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THE RELATIONSHIP BETWEEN SERVANT  
LEADER COACH BEHAVIORS  
AND ACHIEVEMENT GOALS IN  
COLLEGIATE TENNIS PLAYERS: THE  
MEDIATING EFFECT OF MOTIVATIONAL  
CLIMATE

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THE RELATIONSHIP BETWEEN SERVANT LEADER COACH BEHAVIORS AND  
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EFFECT OF MOTIVATIONAL CLIMATE

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Eastern Washington University

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In Partial Fulfillment of the Requirements

For the Degree

Master of Science

In Physical Education

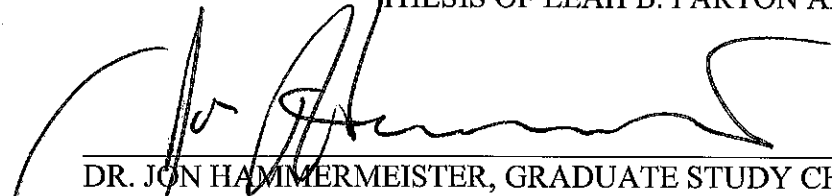
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By

Leah Broker-Newell Parton

Fall 2016

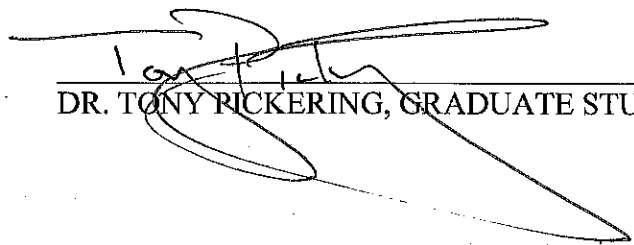
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## **Chapter 1**

### **Introduction**

In sport, there are athletes that seek challenges, stay late after practice, and are highly motivated to improve; while other athletes exhibit minimal effort, avoid challenging activities, and are not intrinsically motivated. What differentiates these athletes? Achievement motivation is one way to explain these differences. High achievement motivation is usually viewed as a desirable characteristic, because it is associated with a number of positive characteristics in sport including high intrinsic motivation (Wang, Liu, Lochbaum, & Stevenson, 2009), enjoyment (Puente-Diaz, 2013), increased number of minutes devoted to practice time (Ntoumanis, Thorgersen-Ntoumani, & Smith, 2009), and even enhanced performance (Elliot, Cury, Fryer, & Huguet, 2006).

Achievement behaviors tend to thrive in positive motivational climates – which can be defined as the psychological environment a leader creates by providing instruction and feedback. The type of climate produced is based on the skill of the leader and is usually dichotomized into either a) mastery-focused (where intra-personal improvement is emphasized) or b) performance focused (where social comparison is emphasized; Ames, 1992a). In sport settings, the coach plays a key role in determining both motivational climate as well as the achievement-related behaviors of his/her athletes. Thus, coaches that emphasize athlete empowerment, democratic coaching behaviors, and place less emphasis on the traditional autocratic, fear-based coaching methods should result in the generation of more adaptive motivational climates.

The servant leader model (Greenleaf, 1977) is one based on teamwork and community, one that seeks to involve others in decision making, one strongly based in

ethical and caring behaviors, and one that attempts to enhance the personal growth of subordinates while improving the caring and quality of institutions (Spears, 1998). This model has been proposed to be well suited for coaches as a framework to enhance both motivational climate and the achievement behaviors of their athletes. Thus, the purpose of this study is to examine the relationships among servant leader coach behavior, achievement motivation, and motivational climate.

### **Achievement Goals**

Motivated behavior is influenced by an individual's cognitions pertaining to the meaning of achievement (Brustad, 1992). Currently, Elliot's 3x2 achievement goal framework (Elliot, Murayama, & Pekrun, 2011) is a widely accepted model which uses achievement goals to explain achievement behavior. Original conceptualizations of the achievement goal construct (e.g., Dweck, 1986; Nicholls, 1984) distinguished between two distinct types of goals which explained achievement behavior: mastery, in which the purpose is to develop competence and task mastery, and performance, in which the purpose is to demonstrate competence. Later, Elliot (1999) proposed a set of achievement goal models that extended this dichotomous model through the incorporation of approach and avoidance goals into a "trichotomous model," consisting of mastery, performance-approach, and performance-avoidance goals. Further, the trichotomous model was extended so that both performance and mastery goals were intersected by approach-avoidance domains, leading to a "2x2" model (see Appendix A) with four possible sets of achievement goals (e.g., approach mastery, avoid mastery, approach performance, avoid performance; Elliot & McGregor, 2001).

The achievement goal construct is based on the central idea of competence (Elliot & McGregor, 2001). For example, a mastery-approach goal is focused on the attainment of task-based or self-based competence. A mastery-avoidance goal is focused on the avoidance of task-based or self-based incompetence. A performance-approach goal is focused on the attainment of other-based competence, and a performance avoidance goal is focused on the avoidance of other-based incompetence. When achievement goals are conceptualized in this manner, it becomes clear that mastery-based goals contain two different standards for evaluation: task-based competence and self-based competence.

More recently, Elliot and colleagues (2011) extended the 2x2 model into a 3x2 model (see Appendix B) in which the achievement based goals are split into task-, self-, and other-based. Task-based goals refer to the absolute demands of the task (i.e., doing well relative to the task requirement); self-based goals use one's own intrapersonal trajectory for evaluation (i.e., doing well relative to past experience); and other-based goals focus on an interpersonal evaluative standard (i.e., doing well in comparison to others; Elliot et al., 2011). Thus, blending these dimensions together creates six different approaches: task-approach goal (e.g., 'Do the task correctly'), self-approach goal (e.g., 'Do better than before'), other-approach goal (e.g., 'Do better than others'), task-avoidance goal (e.g., 'Avoid doing the task incorrectly'), self-avoidance goal (e.g., 'Avoid doing worse than before'), and other-avoidance goal (e.g., 'Avoid doing worse than others').

In both academic and sport domains, achievement goals lead to a variety of achievement behaviors, emotions, and outcomes, reflecting the importance of understanding achievement goals. Research in the 2x2 model suggests that mastery-

approach and performance-approach goals are generally associated with adaptive outcomes (Ames & Archer, 1988; Elliot & Church, 1997; Elliot & McGregor, 2001; Pekrun, Elliot, & Maier, 2006; Puente-Diaz, 2013), while mastery-avoidance and performance-avoidance are associated with maladaptive outcomes (Elliot & Church, 1997; Elliot, Cury, Fryer, & Huguet, 2006; Elliot & McGregor, 2001; Wang, Liu, Lochbaum, & Stevenson, 2009).

While understanding the models and consequences of achievements goal is important, it is perhaps more useful to identify why individuals choose to avoid or approach any of the various goals identified by the achievement theorists. Leader behaviors (e.g., types of feedback, reward systems, social support) have been identified as an important antecedent in the adoption of achievement goals (Adie & Jowett, 2010; Erturan-Ilker, 2014; Pekrun, Cusack, Murayama, Elliot, & Thomas, 2014; Wang, Koh, & Chatzisarantis, 2009). Coaches play a very influential role in the development of competence, which is likely to impact many areas of function.

### **Motivational Climate**

Motivational climate is the situational goal structure created by the coach (Ames, 1992a). Coach behaviors convey the criteria for success, and in doing so, create an achievement climate. Recognition and evaluation, response to errors, behavior expectations, and the coach's definition of success are variables that create the motivational climate in an athletic setting (Newton, Duda, & Yin, 2000). A motivational climate can either be mastery-focused or performance-focused. In sport, a mastery climate is congruent with coach behaviors that emphasize effort, self-improvement, establishment of roles, and cooperative learning (Newton et al., 2000). On the contrary, a

coach stressing teammate rivalry, punishment after mistakes, and unequal recognition and encouragement creates a performance climate (Newton et al., 2000).

Moreover, the motivational climate influences the adoption of achievement goals (Ames, 1992b). A mastery motivational climate is associated with the adoption of mastery-oriented goals, and a performance climate is associated with the adoption of performance-oriented goals (Bortoli, Bertollo, Comani, & Robazza, 2011; Knight, 2015; Ntoumanis & Biddle, 1998). Because achievement goals are related to numerous outcomes and behaviors, it is important to understand how coach behaviors influence the motivational climate and what coach behaviors lead to superior achievement behaviors.

### **Servant Leadership**

Servant leadership is a viable and contemporary model of leadership that lacks research within achievement goals and motivation climate, especially using Elliot's 3x2 conceptualization of achievement goals. Servant leadership, a term coined by Robert Greenleaf (1977), reflects a leader that chooses to serve followers by placing followers' needs, desires and interests above their own. Servant leadership in sport revolves around building and maintaining trust, demonstrating humility, and serving others (Hammermeister, Burton, Pickering, Chase, Westre, & Baldwin, 2008). It is an emerging type of leadership that is a worthwhile model to incorporate in sport contexts due to its focus on interpersonal relationships, ethical standards, and personal growth of athletes (Burton & Peachey, 2013; Hammermeister et al., 2008; Rieke, Hammermeister, & Chase, 2008). Recently, Knight (2015) demonstrated that servant leader behaviors are positively associated with mastery-focused goals and negatively associated with performance-focused goals. Additionally, results indicate that servant leader behaviors are positively

associated with a mastery motivational climate and negatively associated with a performance motivational climate (Knight, 2015).

Coach behaviors, achievement goals, and motivational climate are intricately connected. First, leader behaviors influence the adoption of achievement goals (Knight, 2015). Second, motivational climate is created by leader behaviors (Newton et al., 2000). Finally, motivational climates are associated with and predictive of achievement goal orientations (Carr, 2006; Morris & Kavussanu, 2008; Murayama & Elliot, 2009; Ntoumanis & Biddle, 1998). Logically, it appears that the relationship between leader behaviors and achievement goals is best explained through the lens of motivational climate. The assumed relationship is that leader behaviors influence motivational climate, which then influences the adoption of achievement goals. Further, no study has examined the relationship between servant leader coach behaviors and achievement goals, while viewing motivational climate as a potential mediator.

### **Statement of the Problem**

The purpose of this study is fourfold: (1) to discover if servant leadership (independent variable) is related to achievement goals (dependent variable); (2) to discover if servant leadership is related to motivational climate (potential mediator); (3) to determine if motivational climate and achievement goals are related, when servant leadership is controlled; (4) to determine if motivational climate mediates the relationship between servant leadership and achievement goals.

### **Hypotheses**

Hypothesis 1: There will be a significant linear relationship between servant leadership and achievement goals.

Hypothesis 2: There will be a significant linear relationship between servant leadership and motivational climate.

Hypothesis 3: There will be a significant relationship between achievement goals and motivational climate when controlling for the effects of servant leadership.

Hypothesis 4: Motivational climate will mediate the relationship between achievement goals and servant leadership.

### **Operational Definitions**

Servant leadership: Servant leadership is operationally defined based on a score on the Revised Servant Leadership Profile for Sport (RSLP-S; Hammermeister et al., 2008).

Achievement motivation: Achievement motivation is operationally defined based on a score on the 3 x 2 Achievement Goal Questionnaire for Sport (3 x 2 AGQ-S; Mascaret et al, 2015).

Motivational climate: Motivational climate is operationally defined based on a score on the Perceived Motivational Climate in Sport Questionnaire-2 (PMCSQ-2; Newton et al., 2000).

### **Delimitations**

Research within servant leadership in sport has been conducted in youth soccer (Knight, 2015), high school basketball (Rieke et al., 2008), and a mix of college athletes (Hammermeister et al., 2008), but no research has focused solely on college tennis players. Thus, the participants were delimited to collegiate tennis players in the state of Washington.



**Limitations**

The main limitation of the study is its cross-sectional design. Data was only collected at one point in the season. Using a longitudinal design would allow a more detailed analysis of how coaches influence athletes' achievement goals. Another limitation is that with self-reported questionnaires athletes' answers may be biased due to social desirability concerns.

**Assumptions**

It was assumed that participants answered the questionnaire honestly and did not exaggerate or minimize responses. It was also assumed that respondents understood the questions on the questionnaire. The statistical analysis used to test the meditational relationship is based on the assumption that there is a causal sequence between the relationships (e.g., A leads to B which leads to C), so another assumption was that leader behaviors predict motivational climate, and in turn motivational climate predicts achievement goals.

**Significance**

Understanding what influences achievement goal adoption is quite important, because an athlete's achievement goal orientation can influence sport performance, affective responses, effort, task choices, and other psychosocial outcomes. Recognizing how coaches affect the motivational climate and athletes' achievement goals can provide helpful insight to effective coaching behaviors. Furthermore, relatively little research has been conducted in servant leadership in sport. Gaining knowledge on how servant leader coach behaviors impact athletes can offer insight into the effectiveness of the emerging sport leadership model.

