	<.001	1.00	<.001	.98	<.001	.97	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1; (3) No p-value is reported for Model 1-6's between coach variance estimate because it was identified as zero.

Table 22

Hierarchical Linear Modeling Results for Predicting Athletes' Task Motivation Using Coach and Athlete Demographic, Mastery Climate, and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	4.10	<.001	4.10	<.001	4.10	<.001	4.11	<.001	4.15	<.001	4.20	<.001
Athlete Age			-.04	.25	-.04	.21	-.05	.10	-.08	.03	-.09	.02
Athlete Years with Team			.03	.30	.01	.74	.01	.65	.01	.66	.01	.73
Athlete Years with Coach			-.02	.44	-.01	.57	-.00	.99	.00	.99	.00	.91
Athlete-Perceived Mastery Climate					.29	<.001	.15	.02	.16	.02	.15	.02
Athlete-Reported Coach SL Trust/Inclusion							.14	.002	.14	.002	.14	.002
Athlete-Reported Coach SL Humility							.06	.12	.06	.11	.06	.12
Athlete-Reported Coach SL Service							-.02	.60	-.03	.48	-.03	.49
Coach Age									-.01	.31	-.00	.59
Coach Gender									-.10	.30	-.18	.10
Coach Years with Team									-.00	.95	-.01	.81
Coach License Level									.01	.46	.02	.38
Coach SL Trust/Inclusion											.11	.30
Coach SL Humility											-.04	.50
Coach SL Service											-.08	.29

Table 22 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
-2 Log Likelihood	440.6		438.3		415.0		395.1		392.9		390.8	
Chi ² Diff Test			2.30	.51	23.24	<.001	19.96	<.001	2.13	.71	2.18	.54
UN(1,1)	.00	.44	.00		.00	.36	.01	.16	.00	.35	.00	.43
Residual	.32	<.001	.32	<.001	.29	<.001	.26	<.001	.26	<.001	.26	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1; (3) No p-value is reported for Model 2's between coach variance estimate because it was identified as zero.

Table 23

Hierarchical Linear Modeling Results for Predicting Athletes' Incremental Learning Beliefs Using Coach and Athlete Demographic, Mastery Climate, and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	4.47	<.001	4.47	<.001	4.47	<.001	4.47	<.001	4.40	<.001	4.50	<.001
Athlete Age			.01	.75	.01	.82	.00	.97	-.04	.26	-.05	.21
Athlete Years with Team			.02	.41	.01	.57	.02	.51	.02	.44	.01	.60
Athlete Years with Coach			-.04	.07	-.04	.09	-.04	.10	-.03	.14	-.03	.22
Mastery Climate					.11	.07	.01	.93	.04	.59	.02	.75
Athlete-Reported Coach SL Trust/Inclusion							.05	.30	.06	.24	.06	.18
Athlete-Reported Coach SL Humility							-.02	.57	-.03	.42	-.03	.41
Athlete-Reported Coach SL Service							.11	.01	.11	.20	.11	.02
Coach Age									-.01	.02	-.01	.12
Coach Gender									-.02	.83	-.15	.16
Coach Years with Team									-.00	.88	-.01	.62
Coach License Level									.03	.10	.04	.09
Coach SL Trust/Inclusion											.17	.10
Coach SL Humility											-.07	.27
Coach SL Service											-.14	.07

Table 23 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
-2 Log Likelihood	443.7		440.8		437.6		421.9		414.6		408.0	
Chi ² Diff Test			2.88	.41	3.20	.07	15.76	.001	7.30	.12	6.55	.09
UN(1,1)	.01	.17	.01	.32	.01	.27	.01	.18	.00	.42	.00	
Residual	.31	<.001	.31	<.001	.31	<.001	.29	<.001	.29	<.001	.28	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1; (3) No p-value is reported for Model 6's between coach variance estimate because it was identified as zero.

Table 24

Hierarchical Linear Modeling Results for Predicting Athletes' Entity Ability Beliefs Using Coach and Athlete Demographic, Mastery Climate, and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	1.95	<.001	1.95	<.001	1.95	<.001	1.95	<.001	1.97	<.001	1.92	<.001
Athlete Age			.03	.50	.03	.46	.03	.40	.09	.06	.09	.07
Athlete Years with Team			-.04	.21	-.03	.31	-.04	.28	-.03	.31	-.03	.40
Athlete Years with Coach			-.01	.74	-.01	.72	-.01	.70	-.02	.62	-.02	.53
Athlete-Perceived Mastery Climate					-.15	.05	-.05	.59	-.08	.37	-.07	.45
Athlete-Reported Coach SL Trust/Inclusion							-.04	.51	-.05	.46	-.05	.41
Athlete-Reported Coach SL Humility							-.01	.80	-.01	.87	-.01	.86
Athlete-Reported Coach SL Service							-.09	.12	-.09	.13	-.09	.12
Coach Age									.01	.28	.00	.49
Coach Gender									.08	.50	.15	.28
Coach Years with Team									-.03	.27	-.03	.36
License Level									-.04	.13	-.04	.17
Coach SL Trust/Inclusion											-.07	.69
Coach SL Humility											.02	.78
Coach SL Service											.08	.39

Table 24 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
-2 Log Likelihood	566.2		563.4		559.7		550.8		546.8		545.6	
Chi ² Diff Test			2.80	.42	3.70	.05	8.83	.03	3.99	.41	1.20	.75
UN(1,1)	.01	.34	.00	.42	.00	.48	.00	.38	.00		.00	
Residual	.51	<.001	.51	<.001	.50	<.001	.48	<.001	.48	<.001	.48	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1; (3) No p-value is reported for Model 5 and Model 6's between coach variance estimate because it was identified as zero.