## **Chapter 2**

### **Review of Literature**

Coach leader behaviors have a profound impact on an athletes' sport experience (Amorose & Horn, 2000; Black & Weiss, 1992; Bum & Shin, 2015). In particular, coach behaviors influence athletes' adoption of achievement goals (Erturan-Ilker, 2014; Pekrun et al., 2014). This is of particular importance because achievement goals, depending on the goal orientation, are associated with a variety of adaptive outcomes, such as enjoyment, intrinsic motivation, and enhanced performance, as well as maladaptive outcomes like decreased effort, cognitive anxiety, and diminished performance (Elliot & McGregor, 2001; Li, Chi, Yeh, Guo, Ou, & Kao, 2011; Pekrun et al., 2009; Puente-Diaz, 2013). Furthermore, understanding which leader behaviors elicit superior achievement goal adoption is important for both coaches and athletes. Servant leadership is one model worth analyzing because research demonstrates a positive association between servant leader behaviors and superior outcomes (Hammermeister et al., 2008; Rieke et al., 2008), which supports the incorporation of this model into sport contexts.

The relationship between leader behaviors and achievement goal adoption appears to be best conceptualized through the framework of motivational climate. Motivational climate is the situational goal structure created and emphasized by the coach (Ames, 1992a). Motivational climate has also been associated with the adoption of achievement goals (Knight, 2015; Murayama & Elliot, 2009). Essentially, the logical progression assumes that coach behaviors influence the motivational climate, which then influences athletes' achievement goal adoption. Consequently, the premise of this study is to analyze the complex relationship among servant leadership, achievement goals, and motivational

climate. This chapter provides a comprehensive overview on these three constructs separately and examines their shared relationships.

To begin, this chapter will provide a literature review of servant leadership. The servant leadership section will address: 1) leadership; 2) leadership in sport; 3) servant leadership; 4) models of servant leadership; 5) measuring servant leadership; 6) servant leadership research; 7) servant leadership research in sport.

The achievement motivation section is divided into the following sections: 1) achievement motivation; 2) achievement goal theory; 3) measuring achievement goals; 4) antecedents of achievement goals; 5) achievement behaviors and outcomes; 6) achievement goals and leadership.

The section of motivational climate is split into: 1) motivational climate; 2) measuring motivational climate; 3) motivational climate and leadership; 4) motivational climate and leadership in sport; 5) motivational climate and achievement goals; 6) motivational climate and achievement goals in sport.

## **Servant Leadership**

**Leadership.** When the term leadership is mentioned, images of power, authority, management, administration, control and supervision may come to mind (Soucie, 1994). While these images are likely congruent with a layperson's image of leadership, researchers currently lack a comprehensive understanding of leadership (Smith, Montagno, & Kuzmenko, 2004). As Yukl suggests, "the term *leadership* is a word taken from the common vocabulary and incorporated into the technical vocabulary of a scientific discipline without being precisely redefined" (2010, p. 20). Despite this ambiguity, models of leadership share the common assumptions that leadership is a

process of influence and that it occurs within groups or organizations (Yukl, 2010).

Hammermeister (2010) defines leadership as “the art and science of persuading others to achieve person as well as group goals.” This practical definition contains both the idea of influence and a group-focused process.

The attributes or characteristics that make a leader effective are also plagued by disagreement and ambiguity (Smith et al., 2004). Regardless, researchers have attempted to examine the characteristics of effective leaders (e.g., McClelland & Burnham, 1976; Miner, 1978; Yukl, 2010). Power, personal traits, behaviors, and skills are elements commonly examined. For example, Yukl (2010) identified high energy and tolerance to stress, self-confidence, an internal locus of control, emotional maturity, integrity, memory, interpersonal skills, empathy, persuasiveness, self-monitoring, moderately high achievement orientation, and low need for affiliation as related to leadership effectiveness. McClelland and Burnham (1976) suggested that effective leaders must have a stronger need for power than a need to be liked or affiliated. However, the type of power displayed is important to distinguish. The first type of power, personal power, is the desire to direct others; whereas the second, institutional or social power, is the desire to lead others to advance the goals of the group (McClelland & Burnham, 1976). McClelland and Burnham (1976) suggested that a high need for power paired with high personal inhibition represents an institutional power leader. This type of leadership is recognized as more effective than personal power leadership (McClelland & Burnham, 1976). Additionally, Miner (1978) posited that effective leaders need to be competitive, assertive, exercise power over subordinates, and maintain high visibility.

Although there is no consensus on what constitutes an effective leader, the leader's skills will dictate group outcomes and behaviors, such as a) enthusiastic commitment, b) indifferent compliance, c) reluctant obedience, or d) full resistance (Soucie, 1994). Yukl (2010) asserts that a leader can influence members' interpretations of external events, choice of objectives and strategies, motivation, skills, confidence, mutual trust and cooperation, as well as organization and coordination of work activities. However, leaders can also have a detrimental effect on groups. For example, when a leader demonstrates a need for personal power, subordinates are left disorganized, without direction, and team morale will dissipate quickly if the leader leaves the organization (McClelland & Burnham, 1976). Additionally, Hammermeister (2010) noted that group dynamics, goal achievement, administration, and performance can be negatively influenced by ineffective leadership in the realm of athletics.

Traditional types of leadership are a reflection of the Industrial Revolution, where hierarchies were the norm, and top-down leadership was an expectation of the time period (McGee-Cooper & Trammell, 2002). Those at the top of the hierarchy were in control of information, decisions, and power, while subordinates at the bottom were expected to obey without question and conform to the standards of practice (McGee-Cooper & Trammell, 2002). Today, individuals seek more than financial provision in a job; and the desire to make a difference and to support a bigger cause, paired with different values and expectations in the workplace, make the traditional top-down style of leadership out-of-date and ineffective (McGee-Cooper & Trammell, 2002). A new model of leadership is necessary to support the adapting demands of employees and organizations today (McGee-Cooper & Trammell, 2002).

**Leadership in sport.** Traditionally, sport leadership models originate at the business and organization level and then are adapted to fit sport contexts (Westre, 2008). Early researchers assumed similarities between sport teams and business settings, which resulted in the logical transfer of leadership theories and models to athletic settings (Chelladurai, 1980). There are, however, differences between the two settings (Chelladurai, 1980). Soucie (1994) noted that the research in management settings is not directly applicable to coaching leadership within sport organizations despite many similarities between the two. Regardless, there appears to be enough functional conceptual crossover between the business and sport worlds to incorporate organizational models into sport settings (Rieke et al., 2008). Similarly, Martens (2004) argues that coaches must be versed not only in their sport but must have a grasp on managerial and administrative duties.

In sport organization, it is the administrators' responsibility to empower subordinates to set and achieve goals (Soucie, 1994). Due to the influence coaches and administrators have over team outcomes, they are usually the first ones fired when a team is unsuccessful (Soucie, 1994). Consequently, the effectiveness of a coach is quite important. However, what constitutes an effective leader is just as ambiguous in sport settings as it is in other settings. Soucie affirms "there are no absolute truths about effective leadership" (1994, p. 11).

Regardless, coaching behavior is associated with a variety of athletic outcomes and psychosocial states such as an athlete's performance, effort, satisfaction with sport, confidence, anxiety, motivation, and perceived competence (Amorose & Horn, 2000; Bum & Shin, 2015; Black & Weiss, 1992). For example, athletes who perceived their

coach to demonstrate a democratic coaching style, emphasize training and instruction, and exhibit high levels of praise, encouragement, and information-based feedback reported high intrinsic motivation (Amorose & Horn, 2000). Additionally, low levels of autocratic behavior and punishment-oriented behaviors and feedback were associated with higher athlete intrinsic motivation (Amorose & Horn, 2000). Similarly, decreased cognitive anxiety, enhanced performance, and increased self-confidence were reported in junior golfers who perceived their coaches to be low in autocratic behavior and high in training/instruction and social support (Bum & Shin, 2015).

Furthermore, when athletes perceived coaches to give feedback after successful performances and information-based encouragement after less successful performances, they reported high levels of perceived success, enjoyment, effort, perceived competence, and preference for challenging activities (Black & Weiss, 1992). A qualitative analysis examining Olympic medal-winning coaches emerged with three main leadership themes: a) demanding leadership, describes a coach who leads group members directly and decisively, b) relationship leadership, refers to the building and strengthening of individual relationships, and c) solution-focused leadership, where the leader has a clear vision, creates a learning-based culture, and establishes clear roles (Din, Paskevich, Gabriele, & Wethner, 2015). These findings express the importance of relation-based leadership and are especially noteworthy because Olympic level coaches can be considered some of the best sport leaders around. In general, results in sport leadership suggest that superior cognitive states, behaviors, and performance outcomes align better with coaches that exhibit democratic behavior, are low in autocratic tendencies, provide more positive, information-based feedback styles, and focus on coach-athlete

relationships. Unfortunately, athletic coaches still appear to rely on goal and task completion, as opposed to interpersonal relationships (Soucie, 1994). As a result, research is placing a stronger emphasis on leaderships that emphasize the importance of relationships and interactions between leader and follower (Avolio, Walumbwa, & Weber, 2009).

**Servant leadership.** Servant leadership offers a different approach to leadership because the primary focus is to develop and facilitate the growth of individuals within the organization or a team through interpersonal relationships. The concept of servant leadership and its development within organizational settings is widely credited to Robert K. Greenleaf. Servant leadership assumes that the leader puts the needs, aspirations, and interests of followers above their own (Greenleaf, 1977). One of the most widely cited passages about servant leadership comes from Greenleaf's book *Servant Leadership: A Journey into the Nature of Legitimate Power and Greatness* (1977):

It begins with the natural feeling that one wants to serve, to serve first... The difference manifests itself in the care taken by the servant-first to make sure that other people's highest priority needs are being served. The best test... Do those served grow as persons? Do they, while being served, become healthier, wiser, freer, more autonomous, and more likely themselves to become servants? And, what is the effect on the least privileged in society? Will they benefit, or at least not further be deprived (pp. 13-14).

Servant leaders go beyond one's self interest and genuinely care about serving followers (Greenleaf, 1977). As the passage noted, servant leaders believe success is when their followers achieve autonomy, personal growth, and well-being (Greenleaf,



1977). The primary goal of servant leaders is to serve first and lead second. This model of leadership is considered an upside down approach to leadership (McGee-Cooper & Trammell, 2002). While traditional models of leadership place the leader on top of the pyramid with the subordinates on the bottom, the servant leader inverts the pyramid, placing themselves at the bottom with the subordinates at the top (Rieke et al., 2008). Servant leadership is not a soft type of leadership where the ‘inmates run the asylum’ (Rieke et al., 2008). Rather, followers are given clearly defined roles and expectations, and the servant leader’s duty is to help the followers execute these roles effectively. However, if expectations or job duties are not met, sanctions will be imposed (Rieke et al., 2008). When relationships are a priority, individuals feel valued and work standards are met, Greenleaf (1977) posited that this then enhances work productivity.

**Models of servant leadership.** Due to the lack of an empirically-validated definition and consensus on a theoretical framework, researchers have created their own definitions and models based on Greenleaf’s original work (van Dierendonck, 2011). This has led to several interpretations of servant leadership with many descriptive characteristics and associated behaviors. Among the most influential researchers are Spears (1995), Laub (1999), Russell and Stone (2002), and Patterson (2003) (van Dierendonck, 2011). While each of these researchers’ models share some degree of continuity, each contains its own differences, which creates confusion on the exact definition of servant leadership (van Dierendonck, 2011). To give a deeper insight on the development of servant leadership, the most influential models will be discussed.

Larry Spears was one of the first and most influential authors to develop a model based on Greenleaf’s ideas. Spears spent years working and writing with Greenleaf and

was the former director of Greenleaf Center for Servant Leadership. Spears (1998) identified 10 characteristics as fundamental to servant leadership:

1. Listening- Leaders must have a deep commitment to listening to others. By seeking to identify and clarify the will of a group, the leader also learns to hear one's own inner voice.
2. Empathy- The servant leader will seek to understand, accept, and recognize others authentically. Servant leaders look for the good in people and do not reject others.
3. Building community- Servant leaders recognize that community is essential for growth and work to create a community within the organization.
4. Stewardship- To be a good steward, the leader must commit to serving the needs of others.
5. Awareness- Awareness helps servant leaders view situations from a more holistic perspective, especially in issues regarding ethics, power, and values.
6. Foresight- Servant leaders are able to see the likely outcomes of a situation.
7. Conceptualization- Having a greater vision for the organization is essential to servant leadership. Understanding what day-to-day operations must occur to reach the greater goal is also necessary.
8. Healing- Healing is considered one of the greatest strengths of a servant leader, because they have the ability to restore wholeness to a person who may be broken-spirited or suffering broken relationships.
9. Persuasion- Servant leaders want to convince others, as opposed to demanding compliance, which is a clearly different than traditional authoritarian models of leadership.

10. Commitment to growth- It is the servant leader's responsibility to nurture the individual growth of the organization, acknowledging that individuals have deep value beyond their job.

Although, Spears' model is widely recognized, he never operationally defined the model with a valid and reliable study, and as a result hindered future empirical research and extension of the model (van Dierendonck, 2011).