Table 25

Hierarchical Linear Modeling Results for Predicting Athletes' Ego Orientation Using Coach and Athlete Demographic, Mastery Climate, and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	2.01	<.001	2.01	<.001	2.01	<.001	2.01	<.001	1.96	<.001	2.02	<.001
Athlete Age			.04	.34	.04	.33	.05	.25	.08	.18	.11	.07
Athlete Years with Team			-.01	.88	.00	.94	-.00	.98	.00	.90	.01	.85
Athlete Years with Coach			-.07	.05	-.07	.05	-.07	.04	-.07	.04	-.08	.04
Athlete-Perceived Mastery Climate					-.15	.10	-.04	.73	-.04	.69	-.05	.63
Athlete-Reported Coach SL Trust/Inclusion							-.12	.09	-.12	.10	-.12	.10
Athlete-Reported Coach SL Humility							.06	.25	.06	.25	.07	.20
Athlete-Reported Coach SL Service							-.04	.53	-.04	.51	-.05	.43
Coach Age									-.00	.80	.00	.96
Coach Gender									.11	.44	.11	.52
Coach Years with Team									-.02	.54	-.02	.52
Coach License Level									-.02	.50	-.05	.18
Coach SL Trust/Inclusion											-.16	.30
Coach SL Humility											-.11	.23
Coach SL Service											.11	.35

Table 25(continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
-2 Log Likelihood	644.1		638.4		635.6		630.1		628.4		626.0	
Chi ² Diff Test			5.71	.13	2.76	.10	5.52	.14	1.70	.79	2.46	.48
UN(1,1)	.00	.43	.00		.00		.00		.00		.00	
Residual	.69	<.001	.68	<.001	.67	<.001	.66	<.001	.66	<.001	.65	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1; (3) No p-value is reported for Model 2-6's between coach variance estimate because it was identified as zero.

Table 26

Hierarchical Linear Modeling Results for Predicting Athletes' Somatic Trait Anxiety Using Coach and Athlete Demographic, Mastery Climate, and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	1.62	<.001	1.62	<.001	1.62	<.001	1.62	<.001	1.74	<.001	1.69	<.001
Athlete Age			.03	.51	.03	.51	.03	.43	.04	.39	.03	.54
Athlete Years with Team			-.01	.63	-.01	.65	-.02	.60	-.03	.40	-.02	.49
Athlete Years with Coach			.02	.43	.02	.44	.02	.50	.02	.55	.02	.59
Athlete-Perceived Mastery Climate					-.01	.87	.06	.52	.03	.71	.05	.57
Athlete-Reported Coach SL Trust/Inclusion							-.07	.21	-.07	.20	-.08	.17
Athlete-Reported Coach SL Humility							.05	.29	.05	.29	.04	.35
Athlete-Reported Coach SL Service							-.04	.50	-.03	.56	-.03	.56
Coach Age									.02	.01	.01	.03
Coach Gender									-.18	.13	-.14	.30
Coach Years with Team									-.01	.62	-.01	.75
Coach License Level									.01	.57	.02	.42
Coach SL Trust/Inclusion											.05	.67
Coach SL Humility											.02	.75
Coach SL Service											.03	.76

Table 26 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
-2 Log Likelihood	530.1		529.0		528.9		525.5		517.1		515.3	
Chi ² Diff Test			1.16	.76	.03	.86	3.47	.33	8.34	.08	1.79	.62
UN(1,1)	.02	.14	.02	.16	.02	.16	.02	.11	.00	.48	.00	
Residual	.43	<.001	.43	<.001	.43	<.001	.42	<.001	.43	<.001	.42	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1; (3) No p-value is reported for Model 6's between coach variance estimate because it was identified as zero.

Table 27

Hierarchical Linear Modeling Results for Predicting Athletes' Worry Trait Anxiety Using Coach and Athlete Demographic, Mastery Climate, and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	2.34	<.001	2.34	<.001	2.34	<.001	2.34	<.001	2.54	<.001	2.52	<.001
Athlete Age			-.03	.60	-.02	.62	-.02	.77	.02	.71	.06	.33
Athlete Years with Team			-.00	.99	.01	.83	.01	.84	-.01	.88	.00	.92
Athlete Years with Coach			-.02	.65	-.02	.62	-.03	.38	-.03	.42	-.04	.34
Athlete-Perceived Mastery Climate					-.16	.10	-.08	.47	-.11	.33	-.09	.42
Athlete-Reported Coach SL Trust/Inclusion							-.21	.01	-.22	.004	-.23	.002
Athlete-Reported Coach SL Humility							.12	.04	.13	.03	.12	.04
Athlete-Reported Coach SL Service							.08	.23	.08	.25	.07	.31
Coach Age									.01	.08	.02	.07
Coach Gender									-.24	.14	-.16	.34
Coach Years with Team									-.08	.04	-.07	.06
Coach License Level									-.01	.85	-.03	.41
Coach SL Trust/Inclusion											-.10	.52
Coach SL Humility											-.15	.13
Coach SL Service											.22	.07

Table 27 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
-2 Log Likelihood	669.1		668.4		665.6		653.6		646.6		640.4	
Chi ² Diff Test			.71	.87	2.79	.10	11.99	.01	7.04	.13	6.18	.10
UN(1,1)	.01	.30	.01	.30	.01	.30	.03	.17	.01	.34	.00	
Residual	.76	<.001	.75	<.001	.75	<.001	.70	<.001	.70	<.001	.69	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1; (3) No p-value is reported for Model 6's between coach variance estimate because it was identified as zero.

Table 28

Hierarchical Linear Modeling Results for Predicting Athletes' Concentration Disruption Trait Anxiety Using Coach and Athlete Demographic, Mastery Climate, and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	1.43	<.001	1.43	<.001	1.43	<.001	1.43	<.001	1.48	<.001	1.42	<.001
Athlete Age			.01	.79	.01	.76	.02	.60	.00	.93	-.00	.93
Athlete Years with Team			-.01	.65	-.01	.82	-.01	.66	-.02	.57	-.01	.62
Athlete Years with Coach			-.02	.43	-.02	.40	-.02	.33	-.02	.33	-.03	.31
Athlete-Perceived Mastery Climate					-.11	.09	.01	.86	.01	.84	.02	.78
Athlete-Reported Coach SL Trust/Inclusion							-.12	.02	-.12	.02	-.12	.02
Athlete-Reported Coach SL Humility							.04	.27	.04	.29	.04	.32
Athlete-Reported Coach SL Service							-.04	.38	-.04	.36	-.04	.38
Coach Age									.00	.49	.00	.76
Coach Gender									-.15	.20	-.10	.44
Coach Years with Team									-.03	.33	-.02	.41
Coach License Level									.03	.17	.04	.15
Coach SL Trust/Inclusion											.00	.10
Coach SL Humility											.06	.43
Coach SL Service											.02	.84

Table 28 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
-2 Log Likelihood	453.7		452.2		449.3		438.6		434.1		433.0	
Chi ² Diff Test			1.54	.67	2.85	.09	10.72	.01	4.51	.34	1.03	.79
UN(1,1)	.01	.16	.01	.17	.01	.22	.02	.12	.01	.21	.01	.25
Residual	.32	<.001	.32	<.001	.32	<.001	.30	<.001	.30	<.001	.30	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1.

Table 29

Hierarchical Linear Modeling Results for Predicting Athletes' Mastery Climate Using Coach and Athlete Demographic and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>Predictor</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	4.29	<.001	4.29	<.001	4.30	<.001	4.44	<.001	4.53	<.0001
Athlete age			.02	.64	-.01	.66	.03	.37	.04	.27
Athlete years with team			.06	.04	.05	.02	.05	.04	.04	.11
Athlete years with coach			-.01	.60	.00	.84	.00	.99	.00	.82
Athlete-Reported Coach SL Trust/Inclusion					.29	<.001	.27	<.001	.27	<.0001
Athlete-Reported Coach SL Humility					-.00	.94	.01	.81	.01	.69
Athlete-Reported Coach SL Service					-.01	.80	-.01	.77	-.01	.77
Coach age							.01	.03	.01	.01
Coach Gender							-.05	.59	-.13	.18
Coach years with team							-.01	.54	-.02	.31
Coach License level							-.05	.10	-.06	.01
Coach SL Trust/Inclusion									-.02	.84
Coach SL Humility									-.03	.53
Coach SL Service									-.07	.28
-2 Log Likelihood	443.8		438.3		359.5		349.8		343.6	

Table 29 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Chi ² Diff Test			5.54	.14	78.73	<.001	9.70	.05	6.23	.10
UN(1,1)	.03	.04	.03	.04	.01	.11	.00	.38	.00	
Residual	.30	<.001	.30	<.001	.22	<.001	.22	<.001	.22	<.0001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1; (3) No p-value is reported for Model 6's between coach variance estimate because it was identified as zero.

Table 30

Hierarchical Linear Modeling Results for Predicting Athletes' Coping with Adversity Using Coach and Athlete Demographic, Performance Climate, and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	2.69	<.001	2.69	<.001	2.93	<.001	2.84	<.001	2.99	<.001
Athlete Age			-.06	.11	-.06	.11	-.05	.24	-.05	.27
Athlete Years with Team			.04	.18	.04	.18	.04	.13	.03	.30
Athlete Years with Coach			-.05	.07	-.06	.04	-.06	.04	-.05	.06
Athlete-Perceived Performance Climate					-.12	.05	-.10	.10	-.11	.07
Coach Age							-.01	.30	-.00	.73
Coach Gender							.16	.16	.02	.84
Coach Years with Team							.04	.19	.02	.39
Coach License Level							-.04	.12	-.04	.11
Coach SL Trust/Inclusion									.00	1.00
Coach SL Humility									-.04	.56
Coach SL Service									-.13	.12
-2 Log Likelihood	506.8		500.8		497.0		490.4		481.1	
Chi ² Difference Test			6.05	.11	3.76	.05	6.66	.16	9.28	.03

Table 30 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
UN(1,1)	.03	.08	.02	.18	.01	.26	.00	.36	.00	
Residual	.39	<.001	.39	<.001	.39	<.001	.38	<.001	.37	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1; (3) No p-value is reported for Model 5's between coach variance estimate because it was identified as zero.

Table 31

Hierarchical Linear Modeling Results for Predicting Athletes' Performance Under Pressure Using Coach and Athlete Demographic, Performance Climate, and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	2.70	<.001	2.70	<.001	2.98	<.001	3.06	<.001	3.18	<.001
Athlete Age			.03	.56	.04	.44	.07	.29	.12	.03
Athlete Years with Team			.04	.26	.04	.26	.04	.28	.04	.24
Athlete Years with Coach			-.06	.06	-.07	.04	-.07	.04	-.07	.02
Athlete-Perceived Performance Climate					-.14	.06	-.14	.06	-.13	.07
Coach Age							.00	.57	.01	.26
Coach Gender							-.09	.59	-.11	.46
Coach Years with Team							-.10	.02	-.09	.01
Coach License Level							-.01	.75	-.07	.03
Coach SL Trust/Inclusion									-.46	.003
Coach SL Humility									-.26	.01
Coach SL Service									.26	.02
-2 Log Likelihood	563.4		559.6		556.2		550.5		536.6	
Chi ² Difference Test			3.80	.28	3.39	.07	5.71	.22	13.89	.003

Table 31 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
UN(1,1)	.07	.03	.07	.03	.09	.02	.07	.03	.01	.30
Residual	.47	<.001	.46	<.001	.45	<.001	.44	<.001	.45	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1.

Table 32

Hierarchical Linear Modeling Results for Predicting Athletes' Cognitive Sport Confidence Using Coach and Athlete Demographic, Performance Climate, and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	5.55	<.001	5.55	<.001	5.88	<.001	5.84	<.001	5.86	<.001
Athlete Age			-.06	.23	-.05	.28	-.06	.31	-.05	.46
Athlete Years with Team			-.00	.92	-.00	.91	-.00	.96	-.00	.10
Athlete Years with Coach			-.01	.86	-.01	.68	-.01	.81	-.01	.76
Athlete-Perceived Performance Climate					-.16	.04	-.16	.05	-.17	.05
Coach Age							-.01	.25	-.01	.31
Coach Gender							.05	.76	.06	.73
Coach Years with Team							-.02	.57	-.02	.61
Coach License Level							-.01	.78	-.02	.60
Coach SL Trust/Inclusion									-.07	.69
Coach SL Humility									-.05	.67
Coach SL Service									.06	.61
-2 Log Likelihood	627.9		626.2		622.1		619.6		619.2	
Chi ² Difference Test			1.70	.64	4.07	.04	2.58	.63	.36	.95

Table 32 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
UN(1,1)	.04	.12	.03	.15	.03	.14	.02	.23	.02	.22
Residual	.63	<.001	.63	<.001	.62	<.001	.62	<.001	.62	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1.

Table 33

Hierarchical Linear Modeling Results for Predicting Athletes' Resilience Sport Confidence Using Coach and Athlete Demographic, Performance Climate, and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	5.29	<.001	5.28	<.001	5.76	<.001	5.75	<.001	5.84	<.001
Athlete Age			-.13	.03	-.12	.04	-.16	.01	-.15	.03
Athlete Years with Team			.02	.59	.02	.63	.02	.63	.01	.84
Athlete Years with Coach			-.01	.89	-.02	.66	-.00	.92	-.00	.96
Athlete-Perceived Performance Climate					-.24	.01	-.23	.02	-.25	.01
Coach Age							-.02	.05	-.02	.08
Coach Gender							-.03	.86	-.08	.68
Coach Years with Team							.00	.96	-.01	.86
Coach License Level							.00	.99	-.01	.81
Coach SL Trust/Inclusion									-.14	.44
Coach SL Humility									.03	.79
Coach SL Service									-.06	.62
-2 Log Likelihood	733.4		728.9		722.9		717.8		713.6	
Chi ² Difference Test			4.46	.22	6.05	.01	5.13	.27	4.14	.25

Table 33 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
UN(1,1)	.04	.14	.02	.259	.01	.342	.00			.00
Residual	.95	<.001	.95	<.001	.93	<.001	.93	<.001	.91	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1; (3) No p-value is reported for Model 5 and Model 6's between coach variance estimates since it was identified as zero.