Due to the lack of an validated definition, Laub (1999) conducted a comprehensive review of the servant leadership literature and discovered six clusters of servant leadership attributes: 1) values people, views others highly, puts them first and listens; 2) develops people, provides learning and growth, demonstrates behaviors through modeling, and encourages; 3) builds community, focuses on enhancing relationships, working as a team, and acceptance of different values; 4) displays authenticity, stays open, self-aware, and maintains self-integrity; 5) provides leadership, envisions the future, takes initiative, and sets clear goals; 6) shares leadership, empowers others and shares status. Laub created a measurement tool based on these characteristics that will be discussed later.

Russell and Stone (2002) expanded on Spears (1998) list of characteristics by differentiating between functional attributes and accompanying attributes in servant leaders. Functional attributes are the operative qualities and effective characteristics of servant leadership that are observed through leader behaviors (Russell & Stone, 2002). Accompanying attributes, which supplement the functional characteristics, are complementarily and can even serve as prerequisites of effective servant leadership (Russell & Stone, 2002). The nine functional attributes are vision, honesty, integrity,

trust, service, modeling, pioneering, appreciation of others, and empowerment (Russell & Stone, 2002). The functional attributes are supported by eleven accompanying features, including communication, credibility, competence, stewardship, visibility, influence, persuasion, listening, encouragement, teaching, and delegation (Russell & Stone, 2002). Although this is an extensive model, it has been criticized for its ambiguity in distinguishing the differences between functional and accompanying attributes (van Dierendonck, 2011).

Patterson (2003) sought to examine servant leadership as a viable leadership perspective, because other models failed to explain concepts like love, humility, and altruism for followers. Patterson (2003) conceptualizes servant leader characteristics as virtues. According to this theory, servant leaders possess the virtues of love, humility, altruism, vision, trust, empowerment, and service (Patterson, 2003). Van Dierendonck (2011) expresses that the conceptualization of the need to serve is a strength of the model, but it lacks the leadership aspect of servant leadership.

Within these four models (Laub, 1999; Patterson, 2003; Russell & Stone, 2002; Spears, 1998), there are 44 characteristics identified for servant leaders (van Dierendonck, 2011). While there are distinct differences, many of the characteristics overlap. Subsequently, the models share similarities, creating confusion and a lack of clear understanding of servant leadership (van Dierendonck, 2011). In an attempt to bring clarity to the situation, van Dierendonck (2011) distinguished the models by separating antecedents, mediating processes, and other significant factors; and six ideas emerged as noteworthy. Servant leaders 1) empower & develop people; 2) demonstrate humility; 3)

exhibit authenticity; 4) genuinely accept others; 5) provide direction; 6) are stewards who work for the good of the whole group (van Dierendonck, 2011).

**Measuring servant leadership.** Laub (1999) developed the first measure of servant leadership, the Organizational Leadership Assessment (OLA). As mentioned previously, Laub discovered six clusters of servant leadership. However, the multidimensionality of the measurement was questioned due to the high correlations between the means scores of the six clusters (van Dierendonck, 2011). The organization as a whole and leadership emerged as the two underlying dimensions in the model (Laub, 1999). Laub's instrument served as the first push towards measuring servant leadership objectively. The OLA is still used today to measure general servant leadership in organization (van Dierendonck, 2011).

Page and Wong's (2000) Servant Leader Profile (SLP) consists of 99 items distributed throughout 12 categories. The 12 categories are caring, developing, empowering, goal setting, humility, integrity, leading, modeling, shared decision-making, servanthood, team-building, and visioning. Page and Wong developed this model based on prior conceptual analysis and did not conduct a factor analysis or scale reliability test (Wong & Davey, 2007).

Wong and Page (2003) revised the servant leadership profile and created the seven-factor Revised Servant Leader Profile (RSLP). After further examination, Wong & Davey (2007) found the seven factors were better explained by five dimensions labeled 1) serving and developing others, 2) consulting and involving others, 3) humility and selflessness, 4) modeling integrity and authenticity, and 5) inspiring and influencing others.

Extending on the work of Wong and Page (2003), Hammermeister and colleagues (2008) analyzed the RSLP in a sport context. Results indicated three servant-leader constructs, which are trust/inclusion, humility, and service (Hammermeister et al., 2008). The Revised Servant Leader Profile for Sport (RSLP-S) emerged as a result of the research. The RSLP-S was used to examine servant leadership in college tennis coaches in this study.

**Servant leadership research.** Servant leadership has been researched in organizations (Laub, 1999; Russell & Stone, 2002), school settings (Black, 2010; Cerit, 2009), sport settings (Hammermeister et al., 2008; Knight, 2015; Rieke et al., 2008), religious theology (Anderson, 2005) and business (Jaramillo, Grisaffe, Chonko, & Roberts, 2009) and has been associated with trust, satisfaction, and positive productivity climates. For example, researchers have found servant leadership to be positively associated with trust in the leader (Chan & Mak, 2014; Joseph & Winston, 2005; Sendjaya & Perketi, 2010) and trust in the organization (Joseph & Winston, 2005). Sendjaya and Perketi's (2010) results indicated that servant leadership was a significant predictor of trust in subordinates in educational institutions.

Previous research also suggests that servant leadership is positively associated with job satisfaction (Cerit, 2009; Chan & Mak, 2014; Irving, 2005; Mayer, Bardes, & Piccolo, 2008). Cerit (2009) examined this relationship in an educational setting and reported a strong positive relationship between servant leader behaviors in principals and job satisfaction in teachers. Additionally, Irving (2005) found a positive association between servant leadership and the effectiveness of teams.

Servant leaders' behaviors are also strongly associated with a positive school climate (Black, 2010) and work climate (Jaramillo et al., 2009). Additionally, individuals who worked under servant leaders felt a stronger sense of shared organizational values and expressed a greater commitment to the organization (Jaramillo et al., 2009). Further, servant leadership is positively associated with subordinate's commitment to change within an organization (Kool & van Dierendonck, 2012).

**Servant leadership research in sport.** Despite the recent increase and exploration in servant leadership in academic, business, and church settings, there are few servant leadership studies in sport. Burton and Peachey (2013) describe servant leadership as a viable leadership paradigm for intercollegiate athletics due to the focus on the personal development of student-athletes and the cultivation of an ethical environment. Burton & Peachey (2013) called for an increase in the research and support for servant leadership within the college sport setting. Rieke and colleagues (2008) found high school athletes to prefer servant leader coaching behaviors. This aligns with Westre's (2008) findings that athletes today no longer prefer autocratic and top-down leadership styles. On the contrary, today's athletes want coaches that listen and incorporate athlete input in team decisions, provide positive feedback, genuinely care about the needs of athletes in and out of sport, and have an athlete-centered coaching style (Westre, 2008).

Different researchers have found empirical support for the effectiveness of servant leadership in sport (Hammermeister et al., 2008; Knight, 2015; Rieke et al., 2008). Hammermeister and colleagues (2008) discovered that college athletes coached by servant leaders were more task-oriented, less worried, coped better with adversity, and

were more coachable than athletes coached by weak leaders. Additionally, these athletes were more satisfied with personal and team performance, personal treatment, and the training and instruction provided by coaches (Hammermeister et al., 2008). Athletes who perceived their coaches as servant leaders also displayed higher intrinsic motivation and enjoyment (Hammermeister et al., 2008).

Rieke and colleagues (2008) examined the relationship between perceived servant leader coaching behaviors and satisfaction, motivation, mental skills, and performance in high school athletes as a follow up to Hammermeister and colleagues' (2008) work. Servant leader coaches produced athletes with higher sport satisfaction as compared to non-servant leaders (Rieke et al., 2008). While measuring athlete satisfaction, personal treatment emerged as the most important discriminator between servant leader and non-servant leaders, which Rieke and colleagues (2008) suggested was due to the servant leader's ability to create an inclusive environment, their trusting and humble nature, and a genuine concern for athletes. The second most powerful discriminator in the athlete satisfaction category was training and instruction, indicating that athletes of servant leader coaches felt that they were receiving better training and instruction than athletes of non-servant leader coaches (Rieke et al., 2008). Azadfada and colleagues (2014) examined servant leadership and athlete satisfaction in university female athletes in Iran and found similar patterns to Rieke et al. (2008). Although the researchers used a different instrument to measure servant leadership, there was still a positive correlation between servant leadership and athlete satisfaction. Specifically the subscales 'values people' and 'builds community' demonstrated the strongest correlation with satisfaction (Azadfada, Besmi, & Doroudian, 2014).



Additionally, athletes who were coached by servant leaders demonstrated higher intrinsic motivation than their counterparts (Rieke et al., 2008). The most powerful discriminators between servant leader coaches and non-servant leader coaches were interest and enjoyment, perceived choice, and effort and importance (Rieke et al., 2008).

Rieke and colleagues (2008) also found six of the twelve mental skills measured differed between servant leader and non-servant leader athletes. Goal setting, self-confidence, and commitment were the most important discriminators between the groups, followed by relaxation, activation, and imagery (Rieke et al., 2008). Based on these results, Rieke et al. (2008) suggested the servant leaders do not produce “soft” athletes, but quite the opposite. Servant leader coaches produce athletes that are mentally tough, demonstrating that an autocratic, coercive, authoritarian style of leadership is not necessary to promote the growth of mental skills or toughness (Rieke et al., 2008).

Performance and servant leader coaching behaviors are also positively related (Rieke et al., 2008). The trust/inclusion and service subscales of servant leadership were positively associated with number of season wins and negatively associated with seasonal losses (Rieke et al., 2008). The perceived team performance expectations were positively correlated with the trust/inclusion subscale as well (Rieke et al., 2008). These findings indicate that successful coaching, in terms of winning, does not require a “win at all costs” mentality that disregards ethical and moral standards (Rieke et al., 2008).

Most recently, Knight (2015) examined servant leader coaching behaviors in youth soccer coaches. Perceived servant leadership revealed a significant positive relationship with performance under pressure, cognitive confidence, physical skill confidence, resilience confidence in sport, individual and team satisfaction, intrinsic

motivation, task orientation, and incremental ability beliefs (Knight, 2015). Perceived servant leader coach behaviors also demonstrated a negative relationship with entity ability beliefs, worry trait anxiety, and trait concentration disruption (Knight, 2015).

While early research appears to support the inclusion of servant leadership into sport contexts, more research needs to be conducted on how servant leader behaviors influence athletes' behaviors and psychosocial outcomes. One important outcome is an athlete's achievement motivation. The following section will take a closer look at what achievement motivation is, why achievement motivation matters, and how a coach can affect an athlete's achievement motivation.

### **Achievement Motivation**

Considerable research has been conducted on achievement motivation and, in particular, achievement goals within educational and athletic settings (for a review see Duda, 2005; Elliot, 2005). Hulleman and colleagues (2010) noted that achievement goal theory has seen over 1,000 published studies and dissertations within the past 25 years. In 1938, Murray defined achievement motivation as the desire to master tasks, overcome obstacles, reach high standards, and excel. More recently, Elliot defined achievement motivation as "the energization and direction of competence-based affect, cognition, and behavior" (1999, p. 169). Achievement goals are a way to conceptualize achievement motivation. Achievement goals are defined as the purpose for engaging in achievement behavior (Maehr, 1989). The specific type of achievement goal adopted is predicted to create a framework for how individuals view achievement settings (Elliot, 1999), leading to maladaptive or adaptive behaviors that influence factors like performance, satisfaction, effort, and motivation, and thus are quite important to understand.

**Achievement motivation theory.** Achievement motivation began with the classic achievement motive approaches, such as Need Achievement Theory (Atkinson, 1957; McClelland, 1961) and Attribution Theory (Heider, 1958; Weiner, 1985). The Need Achievement Theory posits that achievement motivation revolves around two global motive dispositions. High achievers gravitate toward the motive to achieve success, and low achievers gravitate toward the motive to avoid failure. The basic premise of the theory proposes these personality factors (i.e., motive dispositions) and situational factors (i.e., probability of success and incentive value of success) interact, resulting in two components: resultant tendencies (i.e., high achievers seek out challenging situations) and emotional reactions (i.e., high achievers experience pride in success). Together these four components result in a fifth and final component, achievement behavior (e.g., high achievers will perform better in competition).

The Attribution Theory (Heider, 1958; Weiner, 1985) suggests that individuals explain their success and failure through three attribution categories: stability (e.g., viewing success as stable/permanent), locus of causality (e.g., believing success was due to an internal cause), and locus of control (e.g., success was due to their effort). Based on the interactions of these three attribution categories, individuals will demonstrate different achievement motivation.

Both of these theories contributed to achievement motivation literature and laid the theoretical groundwork for empirical research. However, these approaches to achievement motivation have weaknesses, particularly the lack of a precise definition of achievement and a narrowly focused and limited scope (Elliot & Dweck, 2005).