Table 34

Hierarchical Linear Modeling Results for Predicting Athletes' Team Performance Satisfaction Using Coach and Athlete Demographic, Performance Climate, and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	5.46	<.001	5.46	<.001	6.08	<.001	6.39	<.001	6.25	<.001
Athlete Age			-.06	.40	-.05	.44	-.04	.58	-.08	.31
Athlete Years with Team			.00	.92	.00	.92	-.01	.80	-.01	.78
Athlete Years with Coach			.01	.89	-.01	.84	-.01	.77	-.01	.85
Athlete-Perceived Performance Climate					-.31	.003	-.30	.01	-.27	.01
Coach Age							.02	.05	.02	.13
Coach Gender							-.37	.06	-.32	.13
Coach Years with Team							-.02	.72	-.02	.71
Coach License Level							-.02	.64	.01	.87
Coach SL Trust/Inclusion									.10	.60
Coach SL Humility									.17	.16
Coach SL Service									-.08	.59
-2 Log Likelihood	763.1		762.5		753.8		747.5		745.4	
Chi ² Difference Test			.68	.88	8.68	.003	6.24	.18	2.10	.55

Table 34 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
UN (1,1)	.08	.06	.07	.08	.06	.11	.02	.29	.01	.42
Residual	1.04	<.001	1.04	<.001	1.02	<.001	1.02	<.001	1.02	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1.

Table 35

Hierarchical Linear Modeling Results for Predicting Athletes' Somatic Trait Anxiety Using Coach and Athlete Demographic, Performance Climate, and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	1.62	<.001	1.62	<.001	1.16	<.001	1.32	<.001	1.22	<.001
Athlete Age			.03	.51	.02	.60	.03	.52	.01	.90
Athlete Years with Team			-.01	.63	-.01	.65	-.02	.46	-.02	.54
Athlete Years with Coach			.02	.43	.03	.23	.03	.28	.03	.26
Athlete-Perceived Performance Climate					.23	<.001	.22	<.001	.23	<.001
Coach Age							.02	.01	.01	.04
Coach Gender							-.15	.17	-.13	.32
Coach Years with Team							-.00	.92	.00	.96
Coach License Level							.00	.86	.02	.42
Coach SL Trust/Inclusion									.12	.31
Coach SL Humility									.06	.40
Coach SL Service									-.03	.74
-2 Log Likelihood	530.1		529.0		517.1		509.5		506.7	
Chi ² Difference Test			1.16	.76	11.87	<.001	7.55	.11	2.85	.42

Table 35 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
UN(1,1)	.02	.14	.02	.16	.02	.13	.00		.00	
Residual	.43	<.001	.43	<.001	.41	<.001	.42	<.001	.41	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1; (3) No p-value is reported for Model 4 and Model 5's between coach variance estimates because it was identified as zero.

Table 36

Hierarchical Linear Modeling Results for Predicting Athletes' Worry Trait Anxiety Using Coach and Athlete Demographic, Performance Climate, and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	2.34	<.001	2.34	<.001	1.57	<.001	1.72	<.001	1.67	<.001
Athlete Age			-.03	.60	-.04	.39	-.01	.81	-.00	.96
Athlete Years with Team			-.00	.99	.00	.98	-.01	.85	.01	.85
Athlete Years with Coach			-.02	.65	.01	.85	.01	.85	.00	.98
Athlete-Perceived Performance Climate					.39	<.001	.39	<.001	.39	<.001
Coach Age							.01	.19	.01	.23
Coach Gender							-.17	.25	-.10	.53
Coach Years with Team							-.06	.08	-.05	.15
Coach License Level							-.01	.86	-.01	.75
Coach SL Trust/Inclusion								α	.02	.88
Coach SL Humility									-.08	.39
Coach SL Service									.14	.21
-2 Log Likelihood	669.1		668.4		646.6		641.8		636.2	
Chi ² Difference Test			.71	.87	21.76	<.001	4.89	.30	5.53	.14

Table 36 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
UN(1,1)	.01	.30	.01	.30	.00	.46	.00		.00	
Residual	.76	<.001	.75	<.001	.70	<.001	.69	<.001	.68	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1; (3) No p-value is reported for Model 4 and Model 5's between coach variance estimates because it was identified as zero.

Table 37

Hierarchical Linear Modeling Results for Predicting Athletes' Concentration Disruption Trait Anxiety Using Coach and Athlete Demographic, Performance Climate, and Servant Leadership Variables as Predictors.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	1.43	<.001	1.43	<.001	1.02	<.001	1.07	<.001	1.00	<.001
Athlete Age			.01	.79	.00	.94	-.01	.76	-.03	.45
Athlete Years with Team			-.01	.65	-.01	.64	-.01	.60	-.01	.61
Athlete Years with Coach			-.02	.43	-.01	.75	-.01	.72	-.01	.75
Athlete-Perceived Performance Climate					.21	<.001	.19	.001	.20	<.001
Coach Age							.00	.72	-.00	.97
Coach Gender							-.10	.40	-.07	.61
Coach Years with Team							-.01	.65	-.01	.70
Coach License Level							.03	.23	.04	.10
Coach SL Trust/Inclusion									.06	.59
Coach SL Humility									.10	.19
Coach SL Service									-.04	.62
-2 Log Likelihood	453.7		452.2		439.8		437.5		435.5	
Chi ² Difference Test			1.54	.67	12.36	<.001	2.30	.68	2.00	.57

Table 37 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
UN(1,1)	.01	.17	.01	.17	.02	.10	.01	.14	.01	.19
Residual	.32	<.001	.32	<.001	.30	<.001	.30	<.001	.30	<.001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1

Table 38

Hierarchical Linear Modeling Results for Predicting Athletes' Performance Climate Using Coach and Athlete Demographic, Coach-Reported Servant Leadership Variables, and Athlete-Reported Coach Servant Leadership Variables.

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Intercept	1.98	<.001	1.98	<.001	1.98	<.001	1.89	<.001	1.96	<.001
Athlete age			.03	.56	.05	.28	.03	.53	.07	.20
Athlete years with team			.01	.75	.01	.77	.01	.79	.01	.77
Athlete years with coach			-.05	.05	-.07	.01	-.07	.01	-.07	.01
Athlete-reported Coach SL Trust/Inclusion					-.22	<.001	-.21	<.001	-.21	<.001
Athlete-reported Coach SL Humility					-.02	.54	-.03	.45	-.03	.50
Athlete-reported Coach SL Service					.07	.13	.07	.14	.06	.18
Coach age							.00	.99	.00	.77
Coach Gender							-.04	.80	-.04	.78
Coach years with team							-.03	.34	-.03	.40
Coach License level							.05	.11	.02	.53
Coach SL Trust/Inclusion									-.19	.21
Coach SL Humility									-.17	.09
Coach SL Service									.16	.17
-2 Log Likelihood	475.1		470.8		440.9		436.9		432.9	

Table 38 (continued)

<i>Predictor</i>	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>	
	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>	<i>est</i>	<i>p</i>
Chi ² Diff Test			4.29	.23	29.88	<.001	3.95	.41	4.07	.25
UN(1,1)	.09	.003	.08	.004	.07	.004	.06	.007	.05	.011
Residual	.32	<.001	.31	<.001	.28	<.001	.28	<.001	.28	<.0001

Note. (1) No p-value is reported for the -2 Log Likelihood estimates; (2) No Chi² Difference test is reported for Model 1.

Appendix 1
IRB Protocol Approval

Appendix 1. IRB Protocol Approval

University of Idaho

Office of Research Assurance

Institutional Review Board

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To: Jennifer Knight
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University of Idaho
Moscow, ID 83844-2401

Dr. Damon Burton, Faculty Sponsor
University of Idaho
Moscow, ID 83844

From: Traci Craig, PhD
Chair, University of Idaho Institutional Review Board
University Research Office
Moscow Idaho 83844-3010

IRB No.: IRB00000813

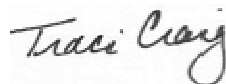
FWA: FWA00005639

Date: July 13, 2010

Project: Approval of "Examining the Mediating Role of Motivational Climate on the Relationships between Coaches' Leadership Variables and Athletes' Psychosocial Outcomes" Number 09-251, Approved July 12, 2010

On behalf of the Institutional Review Board at the University of Idaho, I am pleased to inform you that the above-named research project is approved as offering no significant risk to human subjects.

This approval is valid for one year from the approval date listed above. If you continue with the project after this time, you will need to request extension approval from the IRB committee. Should there be significant changes in the protocol for this project, it will be necessary for you to resubmit the protocol for review by the Committee.



Traci Craig

Appendix 2
Parental Consent Form

Appendix 2. Parental Consent Form.

**EXAMINING THE MEDIATING ROLE OF MOTIVATIONAL CLIMATE ON THE
RELATIONSHIP BETWEEN COACHES' LEADERSHIP VARIABLES AND
ATHLETES' PSYCHOSOCIAL OUTCOMES**

This study proposal was designed to investigate the influence of motivational climate on the relationship between coaches' leadership variables and athletes' cognitions and emotions. The investigator, Jennifer Knight, and faculty sponsor, Dr. Damon Burton, would appreciate your daughter's participation in this study designed to further our understanding of how the motivational climate created by coaches can influence athletes' competitive experience.

Study Proposal:

The purpose of the study is to examine the dynamics of the competitive sport environment through the interactions of coaching characteristics, motivational climate, and athletes' cognitions and emotions.

This study has been approved by the University of Idaho Institutional Review Board. The risks and discomforts that may occur are minimal and all responses are confidential. Your daughter is free to skip any question she does not feel comfortable answering. The potential benefits of participation in this study include a better understanding of motivational climate, both how coaches create it and how it influences athletes' sport experience. The results of this study may be published. Your daughter's identity will not be revealed in any way, and access to all data will be restricted to the researchers unless you grant prior approval. Any questions you have concerning this study may be referred to Jennifer Knight (knig2503@vandals.uidaho.edu) or Damon Burton (dburton@uidaho.edu) at any time. Completion of the questionnaire will require 10-20 minutes.

Participation in this study is on a volunteer basis. Your daughter may withdraw from the study or refuse to have her data included at any time without penalty. Data will remain confidential, which means that participant and team identity will be limited to the principal investigator. Data will be stored in a locked filing cabinet and a secure computer.

I have read the above information, and the nature, demands, risks, and benefits of the project have been explained to me. I knowingly assume the risks involved, and understand that my daughter may withdraw her consent and discontinue participation at any time without penalty or loss of benefit. In signing this consent form, I am not waiving any legal claims, rights or remedies and am certifying that I am at giving consent for my daughter to participate in this study.

Participant's Printed Name: _____

Parent's Printed Name: _____

Parent's Signature: _____ **Date:** _____

Appendix 3

Athlete Assent Form

Appendix 3. Athlete Assent Form

**EXAMINING THE MEDIATING ROLE OF MOTIVATIONAL CLIMATE ON THE
RELATIONSHIP BETWEEN COACHES' LEADERSHIP VARIABLES AND
ATHLETES' PSYCHOSOCIAL OUTCOMES**

This study proposal was designed to investigate the influence of motivational climate on the relationship between coaches' leadership variables and athletes' cognitions and emotions. The investigator, Jennifer Knight, and faculty sponsor, Dr. Damon Burton, would appreciate your participation in this study designed to further our understanding of how the motivational climate created by coaches can influence athletes' competitive experience.

Study Proposal:

The purpose of the study is to examine the dynamics of the competitive sport environment through the interactions of coaching characteristics, motivational climate, and athletes' cognitions and emotions.

This study has been approved by the University of Idaho Institutional Review Board. The risks and discomforts that may occur are minimal because all responses are confidential. You are free to skip any question you do not feel comfortable answering. The potential benefits of participation in this study include a better understanding of motivational climate, both how coaches create it and how it influences athletes' sport experience. The results of this study may be published. Your identity will not be revealed in any way, and access to all data will be restricted to the researchers unless you grant prior approval. Any questions you have concerning this study may be referred to Jennifer Knight (knig2503@vandals.uidaho.edu) or Damon Burton (dburton@uidaho.edu) at any time. Completion of the questionnaire will require 10-20 minutes of your time.

Participation in this study is on a volunteer basis. You may withdraw from the study or refuse to have your data included at any time without penalty. Data will remain confidential, which means that participant and team identity will be limited to the principal investigator. Data will be stored in a locked filing cabinet and a secure computer.