**Achievement goal theory.** In the 1970s there was a shift from these achievement motive theories towards theories that were cognitively-based resulting in the advent of achievement goal theory (Dweck, 1986; Nicholls, 1984). The achievement goal theory was developed by the individual and collaborative work of Carol Ames (Ames, 1992b; Ames & Archer, 1988), Carol Dweck (Dweck, 1986; Dweck & Leggett, 1988), Marty Maehr (Maehr, 1989), and John Nicholls (Nicholls, 1984). Achievement goals are defined as the purpose of task engagement or the reason for engaging in achievement behaviors (Maehr, 1989). The goals an individual pursues provide a framework to interpret and respond to events (Dweck & Leggett, 1988). Dweck argued that the achievement goal construct is a more viable framework than the previous achievement attribution theory and achievement motivate theory (Dweck & Elliott, 1983). Dweck identified that the heavy focus on dispositions and lack of emphasis on cognitions in explaining achievement-related behaviors were weaknesses of the achievement motive construct, while the attribution theory was weak in explaining the role of competence in achievement behaviors (Dweck & Elliott, 1983). The achievement goal theory emerged while addressing the shortcomings of the attribution and achievement motive theories. The previous theories were not negated nor considered invalid in the process, but rather they created the framework for achievement goal theory. The behavioral tendencies proposed in need achievement theory for high and low achievers still align with contemporary theories, specifically the concepts regarding task preference and performance predictions (Weinberg and Gould, 2005).

The achievement goal theory revolves around the idea that goal orientations are a representation of the way each individual views the world. Different goals have different

and distinct cognitive, behavioral, and affective consequences (Elliot & Dweck, 1988).

Achievement goals have been described as running off different ‘programs,’ meaning that each achievement goal has different commands, decision rules, inference rules, and evokes a set of thoughts and emotions that influence behavior (Elliot & Dweck, 1988).

Competence is considered the core of achievement goal theory (Elliot & McGregor, 2001). In general, competence is defined as “the ability to do something successfully or efficiently” (Oxford English Dictionary). Competence is considered an innate psychological need in humans; and from an evolutionary perspective, the need for competence helps humans grow and adapt to new environmental situations (Deci & Ryan, 2000). Essentially, the need to feel competent drives human behavior, and humans will orient their behavior to achieve competence and fulfill this basic need. Individuals set goals, consciously or unconsciously, in an attempt to meet the underlying need of feeling competent. Eventually, individuals learn to achieve competence in specific achievement situations through the use of cognitive-based goals and strategies (Duda, 2005). Thus, the concept of competence and cognitive-based goals combine in this fashion to underpin achievement goal theory.

***Dichotomous achievement goal model.*** Since the emergence of the achievement goal construct, there has been a clear distinction between two types of goals: task versus ego. Dweck and Nicholls’ conceptual ideas behind the goals were quite similar, but they used different nomenclature – with Dweck (1986) referring the two types of goals as “learning and performance” and Nicholls (1984) referring to the goals as “task and ego” orientations. As a result, Ames and Archer (1988) proposed the convergence and integration of the terms. Subsequently, the term mastery-orientation emerged from the

learning goal and task involvement concepts and performance-orientation emerged from the performance goal and ego involvement views (Ames & Archer, 1988). Mastery goals revolve around improving competence by mastering new skills and learning.

Performance goals focus on demonstrating competence in front of others. Together these orientations were called the performance-mastery dichotomous framework.

*Trichotomous achievement goal model.* The dichotomous framework, although headed in the right direction, had a few shortcomings. The performance and mastery orientations proposed in the dichotomous framework were both approach-based types of motivation, meaning that individuals set goals to pursue competence. However, previous achievement motivation theories had distinguished two types of motivation: approach and avoidance (Atkinson, 1957; McClelland et al., 1953). This means an individual can be motivated or act in a way to avoid incompetence. Elliot and Church (1997) described the distinction between approach and avoidance motivation as important and necessary for inclusion into the achievement goal framework. As a result, the trichotomous framework emerged (Elliot & Harackiewicz, 1996) utilizing three types of achievement goals: mastery, performance-approach, and performance-avoidance goals.

Similar to the dichotomous model, mastery goals focused on developing competence through task mastery or self-referenced competence, but the performance goal split into approach and avoidance valences. Performance-approach goals focused on attaining normative competence, whereas performance-avoidance goals focused on the avoidance of normative incompetence (Elliot, 1999). Mastery and performance-approach goals were both considered approach based goals because they involve striving for the

positives, but the performance-avoidance goal was considered an avoidance goal due to the focus on avoiding the negative possibilities (Elliot, 1999).

**2 x 2 achievement goal model.** In 1999, Elliot proposed the 2x2 model of achievement goals (see Appendix A). The model extends on the trichotomous model by including mastery-avoidance goals in addition to the three other achievement goals. The 2x2 model consists of two fundamental dimensions: definition and valence. Competence, therefore achievement goals, can be defined as either performance or mastery goals and valenced as either approaching success (competence) or avoiding failure (incompetence). The model posits that there are four separate achievement goals: performance-avoidance, performance-approach, mastery-approach, and mastery-avoidance.

The descriptors for performance-approach, performance-avoidance are the same as in the trichotomous framework. Mastery goals became mastery-approach goals, which focus on the development of competence by either task-based or self-based standards. The newly incorporated mastery-avoidance goals focus on the avoidance of task-based or self-based incompetence.

**3x2 achievement goal model.** Based on the definitions and conceptualization of mastery-approach and mastery-avoidance goals, it is apparent that mastery goals are defined in two different ways: by self-based standards and task-based standards. In 2011, Elliot and colleagues proposed the separation of mastery goals into two constructs, suggesting that task-, self-, and other- based goals are the three ways competence can be evaluated. Task-based goals refer to evaluating oneself by the absolute demands of the task (e.g., mastering a new skill). Self-based goals refer to evaluating oneself relative to a personal standard (e.g., personal record in high jump). Other-based goals refer to

evaluating oneself relative to others (e.g., beating an opponent). Elliot et al. (2011) proposed a 3x2 achievement goal model, which included six distinct goal constructs (see Appendix B). These constructs are task-approach (e.g., execute the task correctly), task-avoidance (e.g., avoid doing the task incorrectly), self-approach (e.g., doing better than last time) self-avoidance (e.g., avoid doing worse than last time), other-approach (e.g., do better than others), and other-avoidance (e.g., avoid doing worse than others; Elliot, 2011). Elliot and colleagues' (2011) study provided strong support for the model, especially for the separation of mastery goals into self and task goals. Performance goals were not eliminated from this model but relabeled as other-based goals. Unfortunately, because the 3x2 model is relatively new, much of the research regarding achievement goals is oriented under the 2x2 or trichotomous frameworks.

**Measuring achievement goals.** The Task and Ego Orientation in Sport Questionnaire (TEOSQ; Duda, 1989) is a 13-item questionnaire that is based on Nicholls' (1989) conceptualization of achievement goals. The TEOSQ measures task and ego goals but fails to measure avoidance-based goal orientations. The TEOSQ is still used to measure achievement goals in sport contexts. A similar measurement for youth sport is called Achievement Goal Scale for Youth Sports (AGSYS). It was developed by Cumming, Smith, Smoll, Standage, and Grossbard (2008), but it too only measures ego/performance and task/mastery goals.

Elliot and colleagues (Elliot & Church, 1997; Elliot & Harackiewicz, 1996) proposed the trichotomous model of achievement goals, which incorporated the approach/avoidance dimension. Elliot and Church (1997) validated the construct of three separate achievement goals. A trichotomous tool called the Approach and Avoidance



Achievement in Sport Questionnaire (AAASQ; Cury, 1999) was developed in France as an adaption to Elliot's work (Elliot & Church, 1997). Validity and reliability for AAASQ have been reported as acceptable (Cury, 1999; Cury, Elliot, Fonseca, & Moller, 2000; Cury, Fonseca, Rufo, & Sarrazin, 2002).

In 2001, Elliot and McGregor extended the avoidance dimension to include mastery-avoidance goals, creating the Achievement Goal Questionnaire (AGQ). This 2x2 achievement goal framework was revised by Elliot and Murayama (2008) who created an even stronger assessment of achievement goals, the Achievement Goal Questionnaire-Revised (AGQ-R). The AGQ-R demonstrated strong validity and reliability (Elliot & Murayama, 2008). The 2x2 Achievement Goal Questionnaire for Sport (AGQ-S) emerged in 2003 and demonstrated strong factorial validity, temporal stability, and external validity with other well-known antecedents of achievement goals (Conroy, Elliot, & Hofer, 2003). A few years later, a physical education specific measurement was developed. The 2x2 Achievement Goal Questionnaire in Physical Education (AGPED) was created by Wang, Biddle, and Elliot (2007).

Because mastery goals encompassed the idea of self-based and task-based, a tool needed to measure these domains separately. In an attempt to better explain and measure mastery goals, Elliot, Murayama, and Pekrun (2011) developed the 3x2 Achievement Goal Questionnaire (3x2 AGQ). Results demonstrated strong psychometric support for the measurement and particularly supported the need to separate the task-based and self-based goals (Elliot et al., 2011). Soon after, Mascret and colleagues (2015) developed the 3x2 Achievement Goal Questionnaire for Sport (3x2 AGQ-S). Results suggested that the

measurement has strong psychometric properties (Mascret et al., 2015). The 3x2 AGQ-S will be used to measure athletes' achievement goals in this study.

Despite the research supporting the use of approach and avoidance achievement goals and validated measurement tools in sport, many sport psychology studies continues to Nicholls' task-ego orientation labels to conceptualize achievement goals (e.g., Hammermeister et al., 2008; Knight, 2015; Rieke et al., 2008). The conceptualization of Nicholls' task and ego orientations are similar to mastery-approach and performance-approach goals and therefore are used interchangeably when discussing different results in sport research.

**Antecedents of achievement goals.** Leader behaviors and motivational climates are both considered achievement goal antecedents. However, because they are premise of this study, they will be discussed in detail in a later section. Perceived parental climate, achievement motive dispositions, ability beliefs, perceived competence, and gender are other antecedents of achievement goal adoption that will be discussed. Although they are not included in this study, it is important to understand the complex relationship between achievement goal adoption and other antecedents.

***Parent motivational climate.*** The motivational climate created by parents affects the adoption of achievement goals within the realm of academics (Elliot & McGregor, 2001). Elliot and McGregor (2001) analyzed a handful of parental socialization variables that create a parent-induced motivational climate, including person-focused negative and positive feedback, behavior-focused positive and negative feedback, conditional approval, and worry. The results indicated that person-focused negative feedback was a positive predictor of the adoption of both avoidance-based goals, and these goals were

positively predicted by one or both parents inducing worry (Elliot & McGregor, 2001). Performance-approach goals were positively predicted by person-focused positive feedback from the father, as well as mother and father conditional approval (Elliot & McGregor, 2001). These results indicate the importance of parental feedback in the adoption of achievement goals in an academic setting.

In the sport setting, parents can also influence the adoption of achievement goals. Three parental motivational climates commonly studied are learning/enjoyment (i.e., parent emphasis on hard work and learning new skills), worry-conducive (i.e., emphasis on failure and concern over mistakes), and a success-without-effort (i.e., emphasis on achieving success with much effort; White, 1996). In high school athletes, parental emphasis on success without effort predicted performance goals and a perceived learning/enjoyment climate predicted a mastery orientation (White, 1996). Morris and Kavussanu (2008) analyzed these climates among college athletes. The results demonstrated that mastery-approach goals were positively predicted by a learning/enjoyment climate and negatively related to the worry-conducive and success-without-effort climates (Morris & Kavussanu, 2008). The learning/enjoyment climate also predicted mastery-avoidance goals, but the relationship was weaker than mastery-approach goals (Morris & Kavussanu, 2008). The worry-conducive parental climate was found to be the most important climate in predicting performance-avoidance goals, meaning that athletes have higher levels of performance-avoidance goals when they believe their parents emphasize worry about failing and negative social comparison (Morris & Kavussanu, 2008).

*Achievement motive dispositions.* Fear of failure and need to achieve success are the two achievement motive dispositions that affect achievement goal adoption (Elliot & Church, 1997; Elliot & McGregor, 2001). Within the trichotomous framework, Elliot (1999) proposed that the need for achievement was related to the adoption of mastery goals and performance-approach goals, because this approach motive orients people toward success and focuses on attaining positive outcomes. On the other hand, the fear of failure is an avoidance-based motive that is associated with the adoption of performance-avoidance goals (Elliot, 1999). It was also proposed that fear of failure leads to the adoption of performance-approach goals (Elliot, 1999). This means that performance-approach goals are more complex and could contain one or both of the achievement motives.

Within the trichotomous framework, the hope of success, which is another way to describe need for achievement, was found to positively predict mastery goals, and performance-approach goals were best predicted by hope of success and fear of failure (Dinger, Dickhauser, Spinath, & Steinmayr, 2013). The fear of failure was a positive predictor of performance-avoidance goals (Dinger et al., 2013). These results were in line with Elliot's (1999) theory.

Within the 2x2 framework, a general fear of failure positively predicted both mastery-avoidance and performance-avoidance goals (Elliot & Church, 1997; Elliot & McGregor, 2001). The need for achievement positively predicted mastery-approach goals, and both need for achievement and fear of failure positively predicted performance-approach goals (Elliot & McGregor, 2001). Conroy and Elliot (2004) set out to study the 'chicken or egg' issue: Are achievement motives the results of the adoption

of achievement goals or are achievement motives antecedents to the adoptions of goals, as hypothesized? Conroy and Elliot (2004) concluded that the fear of failure increases the probability that an individual will choose to adopt an avoidance goal as opposed to an avoidance goal preceding the fear of failure motive.

In sport settings, fear of failure was found to be positively related with mastery-avoidance, performance-approach, and performance-avoidance goals (Conroy et al., 2003). Similarly, another study found that fear of failure positively predicted both avoidance goals (Conroy & Elliot, 2004). However, the same study indicated that fear of failure was not an antecedent (or consequence) of performance-approach goals, which is contrary to previous research in sport (Conroy et al., 2003) and out of sport (Elliot & Church, 1997; Elliot & McGregor, 2001). What is clear is that fear of failure is an antecedent to the avoidance-based goals and that fear of failure increases the probability one will adopt an avoidance goal (Conroy & Elliot, 2004). As expected, mastery-approach goals were found to be unrelated to fear of failure in sport (Conroy & Elliot, 2004; Conroy et al., 2003).

***Ability beliefs.*** Ability beliefs are the beliefs an individual has about their own ability. These theories of ability create meaning systems that attract different competence goals (Dweck & Molden, 2005). An incremental theory, also called a growth mindset, and an entity theory, also called fixed mindset, are the two theories of ability. An incremental belief system means that the individual views certain abilities or qualities (e.g., intelligence, athleticism, creativity) as malleable, controllable, and changeable (Dweck & Leggett, 1988). On the other hand, if an individual holds an entity view, they

believe their ability in that area is stagnant, fixed, or uncontrollable (Dweck & Leggett, 1988).

Dweck and Leggett (1988) proposed that children who held an incremental belief about their intelligence pursue mastery goals because of their focus on acquiring competence. The children who hold an entity belief about their intelligence create a meaning system based on validating competence, which leads to performance goals (Dweck & Leggett, 1988). Research within the 2x2 model supported Dweck and Leggett's reasoning. For instance, a study examining math performance in students demonstrated that incremental theory positively predicted both types of mastery goals, and entity theory positively predicted both types of performance goals (Cury, Fonseca, & Moller, 2006). The same study found that entity beliefs increased both performance-based goals and decreased both mastery-based goals (Cury et al., 2006). This is in line with Elliot's (1999) suggestion that incremental beliefs would likely lead to the adoption of mastery goals and entity beliefs to performance goals. These results were different than Elliot and McGregor's (2001) findings that suggested that entity theory positively predicted both types of avoidance goals.

There is agreement, however, that theories of ability are antecedents to the adoption of achievement goals in the 2x2 framework, and these goals are proximal predictors of achievement behaviors like performance and intrinsic motivation (Cury et al., 2006). This means that achievement goals are intermediary variables that explain the relationship between theories of ability and achievement outcomes (Cury et al., 2006).

Beliefs about the ability in an athletic setting are also important for the adoption of achievement goals. Research by Cury and colleagues (2002) within the trichotomous

model aligns with Elliot's proposed theory that ability beliefs are associated with the defining aspect of achievement goals (e.g., mastery goals and incremental beliefs are associated and performance goals are associated with entity beliefs). An entity belief about sport ability was positively associated with performance-approach and performance-avoidance goals, and these goals were negatively associated with incremental beliefs (Cury et al., 2002). Mastery goals were positively associated with incremental beliefs about ability in sport (Cury et al., 2002). In the 2x2 model, incremental beliefs were found to predict mastery-approach goals, and entity beliefs were found to predict performance-avoidance goals in team sport athletes (Stenling, Hassmen, & Holmstrom, 2014).

Wang, Liu, Lochbaum, and Stevenson (2009) found perceived competence to play an important role in determining how theories of ability predicted the adoption of achievement goals in a physical education setting. When an individual reported high perceived competence, entity beliefs positively predicted a performance-approach goal; but when perceived competence was moderately low, the entity belief positively predicted both performance-avoidance goals and performance-approach goals (Wang et al., 2009). With both high and low perceived competence, incremental beliefs positively predicted mastery-approach goals (Wang et al., 2009). However, in the low perceived competence group, incremental beliefs positively predicted mastery-avoidance goals (Wang et al., 2009). While entity beliefs predicted performance goals and incremental beliefs predicted mastery goals like Elliot suggested, perceived competence was found to moderate the relationship between ability beliefs and the adoption of achievement goals

(Wang et al., 2009). This is contrary to Elliot's prediction that ability beliefs and perceived competence are separate and independent antecedents.

***Perceived competence.*** Perceived competence refers to an individual's belief about what they can and cannot accomplish in competence-relevant situations (Cury et al., 2006). Elliot (1999) proposed that high competence would orient individuals toward the possibility of success, therefore leading them to approach goals, and low perceived competence would lead individuals toward the possibility of failure and subsequently result in the adoption of avoidance goals.

There are mixed findings regarding Elliot's perceived competence framework. Some researchers have found support for Elliot's prediction (Cury et al., 2006; Dinger et al., 2013; Elliot & Church, 1997). The results of these studies suggest that perceived competence is an antecedent to achievement goals, and achievement goals serve an intermediary role between perceived competence and achievement outcomes (Cury et al., 2006; Elliot & Church, 1997). In the trichotomous framework, perceived competence was a positive predictor of mastery goals and performance-approach goals (Dinger et al., 2013). In Elliot & Church's study (1997), mastery goals and performance-approach goals were also grounded in high competence expectancies, while performance-avoidance goals were grounded in low competence expectancies. In the 2x2 model, perceived competence was a significant positive predictor of mastery-approach and performance-approach goals, and a significant negative predictor of mastery-avoidance and performance-avoidance goals (Cury et al., 2006). Cury and colleagues' study (2006) suggested that perceived competence was also an independent antecedent of achievement goals, and subsequently that perceived competence was not a moderator between ability



beliefs and achievement goal effects. Other researchers have found perceived competence served as a moderator between ability beliefs and achievement goal effects (Elliot & Dweck, 1988; Wang et al., 2009). Elliot (2005) suggested that there is little evidence for this viewpoint, but mixed empirical support still remains.

Elliot's predictions regarding perceived competence as an antecedent were upheld in research using the trichotomous model in sport contexts. In a physical education setting, performance-avoidance goals were negatively associated with perceived competence, while performance-approach and mastery goals were positively associated with perceived competence (Cury et al., 2002).

Similar results were found using the 2x2 framework. Perceived competence positively predicted mastery-approach and performance-approach goals in team sport athletes (Morris & Kavussanu, 2008). However, perceived competence was not a significant predictor of performance-avoidance or mastery-avoidance goals (Morris & Kavussanu, 2008), which again, suggests that perceived competence is important in determining the valence of achievement goals. Wang and colleagues (2009) found slightly different results. The high perceived competence group had higher approach goals, both performance and mastery, than the moderately low perceived competence group. As discussed in the ability beliefs section, perceived competence was found to be a moderator as opposed to an independent antecedent in achievement goal adoption in this study (Wang et al., 2009).

**Gender.** Gender may have an influence on the adoption of achievement goals as well. In youth sport, females had higher mastery goal scores and males has higher performance goal scores (Smith, Smoll, & Cumming, 2009). Morris and Kavussanu

(2008) results indicated that males had higher mastery-approach and performance-approach goals than females, and females had higher mastery-avoidance goals. Similarly, other researchers (Trenz & Zusho, 2011; Stenling et al., 2014) found that females reported higher levels of mastery-avoidance goals than males. This is different than findings in the academic setting where females have higher mastery-approach goals than males (Elliot & McGregor, 2001). The differences may be due to the environmental differences in academic versus athletic settings. The fact that most sport settings have been traditionally dominated by males may influence the way females approach achievement situations in sport (Morris & Kavussanu, 2008). Interestingly, perceived competence was higher in males than females in this study, indicating that males may perceive themselves to be more competent in the sport domain than females (Morris & Kavussanu, 2008). The differences in perceived competence contribute to why males appear to adopt the positively valenced achievement goals (Morris & Kavussanu, 2008).

**Achievement behaviors & outcomes.** Achievement goals lead to a wide variety of psychosocial outcomes, emotions, and achievement behaviors. Mastery-approach goals have consistently been associated with adaptive outcomes (e.g., Elliot & McGregor, 2001; Ames & Archer, 1988; Pekrun et al., 2014; Pekrun et al., 2006). Mastery goals have a positive effect on enjoyment, hope and pride, and a negative effect on boredom, anger, hopelessness, and shame (Pekrun et al., 2006, 2014). Mastery goals are positively associated with high interest (Senko & Harackiewicz, 2005), intrinsic motivation (Ames & Archer, 1988; Elliot & Church, 1997), and deep processing study habits (Elliot & McGregor, 2001), and are negatively associated with health center visits (Elliot & McGregor, 2001) and burnout (Naidoo, DeCriscio, Bily, Manipella, Ryan, & Youdim,

2012) in undergraduates. A meta-analysis found approach goals, relative to avoidance goals, enhanced task performance, and in particular, mastery-approach goals led to the best performance (Van Yperen, Blaga, & Postmes, 2015).

On the other hand, results suggest that mastery-avoidance goals are positively related to test anxiety, worry, disorganization (Elliot & McGregor, 2001), and burnout (Naidoo et al., 2012). Some findings suggest mastery-avoidance goals have no effect on performance (Elliot & McGregor, 2001), while others suggest that mastery-avoidance goals have a negative impact on performance (Van Yperen, Elliot, & Anseel, 2009) and regulation of emotions in the classroom (Sideridis, 2008).

Before the distinction of avoidance-approach goals, research on the outcome of performance-based goals produced mixed support. After the distinction, performance-avoidance goals were distinguished as the performance goals with maladaptive outcomes (Elliot, 1999; Elliot & Church, 1997). Performance-approach goals are positive predictors of hope, enjoyment, and pride (Pekrun et al., 2006, 2009, 2014) and negative predictors of anxiety and hopelessness (Pekrun et al., 2014). Performance-approach goals are positively associated with academic performance (Elliot & Church, 1997; Elliot & McGregor, 2001; Pekrun et al., 2009) and are predictors of task success (Senko & Harackiewicz, 2005). Performance-approach goals are negatively associated with burnout in undergraduate students as well (Naidoo et al., 2012).

Performance-avoidance goals are positive predictors of anxiety, hopelessness, shame, relief, and anger (Pekrun et al., 2006, 2009, 2014). Performance-avoidance goals are also positively associated with surface processing during studying, disorganization, test anxiety, worry (McGregor & Elliot, 2001) and burnout (Naidoo et al., 2012) and

negatively associated with overall exam performance in undergraduates (Elliot & McGregor, 2001). Pekrun and colleagues (2009) also found performance-avoidance goals to be negative predictors of academic performance.

Harackiewicz, Barron, Pintrich, Elliot, & Thrash (2002) suggest that in general mastery goals are positively associated with increased interest and intrinsic interest and performance-approach goals are positively associated with enhanced performance. This idea supports the notion of multiple goal adoption. Achievement goals are orthogonal, meaning that different goals can co-occur. An individual can score high in both a performance-based and mastery-based goal. Harackiewicz and colleagues (2002) encourage a multiple goal perspective, specifically the incorporation of both a performance-approach and mastery-approach goal to achieve the most beneficial outcomes.

Achievement emotions, behaviors, and outcomes within the sport context are similar to those in the academic context. Mastery-approach goals positively predict intrinsic motivation (Wang et al., 2009; Li et al., 2011), performance in sport (Elliot et al., 2006; Li et al., 2011), and practice time (Ntoumanis et al., 2009). Mastery-approach goals also show a positive relationship with enjoyment and hope in youth tennis players (Puente-Diaz, 2013). Using task-ego verbiage, researchers found that a task/mastery goal orientation is associated with adaptive achievement strategies like persistence in practice, practice mastery, and exerting effort in competition, as well as positive affect (Biddle, Wang, Kavussanu, & Spray, 2003) and mindfulness (McCarthy, 2011). On the contrary, mastery-avoidance goals negatively predict intrinsic motivation (Wang et al., 2009) and positively predict cognitive anxiety (Stenling et al., 2014).

Biddle and colleagues (2003) found interesting results regarding performance/ego goal orientations and morally-relevant behaviors. Athletes that reported high performance/ego orientations also reported unsportsman-like attitudes, endorsed intentionally aggressive behaviors within sport, and displayed aggressive behaviors in sport (Biddle et al., 2003). Performance-approach goals have positive effects on performance (Elliot et al., 2006) but do not necessarily enhance intrinsic motivation (Wang et al., 2009). Additionally, a positive association between performance-approach goals and hope was found in youth tennis players (Puente-Diaz, 2013). Performance-avoidance goals have been identified as detrimental to sport performance (Elliot et al., 2006; Li et al., 2011). Experimentally-induced performance avoidance goals resulted in less practice and greater behavioral self-handicapping than both mastery approach and mastery-avoidance goals (Ntoumanis et al., 2009).

**Achievement goals and leader behaviors.** One of the main premises of this study is to examine the relationship between servant leader coach behaviors and achievement goals. This section will provide an overview of the current research on the relationship between leader behaviors and achievement goals in academics and in sport. Researchers have found that leader behaviors have a direct influence on the adoption of achievement goals (Erturan-Ilker, 2014; Pekrun et al., 2014). In an academic setting, achievement goals are influenced by system of evaluation, type of recognition, nature of interactions, and the source of authority (Duda, 2005).