I have read the above information, and the nature, demands, risks, and benefits of the project have been explained to me. I knowingly assume the risks involved, and understand that I may withdraw my consent and discontinue participation at any time without penalty or loss of benefit to myself. In signing this assent form, I am not waiving any legal claims, rights or remedies and am certifying that I am at least 18 years of age or am providing a parental consent form.

Participant's Printed Name: _____

Participant's Signature: _____ **Date:** _____

Appendix 4
Coach Consent Form

Appendix 4. Coach Consent Form

**EXAMINING THE MEDIATING ROLE OF MOTIVATIONAL CLIMATE ON THE
RELATIONSHIP BETWEEN COACHES' LEADERSHIP VARIABLES AND
ATHLETES' PSYCHOSOCIAL OUTCOMES**

This study proposal was designed to investigate the influence of motivational climate on the relationship between coaches' leadership variables and athletes' cognitions and emotions. The investigator, Jennifer Knight, and faculty sponsor, Dr. Damon Burton, would appreciate your participation in this study designed to further our understanding of how the motivational climate created by coaches can influence athletes' competitive experience.

Study Proposal:

The purpose of the study is to examine the dynamics of the competitive sport environment through the interactions of coaching characteristics, motivational climate, and athletes' cognitions and emotions.

This study has been approved by the University of Idaho Institutional Review Board. The risks and discomforts that may occur are minimal because all responses are confidential. You are free to skip any question you do not feel comfortable answering. The potential benefits of participation in this study include a better understanding of motivational climate, both how coaches create it and how it influences athletes' sport experience. The results of this study may be published. Your identity will not be revealed in any way, and access to all data will be restricted to the researchers unless you grant prior approval. Any questions you have concerning this study may be referred to Jennifer Knight (knig2503@vandals.uidaho.edu) or Damon Burton (dburton@uidaho.edu) at any time. Completion of the questionnaire will require 10-20 minutes of your time.

Participation in this study is on a volunteer basis. You may withdraw from the study or refuse to have your data included at any time without penalty. Data will remain confidential, which means that participant and team identity will be limited to the principal investigator. Data will be stored in a locked filing cabinet and a secure computer.

I have read the above information, and the nature, demands, risks, and benefits of the project have been explained to me. I knowingly assume the risks involved, and understand that I may withdraw my consent and discontinue participation at any time without penalty or loss of benefit to myself. In signing this consent form, I am not waiving any legal claims, rights or remedies and am certifying that I am at least 18 years of age.

Participant's Printed Name: _____

Participant's Signature: _____ **Date:** _____

Appendix 5
Study Hypotheses

Appendix 5. Study Hypotheses

Coach Hypotheses

Coach Hypothesis 1 (CH-1): Emotional intelligence core competencies should demonstrate a significant positive relationship with servant leadership.

Coach Hypothesis 2 (CH-2): Coaches' incremental beliefs about talent and task orientations should demonstrate a significant positive relationship with servant leadership characteristics.

Coach Hypothesis 3 (CH-3): Coaches' entity ability beliefs and ego orientations should reveal a significant negative relationship with servant leadership characteristics.

Coach-Athlete Hypotheses

Coach-Athlete Hypothesis 1 (CAH-1): Higher levels of servant leadership should be associated with greater mastery-oriented motivational climate perceptions.

Coach-Athlete Hypothesis 2 (CAH-2): Lower levels of servant leadership should be associated with greater athlete performance-oriented motivational climate perceptions.

Coach-Athlete Hypothesis 3 (CAH-3): Higher levels of servant leadership should demonstrate a significant positive relationship with higher levels of intrinsic motivation, incremental learning beliefs, sport confidence, task orientation, satisfaction, and coping with stress.

Coach-Athlete Hypothesis 4 (CAH-4): Higher levels of servant leadership should be negatively and significantly related with athletes' ego orientation, entity learning beliefs, and sport anxiety.

Athlete Hypotheses

Athlete Hypothesis 1 (AH-1): Perceptions of a mastery motivational climate should reveal a significant positive relationship with greater ability to cope with stress, sport confidence, athlete satisfaction, intrinsic motivation, task orientation, and incremental learning beliefs.

Athlete Hypothesis 2 (AH-2): Perceptions of a mastery motivational climate should demonstrate a significant negative relationship with sport anxiety, ego orientation, and entity learning beliefs.

Athlete Hypothesis 3 (AH-3): Athletes' perceptions of the coaches' servant leadership should show a significant positive relationship with mastery climate.

Athlete Hypothesis 4 (AH-4): Athletes' perceptions of coaches' servant leadership should reveal a significant positive relationship with coping with stress, sport confidence, athlete satisfaction, intrinsic motivation, incremental learning beliefs, and task motivation.

Athlete Hypothesis 5 (AH-5): Athletes' perceptions of coaches' servant leadership should demonstrate a significant negative relationship with sport anxiety, ego orientation, and entity learning beliefs.

Athlete Hypothesis 6 (AH-6): Perceptions of a performance motivational climate should show a significant negative with coping with stress, sport confidence, athlete satisfaction, intrinsic motivation, task orientation, and incremental learning beliefs.

Athlete Hypothesis 7 (AH-7): Perceptions of a performance motivational climate should reveal a significant positive relationship with sport anxiety, ego orientation, and entity learning beliefs.

Athlete Hypothesis 8 (AH-8): Athletes' perceptions of the coaches' servant leadership should demonstrate a significant negative relationship with performance climate.

Appendix 6

Athletic Coping with Sport Inventory – 28 (ACSI-28)

Appendix 6. Athletic Coping with Sport Inventory – 28 (ACSI-28)

REACTIONS TO COMPETITION QUESTIONNAIRE

(Subscales: Coping with Adversity (CWA); Peaking under Pressure (PUP))

1=NOT AT ALL

2= SOMEWHAT

3= MODERATELY SO

4= VERY MUCH SO

How often do you experience each of these reactions? Circle your answer.

1. I maintain emotional control no matter how things are going for me
2. When things are going badly, I tell myself to keep calm and this works for me.
3. When I feel myself getting too tense, I can quickly relax my body and calm myself.
4. I remain positive and enthusiastic during competition, no matter how badly things are going during competition.
5. To me, pressure situations are challenges that I welcome.
6. The more pressure there is during a game, the more I enjoy it.
7. I tend to play better under pressure because I think more clearly.
8. I make fewer mistakes when the pressure's on because I concentrate better.