Feedback instructions are a primary example of leader behaviors that influence the adoption of achievement goals (Erturan-Ilker, 2014). Erturan-Ilker (2014) examined the relationship between positive and negative feedback with achievement goals in a

Turkish physical education class. Results suggested that mastery and performance approach goals increased in the positive feedback group and performance avoidance goals decreased (Erturan-Ilker, 2014). On the other hand, performance avoidance goals increased in the negative feedback group (Erturan-Ilker, 2014). Elliot and Church (1997) suggest that negative feedback may cause individuals to switch from a performance-approach to a performance-avoidance goal, and positive feedback may cause individuals with avoidance goals to adopt approach-based goals. Similarly, Senko & Harackiewicz (2005) found undergraduate psychology students decreased their mastery goal pursuits when given negative competence feedback.

Pekrun and colleagues (2014) examined the effect of anticipated feedback on achievement goals in a high school population. Anticipated achievement feedback, the feedback that the student expects to receive, was identified as a powerful contextual factor that shape achievement goals (Pekrun et al., 2014). Anticipated feedback that focused on self-improvement facilitated the adoption of mastery goals, while anticipated feedback based on social comparison facilitated the adoption of both performance-based goals (Pekrun et al., 2014).

Not surprisingly, just as teacher behaviors influence the endorsement of student achievement goals in the classroom, coach behaviors influence the adoption of achievement goals in sport. Athletes who perceived their coaches to be more committed, close in relationship, and seen as readily accessible were more likely to endorse a mastery-approach goal (Adie & Jowett, 2010). On the other hand, athletes who felt less close in relationship and who perceived their coach as less committed and complementary were more likely to adopt a performance-avoidance goal (Adie & Jowett,

2010). An unhealthy coach-athlete relationship could distract player focus away from competence-based pursuits and instead place it on the possibility of failure (Adie & Jowett, 2010).

Wang and colleagues (2009) analyzed the effects of leadership on achievement goals in high school basketball players. A democratic environment, perceived social support, positive feedback, and training and instruction were positively associated with both mastery-approach and mastery-avoidance goals but neither of the performance-based goals (Wang et al., 2009). These behaviors, in particular the democratic environment, social support, and positive feedback are characteristics evident in servant leaders. Knight (2015) examined the relationship between servant leadership and goal orientations in youth athletes. Servant leader behavior predicted a mastery orientation, particularly the trust/inclusion subscale, while servant leadership did not predict a performance orientation (Knight, 2015).

While the research suggests that leader behaviors predict achievement goals, the relationship may be better explained by the inclusion of motivational climate. Motivational climate is a reflection of coaching behaviors (Newton et al., 2000) and is also considered an important antecedent in the adoption of achievement goals (Ames, 1992b). Motivational climate appears to “connect the dots” between servant leadership and achievement goal adoption.

### **Motivational Climate**

Motivational climate is the situational goal structure that is created by significant others (e.g., teachers, parents, coaches) in achievement contexts (Ames, 1992b). The motivational climate is based on how the significant individual determines what

constitutes success and failure in that achievement situation (Ames, 1992b). There are two types of motivational climates: a) mastery climate- where success is defined by the demonstration of maximal effort, individual improvements, and mastering tasks (Ames, 1992b) and b) performance climate- where interpersonal competition, normative standards, and social comparison are stressed (Ames, 1992a).

Motivational climate influences an individual's affect and behavior. Research in both academic and sport contexts indicate that motivational climates are related to a variety of outcomes. A mastery climate is positively associated with intrinsic motivation (Kavussanu & Roberts, 1999; Newton et al., 2000, Seifriz, Duda, & Chi, 1992), enjoyment (Balaguer, Duda, & Crespo, 1999; Kavussanu & Roberts, 1999; Seifriz et al., 1992), effort (Kavussanu & Roberts, 1999; Seifriz et al., 1992), positive perceptions of the coach (Balaguer, Duda, Atienza, & Mayo, 2002), perceived competence (Kavussanu & Roberts, 1999), and effective learning strategies (Ames & Archer, 1988). A mastery climate is negatively associated with worry about performance (Walling, Duda, & Chi, 1993) and tension (Kavussanu & Roberts, 1999).

On the other hand, a performance climate is associated with more maladaptive outcomes, including a positive association with worry about performance (Walling et al., 1993), decreased satisfaction (Walling et al., 1993), and the belief that ability causes success (Seifriz et al., 1992). Additionally, motivational climates are strongly correlated with and predictive of goal orientations (e.g., Bortoli, Bertollo, Comani, & Robazza, 2011; Carr, 2006; Knight, 2015; Murayama & Elliot, 2009), which is a major focus of this study. This relationship will be discussed more thoroughly in subsequent sections.



**Measuring motivational climate.** Seifriz and colleagues (1992) developed the first sports-related measure of perceived motivational climate called the Perceived Motivational Climate in Sport Questionnaire (PMCSQ). The theoretic framework and makeup of the instrument was based on previous work in the educational field by Nicholls (1989), Dweck (1986), and Ames (1992b; Ames & Archer, 1988). Similar to the educational domain, perceived performance climate and the perceived mastery climate were identified in the PMCSQ (Seifriz et al., 1992). A follow up study by Walling and colleagues (1993) found support for the construct validity of the PMCS. However, both (Seifriz et al., 1992; Walling et al., 1993) suggested that the measure could be improved, particularly by conceptualizing motivational climate in a hierarchical manner (Newton et al., 2000). To improve the psychometric properties of the PMCSQ, Newton and colleagues (2000) developed the Perceived Motivational Climate in Sport Questionnaire-2 (PMCSQ-2). Validity and reliability were established for the PMCSQ-2, and six dimensions emerged, including effort/improvement, important role, cooperative learning, team member rivalry, unequal recognition, and punishment for mistakes (Newton et al., 2000). The two-part study found support for the multi-dimensional hierarchical structure for the 33-item PMCSQ-2 (Newton et al., 2000). The PMCSQ-2 was implemented in this study to measure the motivational climate of tennis teams.

**Motivational climate and leader behaviors.** The motivational climate is created by the behaviors of a significant adult (e.g., coach, teacher, parents), including feedback about performance, the system of reward and punishment, and instructional commands. Newton et al. (2000) suggested that how a coach or teacher defines achievement or success, the patterns of recognition and evaluation, the response to errors and the

expectation for certain behavior within the group are standards that the coach conveys to create a motivational climate. Overall, different behaviors convey the teacher/coach's criteria for success, thus creating the achievement climate. Initial research on motivational climates began in academic settings. According to Ames and Archer (1988), when social comparison is deemed important, students tend to focus on their ability as it relates to others, and their affective responses and performance are determined by their success and failure according to this comparative standard. In an environment that focuses on self-standards, personal improvement, and participation, students tend to think about their effort and task-mastery (Ames & Archer, 1988). Ames (1992b) identified the design of tasks and learning activities, evaluation and recognition, and the teacher's degree of authority as three constructs that influence the classroom structure/motivational climate of the classroom, which in turn influenced achievement goals.

Erturan-Ilker (2014) examined at the relationship between affective feedback (e.g., positive vs. negative feedback) and motivational climate in a high school physical education class in Turkey. One experimental group was provided with positive feedback while the other group was given negative feedback. A trichotomous motivational climate scale (Agbuga & Xiang, 2008) was used to assess the motivational climate. Students in the positive feedback group perceived the climate to be mastery and performance-approach focused, while students in the negative feedback group interpreted their climate as performance-avoidance oriented (Erturan-Ilker, 2014). Viciano and colleagues (2007) conducted a similar study in a physical education setting. The results demonstrated that positive feedback led to higher scores in the learning-oriented motivational climate, whereas negative feedback led to higher scores in the performance-oriented motivational

climate (Viciano, Cervello, & Ramirez-Lechuga, 2007). These results suggest the importance of specific leader behaviors, such as positive or negative feedback, in the creation of motivational climates

**Motivational climate and leader behaviors in sport.** Coaches play a large role in creating the motivational climate in sport settings (Newton et al., 2000; Smith, Balaguer, & Duda, 2006). Ames (1992a) identified the coach of an athletic team as the main architect of the motivational climate. A group of elite skiers indicated that the coach plays a vital role in determining the motivational climate, and they expressed their preference for a caring and supportive environment (Pensgaard & Roberts, 2002). The importance of the coach's influence on the team motivational climate is evidence by the instruments used to measure the motivational climate in sport settings. The most updated instrument, the Perceived Motivational Climate in Sport Questionnaire-2 (Newton et al., 2000), refers to the coach in over half the questions, thus indicating the important role coaches play in developing the motivational climate (Smith et al., 2006). In a mastery climate, sport coaches emphasize effort, self-improvement, cooperative learning, and important roles for every team member (Newton et al., 2000). On the other hand, a coach encourages team member rivalry, punishes athletes for mistakes, and unequally recognizes and encourages teammates in a performance climate (Newton et al., 2000).

While there is limited research examining the influence of servant leader coaching behaviors on motivational climate, some researchers (Mageau & Valler, 2003; Ommundsen & Kvalo, 2007) have examined different leader characteristics as they relate to the structuring of motivational climates and athlete motivation. Mageau and Vallerand (2003) posit that coach behaviors influence the environment and athlete motivation

through Self-Determination Theory. Coaches who support athlete's autonomy, provide structure, and are involved in athletes' well-being create an optimal environment for the satisfaction of their athletes' basic human needs, autonomy, competence, and relatedness, which enhance intrinsic and self-determined extrinsic motivation (Mageau & Vallerland, 2003). Autonomy-supportive coaches provide athletes' with choices, give rationale for rules and tasks, recognize individual feelings, allow opportunities for athletes to take initiative, provide competence feedback, prevent ego-involvement, and avoid controlling motivational strategies (Mageau & Valler, 2003). These autonomy-supportive behaviors are similar to characteristics and behaviors found in servant leaders.

Weiss, Amorose, and Wilko (2009) provided insight to the relationship between specific feedback from coaches and motivational climates. Praise with or without information following success and mistake-contingent encouragement were both positively correlated to a mastery climate (Weiss et al., 2009). Statements that criticized with or without information were positively associated with a performance climate, and praise with or without information following success was negatively related to a performance climate (Weiss et al., 2009). The results indicate the importance of praise and encouragement following mistakes in creating a mastery climate.

Recently, Knight (2015) examined how servant leader coach behaviors were related to motivational climates. The results indicated that athletes' perceptions of servant leadership in their coaches were positively associated with a mastery climate, specifically the trust/inclusion subscale of servant leadership (Knight, 2015). Similarly, servant leader coach behaviors, in particular the trust/inclusion category, were negatively associated with a performance climate (Knight, 2015). Additionally, additional years of coaching

and a higher licensing level in youth soccer were positively associated with a higher mastery climate score (Knight, 2015).

**Motivational climate and achievement goals.** Both personal and situational factors influence the adoption of achievement goals and subsequent achievement behaviors (Smith et al., 2009). Elliot (1999) posited that social-environmental factors are important determinants in achievement goals. Achievement goal theory predicts that the motivational climate an individual experiences can, over time, lead the individual to acquiring the performance or mastery dispositional goal orientation that the climate emphasized (Ames, 1992b; Nicholls, 1989). In school-aged children, Ames (1992b) discovered that the classroom environment influenced students' adoption of achievement goals.

Results from Murayama & Elliot (2009) suggested that a mastery goal structure in the classroom positively predicted the adoption of mastery goals in students, but a performance-approach goal structure was unrelated to achievement goal adoption (Murayama & Elliot, 2009). Results from a longitudinal study found similar results (Papaioannou, Marsh, & Theodorakis, 2004). Papaioannou and colleagues (2004) examined how achievement goals changed over the course of a school year in a physical education class. Mastery climates were associated with increases in a mastery goal orientation, and performance climates were positively associated with changes in performance goal orientations (Papaioannou et al., 2004). Results from Carr (2006) suggested that students in a physical education class exposed to high mastery/low performance climate experienced a decrease in the adoption of performance-avoidance goals while maintaining a high level of mastery goals. On the other hand, students that

experienced a low mastery/high performance climate saw an increase in performance-avoidance goals and a decrease in mastery goals (Carr, 2006).

**Motivational climate and achievement goals in sport.** In sport, results align with theoretical predictions. Simply looking at the approach-domains of achievement goals, a mastery climate is associated with stronger mastery goal orientations and a performance climate with stronger performance goal orientations (Bortoli et al., 2011; Knight, 2015; Ntoumanis & Biddle, 1998; Smith et al., 2009). A negative relationship between a mastery climate and performance goal orientations was also demonstrated (Bortoli et al., 2011).

Three recent studies found similarities in the correlations between approach-based achievement goals and motivational climate. A performance climate was positively correlated with performance-approach goals, and similar findings were discovered for a mastery climate and mastery-approach goals (Jaakkola, Ntoumanis, & Liukkonen, 2016; Morris & Kavussanu, 2008; Trez & Zusho, 2011).

However, there appears to be some discrepancy when avoidance goals are added to the mix. Performance-avoidance goals were positively correlated with a performance climate in two studies (Morris & Kavussanu, 2008; Jaakkola et al., 2016), but not in a third (Trenz & Zusho, 2011). Additionally, mastery-avoidance goals were found to be positively correlated (Morris & Kavussanu, 2008), negatively correlated (Trenz & Zusho, 2011), and uncorrelated (Jaakkola et al., 2016) to a mastery climate.

The crossover between the climate with the opposing definition of the achievement goal (e.g., performance climate and mastery-based goal) yields unclear results as well. Although Trez and Zusho (2011) found a negative correlation between

mastery-avoidance goals and a mastery climate, results demonstrated a positive correlation between mastery-avoidance goals and a performance climate. These results were not replicated in either of the other studies. Also, performance-approach goals were positively correlated with a perceived mastery climate in the group that demonstrated high perceived ability (Jaakkola et al., 2016). A relationship between a mastery climate and performance-approach goals was not established in either of the two other studies. Jaakkola and colleagues (2016) suggested that the mastery environment, which encouraged effort, individual skill development, and learning, might have resulted in the desire for the high perceived ability group to demonstrate their normative competence.

Morris and Kavussanu (2008) and Trez and Zusho (2011) extended their research beyond correlations and examined motivational climates as predictors of achievement goals. A perceived mastery team climate positively predicted the adoption of mastery-approach goals; and likewise, a perceived performance climate positively predicted performance-approach goals (Morris & Kavussanu, 2008; Trez & Zusho, 2011). These results suggest that the motivational climate influences the defining component of achievement goals, as opposed to the valence. In addition to these findings, a mastery climate was also found to predict performance-approach goals (Trenz & Zusho, 2011).

### **Summary**

This review covered the three major themes: servant leadership, achievement goals, and motivational climate. In this review, servant leadership was identified as a contemporary style of leadership that is worth consideration in sport contexts. Additional empirical research is necessary for the emerging model to gain traction and support in the

field. Examining servant leadership through the lens of achievement goals is one way to contribute to the hole in the research. Achievement goals in sport are particularly noteworthy because they are connected to a variety of achievement behaviors (e.g., enhanced effort), emotions (e.g., enjoyment), and outcomes (e.g., successful performance). As suggested, the inclusion of motivational climate seems to bridge the gap between servant leader coach behaviors and achievement goals in athletes. This study examines the relationship between servant leadership in collegiate tennis coaches and achievement goals in collegiate tennis players, as well understand the role of motivational climate in the relationship.



## **Chapter 3**

### **Methods**

#### **Introduction**

The objective of this study was to examine the complex relationship between servant leader coach behaviors, motivational climate, and achievement goals in collegiate tennis players. A mediation analysis following the work of Barron & Kenny (1986) and MacKinnon and colleagues (2008) was conducted to examine the relationship. The following section will outline participants, instrumentation, procedures for collecting data, and data analysis.

#### **Participants**

Eighty-two collegiate tennis players participated in the study. The sample consisted of 34 males and 48 females with a mean age of 19.77 years and standard deviation of 1.26 years. A total of nine coaches were evaluated by their athletes (seven males and two females). Three of the males coached male teams, three coached female teams, and one coached both male and females, while the two females solely coached female teams. The participant make up was 29% freshmen, 22% sophomores, 23% juniors, and 24% seniors. Respondents were from National Collegiate Athletic Association (NCAA) Division I (39%) and Division III (61%) institutions in Washington state.

#### **Instruments**

Participants were given a questionnaire that consists of three validated instruments to assess perceived servant leader behaviors, achievement goals, and the motivational climate of the team.

**Servant leadership.** To assess servant leadership, the Revised Servant Leadership Profile for Sport (RSLP-S; Hammermeister et al., 2008) was used. The RSLP-S was adapted from Wong's (2004) Revised Servant Leadership Profile (RSLP) to fit a sport-specific population. The RSLP-S consists of three servant-leader dimensions: 1) trust/inclusion, 2) humility, and 3) service. The RSLP-S has a perceived leader behavior profile, as well as a preferred leader behavior dimension. For this study, the perceived leader behavior profile was the only profile utilized. The perceived leader behavior profile consists of 22 items, measured on a 7-point-Likert scale that ranges from strongly agree to strongly disagree. The perceived leader behavior profile consists of 11 trust/inclusion items, six humility items, and five service items. Previous research on the RSLP-S demonstrated high internal consistency with Cronbach's alpha reliability coefficients ranging from 0.79 to 0.92 (Rieke et al., 2008).

**Achievement goals.** To measure achievement goals, the 3x2 Achievement Goal Questionnaire for Sport (3x2 AGQ-S; Mascaret et al., 2015) was utilized. This questionnaire is an adapted version of the Achievement Goal Questionnaire (Elliot et al., 2011). The model is composed of two dimensions of competence: valence (approach or avoidance goals) and definition (task-, self-, other-oriented goals). In total, there are six goal constructs, including task-approach, task-avoidance, self-approach, self-avoidance, other-approach, and other-avoidance goals. Each of the six goal constructs consist of three measurement items that range on a 1 (not true of me) to 7 (extremely true of me) scale, making a total of 18 questions. In their validation work, Mascaret and colleagues (2015) found the 3 x 2 Achievement Goal Questionnaire in Sport displayed adequate validity. A confirmatory factor analysis was conducted, including a comparative fit index

(.98), incremental fit index (.99), and root-mean-square error of approximation (.051), all of which supported the hypothesized model (Mascret et al., 2015). The questionnaire also met the criteria for a good fitting model  $\chi^2$  (120 N=302) = 215.55, and standardized factor loadings were strong (.76 to .94) (Mascret et al., 2015).

**Motivational climate.** Participants were given the Perceived Motivational Climate in Sport Questionnaire-2 (PMCSQ-2; Newton et al., 2000) to assess the perceived motivational team climate. The PMCSQ-2 is a 33-item questionnaire that consists of 17 mastery items, which measure cooperative learning, effort, and important roles, and 16 performance items that measure intra-team rivalry, unequal recognition, and punishment for mistakes. A 5-point-Likert scale measures responses ranging from 1 (strongly disagree) to 5 (strongly agree). Newton and colleagues (2000) found adequate internal consistency for the PMCSQ-2. Alpha coefficients were .87 for a mastery climate and .89 for a performance climate (Newton et al., 2000). The PMCSQ-2 also demonstrated reliability (Newton et al., 2000).

### **Procedure**

Upon the approval of the Institutional Review Board, prospective college tennis coaches were contacted through email to gain permission to involve their athletes. After approval from coaches, the primary researcher traveled to the team's location to distribute the questionnaire to the athletes in a private setting either before or after practice or between matches in a tennis tournament. This occurred during the fall tennis season. Before beginning the questionnaire, the athletes were advised that participation in the study was voluntary and completing the survey implied their consent. Participants were also informed that they could stop at any point in time and that their responses were

anonymous. The questionnaire took between 12 and 15 minutes to complete. Athletes were instructed to place their finished questionnaires into a provided manila envelope.

### **Data Analysis**

Data analysis was conducted using IBM SPSS Statistic 23.0. Descriptive statistics were completed to characterize and describe the sample, and Cronbach's alpha was used to determine the internal consistency and reliability of the instruments. A one-way analysis of variance (ANOVA) was run to determine differences between male and females, and bivariate correlations were conducted to determine the relationships between all variables.

The processes for assessing mediation involves three regression equations and a final, fourth step (Baron & Kenny, 1986; MacKinnon, Fairchild, & Fritz, 2007):

- 1) The independent variable (each RSLP-S variable) must be related to the dependent variable (achievement goals).
- 2) The independent variable (each RSLP-S variable) must be related to the potential mediator (motivational climate).
- 3) The potential mediator (motivational climate) must be related to the dependent variable (achievement goals) when controlling for the relationship the predictor shares with both.
- 4) The fourth step requires that the coefficient relating the independent variable to the dependent variable must be substantially larger than the coefficient relating the independent variable to the dependent variable in the regression model that includes both the potential mediator and independent variable.

The fourth step is statistically equivalent to testing the significance of the mediating effect (MacKinnon et al., 2007). In the third and fourth steps, the coefficients are calculated through a single regression equation where the criterion is regressed upon the predictor and potential mediator simultaneously. Evaluating the statistical significance of the fourth step is computed by dividing the total mediating effect by its standard error, using Equation 1 below (Sobel, 1982). The numerator of the equation (the mediating effect) is simply the product of the individual structural path coefficients,  $a$  and  $b$ . The denominator (the standard error of the mediating effect) is computed using the individual structural path coefficients and their respective standard errors,  $s^a$  and  $s^b$  (obtained respectively, from the second and third regression equations described above). Alpha was set at .05 for the regression analyses.

$$\text{Equation 1: Sobel test statistic} = \frac{a*b}{\text{SQRT}(b^2*s_a^2 + a^2*s_b^2)}.$$

## Chapter 4

### Results

This chapter will provide a summary of the results in four sections- the sections are (1) Cronbach's alpha reliability coefficients, (2) gender differences, (3) bivariate correlations, and (4) the mediational analysis.

#### **Cronbach's Alpha Reliability Coefficients**

Cronbach's alpha was used to measure the internal consistency of instruments and instrument subscales. All scales met the .70 requirement for acceptable internal consistency (O'Donoghue, 2012). Specifically, the RSLP-S demonstrated good internal consistency in both the overall scale and subscales (RSLP-S = .951, trust/inclusion = .917, humility = .899, service = .878). The PMCSQ-2 had good internal consistency with the overall scale (PMCSQ-2 = .764) and both subscales (mastery climate = .879, performance climate = .923). Internal consistency was also good for the 3x2 AGQ-S overall scale and subscales (3x2 AGQ-S = .910, task avoidance = .753, self avoidance = .841, other avoidance = .867, other approach = .787, task approach = .754, self approach = .859). Thus, all scales were retained because they met acceptable internal consistency standards.

#### **Gender Analysis**

A one-way ANOVA was conducted to assess if gender differences existed across the variables of interest. Gender differences were found for RSLP-S humility  $F(1, 80) = 5.83$ ;  $p < .05$ , RSLP-S service  $F(1, 80) = 4.38$ ,  $p < .05$ , and performance motivational climate  $F(1, 80) = 11.57$ ,  $p < .01$ . Because gender differences were identified, the decision was made to run separate mediation analyses for males and females.

## Bivariate Correlations

**Male Correlations.** Performance climate and task-avoidance goals ( $r = .48, p < .01$ ) had a low positive relationship, and performance climate and self-avoidance goals ( $r = .53, p < .01$ ) had moderate positive relationship. Humility also had a significant negative and low correlation to self-avoidance goals ( $r = -.41, p < .05$ ). Humility and task-avoidance goals were related, but did not reach significance ( $r = -.33, p = .06$ ). Finally, humility and performance climate were significantly related ( $r = -.66, p < .0001$ ). This relationship was moderate and negative. Other significant relationships emerged for other variables as well (see Table 2).

**Female Correlations.** Trust/inclusion was moderately related to both mastery climate ( $r = .63, p < .0001$ ) and performance climate ( $r = -.57, p < .0001$ ). Humility had a low relationship with both with mastery climate ( $r = .39, p < .01$ ) and performance climate ( $r = -.35, p < .05$ ). Service was moderately related to both mastery climate ( $r = .58, p < .0001$ ) and performance climate ( $r = -.54, p < .0001$ ). No significant relationships emerged between female achievement goals and servant leader variables or motivational climates. See Table 3 for the female bivariate correlations.

## Mediation Analysis

Figures 1-2 show the regression coefficients and standard errors for the mediation analyses. Tables 4-5 include the magnitude of the indirect mediating effect and the associated results of the Sobel test of significance, the overall shared variance between RSLP-humility and the achievement goals (i.e., the  $R^2$  when achievement goals are regressed upon by RSLP-S humility), and the unique shared variance between RSLP-humility and achievement goals in the mediation model (i.e., the change in  $R^2$  when

performance climate is added as a second predictor to a model with achievement goals already regressed on RSLP-humility). The following paragraphs summarize the information in Figures 1-2 and Tables 4-5 as it applies to the three-step mediation process.

**Step 1: Do RSLP-S variables predict achievement goals?** No significant relationship emerged between servant leadership and achievement goals for the females. Due to this lack of relationship, further mediation analysis with the females was not conducted. However, significant relationships did emerge for the males. The rest of the mediation analysis will be referring to the results for the males. The effect size ( $R^2$ ) of the relationship between RSLP-S humility and self-avoidance goal was .17 ( $p < .05$ ) and between RSLP-S humility and task-avoidance goal was .11 ( $p = .06$ ). Although the  $R^2$  value for humility and task-avoidance goals did not reach traditional statistical significance, it was included in the results because it fell just short of reaching significance.

**Step 2: Do RSLP-S variables predict motivational climate?** The effect size ( $R^2$ ) of the relationship between humility and performance climate was .44 ( $p < .0001$ ) in the males.