Scoring Key:

Coping with Adversity: Items 1, 2, 3, 4;

Peaking under Pressure: Items 5, 6, 7, 8

Appendix 7

Sport Confidence Inventory (SCI)

Appendix 7. Sport Confidence Inventory (SCI)

REACTIONS TO COMPETITION-2

- 1=CAN'T DO AT ALL**
2=VERY UNCERTAIN
3=FAIRLY UNCERTAIN
4=MAYBE I CAN
5=FAIRLY CERTAIN
6=VERY CERTAIN
7=TOTALLY CERTAIN

How certain are you that....

1. You can execute the physical skills necessary to succeed?
2. You can keep mentally focused throughout the competition?
3. You can bounce back from performing poorly to successfully execute your skills?
4. Your physical training has prepared you enough to succeed?
5. You can successfully make critical decisions during competition?
6. You can regain your mental focus after a performance error?
7. Your physical fitness level will allow you to compete successfully?
8. You can effectively use strategies needed to succeed?
9. You can overcome doubt after a poor performance?
10. You can successfully perform the physical skills required in your sport?
11. You can maintain the mental focus needed to perform successfully?
12. You can overcome problems and setbacks to perform successfully?
13. You have the physical preparation that is needed to compete successfully?
14. You can successfully manage your nervousness so that it doesn't hurt your performance?

Scoring Key:

Physical Subscale: 1, 4, 7, 10, 13.

Mental Subscale: 2, 5, 8, 11, 14.

Resilience Subscale: 3, 6, 9, 12.

Appendix 8

Conceptions of the Nature of Athletic Ability Questionnaire - Version 2 (CNAAQ-2)

Appendix 8. Conceptions of the Nature of Athletic Ability Questionnaire - Version 2
(CNAAQ-2)

BELIEFS ABOUT COMPETITION

1 = NOT AT ALL

2 = A LITTLE BIT

3 = SOMEWHAT

4 = MODERATELY SO

5 = VERY MUCH SO

How often do you experience each of these reactions? Circle your answer

1. You have a certain level of talent and you cannot really do much to change that level.
2. Even if you try hard, the skills or knowledge level you reach will change very little.
3. It is difficult to change how good you are at anything.
4. To be successful, you need to develop knowledge, techniques and skills, and practice them regularly.
5. You need to learn and work hard to be good.
6. To reach a high level of performance you must go through periods of learning and training.
7. You need to have certain “gifts” to be good at anything.
8. To be good at anything you need to be naturally gifted.
9. To be good at anything, you need to be born with basic qualities, which allow you to succeed.
10. If you work hard at it, you will always get better.
11. How good you are at anything always improves if you work hard at it.
12. If you put enough effort into it, you will always get better.

Scoring Key:

Incremental Learning Beliefs: Items 4, 5, 6, 10, 11, 12

Entity Learning Beliefs: Items 1, 2, 3, 7, 8, 9

Appendix 9

Task and Ego Orientation in Sport Questionnaire (TEOSQ)

Appendix 9. Task and Ego Orientation in Sport Questionnaire (TEOSQ)

SUCCESS IN SPORT QUESTIONNAIRE**1 = STRONGLY DISAGREE****2 = DISAGREE****3 = NEITHER AGREE NOR DISAGREE****4 = AGREE****5 = STRONGLY AGREE****When do you feel most successful in sports? In other words, when do you feel a sport activity has gone really good for you? Circle your answer**

1. I'm the only one who can do the play or skill.
2. I learn a new skill and it makes me want to practice more.
3. I can do better than my friends.
4. The others can't do as well as me.
5. I learn something that is fun to do.
6. Others mess-up and I don't.
7. I learn a new skill by trying hard.
8. I work really hard.
9. I score the most points/goals/hits.
10. Something I learn makes me want to go and practice more.
11. I'm the best.
12. A skill I learn really feels right.
13. I do my very best.

Scoring Key:

Task Orientation: Items 2, 5, 7, 8, 10, 12, 13

Ego Orientation: Items 1, 3, 4, 6, 9, 11

Appendix 10

Sport Motivation Scale-6 (SMS-6)

Appendix 10. Sport Motivation Scale-6 (SMS-6)

SPORT MOTIVATION SCALE**1 = DOES NOT CORRESPOND AT ALL****2 = CORRESPONDS VERY LITTLE****3 = CORRESPONDS SOMEWHAT****4 = CORRESPONDS MODERATELY****5 = CORRESPONDS QUITE A BIT****6 = CORRESPONDS A GREAT DEAL****7 = CORRESPONDS EXACTLY****How often does each statement correspond to reasons for your participation in the sport? Circle your answer**

1. For the excitement I feel when I am really involved in the activity
2. Because it's part of the way in which I've chosen to live my life
3. Because it is a good way to learn lots of things which could be useful to me in other areas of my life
4. Because it allows me to be well regarded by people that I know
5. Because I feel a lot of personal satisfaction while mastering certain difficult training techniques
6. Because it is absolutely necessary to do sports if one wants to be in shape
7. Because it is one of the best ways I have chosen to develop other aspects of my life
8. Because it is an extension of me
9. Because I must do sports to feel good about myself
10. For the prestige of being an athlete
11. Because participation in my sport is consistent with my deepest principles
12. For the satisfaction I experience while I am perfecting my abilities
13. Because it is one of the best ways to maintain good relationships with my friends
14. Because I would feel bad if I was not taking time to do it
15. For the pleasure of discovering new performance strategies
16. For the material and/or social benefits of being an athlete
17. Because training hard will improve my performance
18. Because participation in my sport is an integral part of my life
19. Because I must do sports regularly
20. To show others how good I am at my sport

Scoring Key:

External Regulation: Items 4, 10, 16, 20

Introjected Regulation: Items 6, 9, 14, 19

Identified Regulation: Items 3, 7, 13, 17

Integrated Regulation: Items 2, 8, 11, 18

Intrinsic Motivation: Items 1, 5, 12, 15

Appendix 11

Athlete Satisfaction Questionnaire (ASQ)

Appendix 11. Athlete Satisfaction Questionnaire (ASQ)

SPORT SATISFACTION QUESTIONNAIRE**1 = NOT AT ALL SATISFIED****2 = A LITTLE BIT SATISFIED****3 = SOMEWHAT SATISFIED****4 = MODERATELY SATISFIED****5 = A LOT SATISFIED****6 = VERY MUCH SATISFIED****7 = EXTREMELY SATISFIED****How satisfied are you in the following situations? Circle your answer**

1. The degree of which I have reached my performance goals during the season.
2. The improvement in my performance over the previous season.
3. The improvement in my skill level thus far.
4. The team's win/loss record this season.
5. The team's overall performance this season.
6. The extent to which the team has met its goals for the season thus far.

Scoring Key:

Individual Performance: Items 1, 2, 3

Team Performance: Items 4, 5, 6

Appendix 12

Sport Anxiety Scale-2 (SAS-2)

Appendix 12. Sport Anxiety Scale-2 (SAS-2)

REACTIONS TO COMPETITION-2

- 1 = NOT AT ALL**
2 = A LITTLE BIT
3 = PRETTY MUCH SO
4 – VERY MUCH SO

How often do you experience each of these reactions before or while you compete in sport? Circle your answer

1. It is hard to concentrate on the game.
2. My body feels tense.
3. I worry that I will not play well.
4. It is hard for me to focus on what I am supposed to do.
5. I worry that I will let others down.
6. I feel tense in my stomach.
7. I lose focus on the game.
8. I worry that I will not play my best.
9. I worry that I will play badly.
10. My muscles feel shaky.
11. I worry that I will mess up during the game.
12. My stomach feels upset.
13. I cannot think clearly during the game.
14. My muscles feel tight because I am nervous.
15. I have a hard time focusing on what my coach tells me to do.

Scoring Key:

Somatic: Items 2, 6, 10, 12, 14

Worry: Items 3, 5, 8, 9, 11

Concentration Disruption: Items 1, 4, 7, 13, 15

Appendix 13

Perceived Motivational Climate in Sport Questionnaire-2 (PMCSQ-2)

Appendix 13. Perceived Motivational Climate in Sport Questionnaire-2 (PMCSQ-2)

SPORT CONTEXT QUESTIONNAIRE**1 = NOT AT ALL TRUE****2 = A LITTLE TRUE****3 = SOMEWHAT TRUE****4 = A LOT TRUE****5 = VERY TRUE****How often do you experience each of these reactions? Circle your answer**

1. Players feel good when they try their best.
2. The coach gets mad when a player makes a mistake.
3. The coach has his/her favorites.
4. Each player contributes in some important way.
5. Players are 'psyched' when they do better than their teammates in a game.
6. The players are encouraged to work on their weaknesses.
7. Players help each other learn.
8. The coach yells at players for messing up.
9. The coach gives most of his/her attention to the 'stars.'
10. Each player has an important role.
11. Players are encouraged to outplay their own teammates.
12. The coach makes sure players improve on skills they're not good at.
13. Players feel successful when they improve.
14. Players are punished when they make a mistake.
15. The coach favors some players more than others.
16. The coach believes that all of the players are crucial to the success of the team.
17. The coach praises players only when they outplay teammates.
18. The focus is to improve each game/practice.
19. Trying hard is rewarded.
20. Players are taken out of games for mistakes.
21. The coach makes it clear who he/she thinks are the best players.
22. Players at all skill levels have an important role on this team.
23. The coach emphasizes always trying your best.
24. Players help each other to get better and excel.
25. Players are afraid to make mistakes.
26. Only the top players 'get noticed' by the coach.
27. The players really 'work together' as a team.
28. Only the players with the best 'skills' get praised.
29. The coach encourages players to help each other learn.

Scoring Key:

Mastery Climate: Items 1, 4, 6, 7, 10, 12, 13, 16, 18, 19, 22, 23, 24, 27, 29

Performance Climate: Items 2, 3, 5, 8, 9, 11, 14, 15, 17, 20, 21, 25, 26, 28

Appendix 14

Revised Servant Leadership Profile for Sport (RSLP-S)

Appendix 14. Revised Servant Leadership Profile for Sport (RSLP-S)

SPORT LEADERSHIP SKILLS

- 1 = STRONGLY DISAGREE**
2 = MODERATELY DISAGREE
3 = SLIGHTLY DISAGREE
4 = NEUTRAL
5 = SLIGHTLY AGREE
6 = MODERATELY AGREE
7 = STRONGLY AGREE

In evaluating my leadership skills...

1. I inspire team spirit by communicating enthusiasm and confidence
2. I listen actively and receptively to others.
3. I practice plain talking (mean what I say and say what I mean)
4. I always keep promises and commitments to others.
5. I grant the athletes a fair amount of responsibility.
6. I willingly accept other's ideas whenever they are better than my own.
7. I promote tolerance, kindness, and honesty.
8. I promote a climate of trust/openness to facilitate participation in decision making.
9. I want to build trust through honesty and empathy.
10. I devote a lot of energy to promoting trust, mutual understanding and team spirit.
11. I have the courage to assume full responsibility for my mistakes
12. I believe that the leader should not be front and center.
13. I am not primarily concerned with always having full authority.
14. I do not have my name attached to every initiative.
15. I allow subordinates to have some control.
16. I do not look at my position as one of power.
17. I do not have to be seen as superior to the athletes in everything.
18. I serve others and do not expect anything in return.
19. I am willing to make personal sacrifices in serving others.
20. I find enjoyment in serving others in whatever role or capacity.
21. I have a heart to serve others.
22. I take great satisfaction in bringing out the best in others.

Scoring Key:

Trust/Inclusion: Items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

Humility: Items 12, 13, 14, 15, 16, 17

Service: Items 18, 19, 20, 21, 22

Appendix 15

Wong and Law Emotional Intelligence Scale (WLEIS)

Appendix 15. Wong and Law Emotional Intelligence Scale (WLEIS)

1 = STRONGLY DISAGREE **2 = MODERATELY DISAGREE**

3 = SLIGHTLY DISAGREE

4 = NEUTRAL

5 = SLIGHTLY AGREE

6 = MODERATELY AGREE

7 = STRONGLY AGREE

SPORT LEADERSHIP-2

1. I have a good sense of why I have certain feelings most of the time
2. I have good understanding of my own emotions.
3. I really understand what I feel.
4. I always know whether or not I am happy.
5. I always know my friends' emotions from their behavior.
6. I am a good observer of others' emotions.
7. I am sensitive to the feelings and emotions of others.
8. I have good understanding of the emotions of people around me.
9. I always set goals for myself and then try my best to achieve them.
10. I always tell myself I am a competent person.
11. I am a self-motivated person.
12. I would always encourage myself to try my best.
13. I am able to control my temper and handle difficulties rationally.
14. I am quite capable of controlling my own emotions.
15. I can always calm down quickly when I am very angry.
16. I have good control of my own emotions.

Scoring Key:

Self-Emotional Appraisal: Items 1, 2, 3, 4

Others' Emotional Appraisal: Items 5, 6, 7, 8

Use of Emotion: Items 9, 10, 11, 12

Self-Regulation of Emotion: Items 13, 14, 15, 16