**Step 3: Does motivational climate predict achievement goals when controlled for servant leader variables?** The regression coefficient for performance climate predicting self-avoidance achievement goals, when controlled for RSLP-S humility was .85 ( $p < .05$ ). The regression coefficient for performance climate predicting task-avoidance achievement goals, when controlled from RSLP-S humility was .79 ( $p < .05$ ).



This suggests that performance climate predicts a significant amount of unique variance in task- and self-avoidance goals in males.

**Step 4: Does motivational climate mediate the relationship between RSLP-S variables and achievement goals?** The magnitudes of the indirect effects of RSLP-humility on achievement goals through the motivational climate construct were  $-.34$  ( $p < .05$ ) for self-avoidance goals and  $-.31$  ( $p < .05$ ) for task-avoidance goals. In both mediation models, the effect size of the direct path between RSLP-S humility and achievement goals, after controlling for the relationship between motivational climate and achievement goals, was very small in magnitude and statistically insignificant- as compared to the effect sizes of the direct path between RSLP-S humility and achievement goals. These results satisfy the necessary requirements for suggesting that the observed relationships between RSLP-S humility and the achievement goals of self-avoidance and task-avoidance are mediated by motivational climate.

## Chapter 5

### Discussion

This study examined the relationships among servant leader coach behaviors, motivational climate, and achievement goals. More specifically, the study had four foci: 1) to discover if servant leadership is related to achievement goals; 2) to discover if servant leadership is related to motivational climate; 3) to determine if motivational climate and achievement goals are related, when servant leadership is controlled; 4) to determine if motivational climate mediates the relationship between servant leadership and achievement goals. This chapter will discuss (1) the four hypotheses, (2) implications for practice, (3) limitations, (4) recommendations for future research, and (5) conclusions.

### Hypotheses

**Hypothesis 1: There will be a significant linear relationship between servant leadership and achievement goals.** There was a significant linear relationship between the servant leadership construct humility and self-avoidance goals for males but not female participants. Similarly, there was a nearly significant ( $p = .06$ ) linear relationship between humility and task-avoidance goals for male participants but not for females. Due to the exploratory nature of this study, this relationship was included in the rest of the mediation analysis even though it did not reach traditional significance. Thus, we can partially confirm our first hypothesis for males but not for females.

The negative relationship between humility and self-avoidance goals that emerged for the males suggests that a coach who is perceived to be high in humility is subsequently less likely to have athletes adopt self-avoidance achievement goals.

Similarly, the negative relationship between humility and task-avoidance goals that emerged for the males suggests that a coach perceived to be high in humility is less likely to have athletes report task-avoidance achievement goals. However, on the flip side, coaches that are perceived to be low in humility are more likely to have athletes report higher scores on self- and task-based avoidance goals.

A high score on the servant leader construct humility characterizes a coach that is not always concerned with having full authority, believes that the leader should not always be front and center, does not look at their position as one of power, allows the team to have some control, and does not have to be seen as superior to the team in everything. This suggests that male team coaches who have a more democratic coaching style and are perceived as less power-hungry are more likely to produce athletes that score lower in self-avoidance goals and task-avoidance goals. Self-avoidance goals are about avoiding the demonstration of incompetence, and specifically avoiding doing worse than a previous performance. In task-avoidance goals, the player's objective is to avoid doing the task incorrectly. For example, "to avoid bad results" and "to avoid performing badly" are items used in the 3x2 AGQ-S to measure task-avoidance. Both of these goals are associated with a fear of failure (Conroy et al., 2003; Conroy & Elliot, 2004) and are not associated with positive psychosocial outcomes (e.g., Stenling et al., 2014; Wang et al., 2009) or superior performance (Van Yperen et al., 2009).

To date, this is the first study to look at servant leadership and achievement goals using the 3x2 model of achievement goals. Previous servant leadership research (Hammermeister et al., 2008; Knight, 2015; Rieke et al., 2008; Westre, 2008) used the Task and Ego Orientation in Sport Questionnaire (TEOSQ; Duda, 1989). This instrument

defines achievement motivation through task (self- and task-based goals) and ego (other-based goals) orientations, but excludes the approach and avoidance domains. The negative relationships between humility and task- and self-avoidance goals in this study partially contradict previous research that found a positive relationship between servant leadership and mastery-based goal orientations (Hammermeister et al., 2008; Westre, 2008). However, it is extremely important to note that in this study the negative relationships between humility and task- and self-based goals were found in the avoidance valences only and not the approach valences. This finding indicates that using the 3x2 achievement goal model may provide a more comprehensive and perhaps a better way to examine the relationship between servant leadership and achievement motivation. Including the avoidance domain into the analysis exposes an important aspect of achievement motivation that is excluded using the TEOSQ and in previous servant leadership literature.

This finding also contradicts coach leadership research not using the RSLP-S. Adie and Jowett's (2010) findings that an athlete's relationship with their coach, measured by commitment, closeness, and complementarity, did not emerge as a predictor of mastery-avoidance goal adoption. Adie and Jowett (2010) noted that the antecedents for mastery-avoidance goals are not well documented in the literature because they are a relatively new concept compared to the other achievement goals. Additionally, Wang and colleagues (2009) found a positive relationship between a democratic environment, social support, and positive feedback from coaches and mastery-avoidance goals. This is also contrary to the current study's findings that humility (e.g., democratic environment) and mastery-avoidance goals are negatively related.

Previous research (Elliot & Church, 1997; Erturan-Ilker, 2014) has found certain coach behaviors, like negative feedback, to be associated with avoidance goals. However, both of these studies looked only at performance-based goals and did not include mastery-avoidance goals in the analysis. This suggests that coach behaviors can have an influence on the adoption of avoidance achievement goals. The inverse relationships between the coaching behavior of humility and self-avoidance and task-avoidance is a relationship that is not well supported in the literature due to the limited amount of servant leadership research and the lack of previous studies incorporating mastery-avoidance goals into the analysis.

**Hypothesis 2: There will be a significant linear relationship between servant leadership and motivational climate.** Among the male participants, there was a significant negative linear relationship between the RSLP-S humility subscale and performance climate. No significant relationships were found for females. Thus, we can partially confirm our second hypothesis for males, but not for females.

In this study, low coach humility predicted a performance climate for male teams. This relationship makes sense because the coach's behaviors convey the criteria for success, and by doing so, create the environment by which success is both emphasized and evaluated. Conversely, this also suggests coaches who favor athletes, give special attention to the star players, encourage teammate rivalry, and punish athletes for making mistakes may perpetuate a less adaptive motivational climate (Newton et al., 2000).

Our findings are somewhat congruent with Knight's (2015) study which also found an inverse relationship between servant leadership and performance motivational climate in youth athletes. However, in Knight's (2015) study the trust/inclusion

dimension of servant leadership emerged as the negative predictor of performance climate as opposed to the humility dimension found in this study. While these findings are similar in that they show an inverse relationship between the servant leadership and performance motivational climates, Knight's (2015) finding is more about the coach's ability to build a trusting and inclusive team environment, while the current finding is more about the coach as a person. The current finding suggests that the personal trait of humility – in and of itself – may be a strong contributor to team climate. The old adage “teams never become what a coach wants them to become, they become who they are” certainly comes to mind here.

Lastly, it is worth noting that our findings are incongruent with those of Nicholls and colleagues (2016) who failed to find a significant relationship between unsupportive coaching behaviors and a performance climate. However, Nicholls et al (2016) study focused on “supportive” and “unsupportive” coach behaviors (utilizing the Coach Behavior Scale) and did not specifically examine servant leader behaviors.

**Hypothesis 3: There will be a significant relationship between achievement goals and motivational climate when controlling for the effects of servant leadership.**

There was a significant linear relationship between performance climate and both self-avoidance and task-avoidance goals when controlling for humility in the male participants but not among females. Thus, we can partially confirm our hypothesis for males but not for females.

This is the first study to date to look at the relationship between motivational climate and achievement goals while controlling for the effects of servant leadership. Previous research strongly supports the relationship between motivational climate and

achievement goals (Ames, 1992b; Bortoli et al., 2011; Morris & Kavussanu, 2008; Murayama & Elliot, 2009; Trez & Zusho, 2011). Typically, the motivational climate the athlete experiences leads to the adoption of similar achievement goals (Ames, 1992b). For example, a mastery climate leads to the adoption of task- and self-based goals, while a performance climate leads to the adoption of other-based goals. The current study found a crossover between task- and self-goals and performance climate, which is less commonly found in the literature. Similar to this study, Trez and Zusho (2011) found a positive correlation between mastery-avoidance goals and performance climate. On the contrary, other research did not find a significant relationship between mastery-avoidance goals and performance motivational climate (Jaakkola et al., 2016; Morris & Kavussanu, 2008). The crossover effect between performance climates and mastery-avoidance goals seems to yield unclear results. It does appear that adding avoidance valences into the equations adds a layer of complexity to the relationship between motivational climate and achievement goals. Future research will need to address whether a performance motivational climate can lead to the adoption of avoidance goals.

**Hypothesis 4: Motivational climate will mediate the relationship between achievement goals and servant leadership.** Performance climate mediated the relationship between self-avoidance goals and humility in male tennis players but not females. Additionally, performance climate mediated the relationship between task-avoidance goals and humility in male tennis players but not among females. Thus, we can confirm hypothesis number four.

This finding indicates that a coach low in perceived humility creates a performance climate, which then leads to the adoption of self-avoidance and task-

avoidance goals among the athletes. Conversely, a coach perceived as high in humility is less likely to create a performance climate, which leads to less self-avoidance and task-avoidance goal adoption. Overall, it appears that the coaching behavior of humility influences a male athlete's adoption of self- and task-avoidance goals, but this relationship is best conceptualized through the lens of a performance motivational climate.

This relationship makes sense. Coach behaviors, like humility, play a large role in creating the team motivational climate (Newton et al., 2000). The way a coach communicates with the team, handles team decision-making, and gives feedback influences the team motivational climate. This climate represents the standards for achievement. Over time, an athlete exposed to the team climate can adopt goals that are emphasized in the motivational climate (Ames, 1992b). In this study, it appears a motivational climate emphasizing favoritism, unequal recognition, and punishment after mistakes results in athletes adopting the fear-based avoidance valences for task- and self-based goals. The relationship among these variables is best explained through the lens of performance climate because the coach's behaviors create the situational goal structure of the team, which then influences the adoption of achievement goals.

Now the question is why did this effect occur in the male participants but not the females? Previous research found females are more likely to adopt mastery-avoidance goals than males in sport (Morris & Kavussanu, 2000; Stenling et al., 2014; Trezn & Zusho, 2011). While the current study did not find a significant difference in the achievement goals set between males and females, the results do indicate that males are



more influenced by humility coaching behaviors and the performance climate in adopting avoidance goals.

The males appear to be demonstrating greater sensitivity to a performance climate. Perceived competence, an antecedent to achievement goals, is one avenue worth further exploration in this regard. Elliot (1999) posited that avoidance goals are underpinned by low perceived competence, meaning that negative perceptions of competence orient athletes towards the possibility of failure. Morris and Kavussanu (2008) found males reported higher perceived competence in sport and at the same time reported more approach-based goals than females. Perhaps low humility coaching behaviors and a performance climate lead to lower perceived competence in males, which makes them more susceptible to the adoption of avoidance goals. Because perceived competence was not measured in this study, these ideas are all speculation.

Contrary to this study, Breiger and colleagues (2015) found a performance climate had a stronger negative impact (e.g., enjoyment, perceived liking by the coach, and attitudes toward coach) on females than it did on males in youth sport. Although achievement goals were not measured as an outcome, the results of Breiger and colleagues' (2015) study does suggest females are more negatively affected by a performance climate than males, which is contrary to the current study. Previous research has also found significant gender differences in the perception of motivational climate with males perceiving a more performance-oriented motivational climate than female respondents (Dowdell, 2013; Kavussanu & Roberts, 1996). For one reason or another, males are more likely to perceive the motivation climate as performance-based as compared to females. Future research will need to address gender differences in

achievement goals, motivational climate, and servant coach leadership to better understand to these relationships.

### **Implications for Practice**

For male coaches, the servant leadership construct humility appears to be particularly important for achievement goal adoption and motivational climate. Because self-avoidance and task-avoidance goals are associated with negative consequences and outcomes, a coach should foster an environment that does not encourage these goals. Incorporating humility into coaching practice appears to be one avenue to do this. As a coach, the practice of humility may lead to a decrease in performance climate, which then may lead to a decrease in avoidance goals in male teams.

The question is how does a coach incorporate humility into coaching practice while maintaining authority and the basic team structure? Allowing athletes to give their input and help make team decisions is one approach to increase a coach's humility. This means creating a democratic environment where athletes' voices are heard and respected. Additionally, not having the coach's name attached to every initiative and not always being front and center are other ways to increase humility. Practically, this could be implemented by discussing new ideas with team captains and having the captains propose the ideas to the team. Further, not looking at the coach position as one of power and not having to be seen as superior to the team in all areas are other ways to incorporate humility in coaching practice. The bottom line is, coaches are the authority figure for the team and should be making the important and tough decisions; however, incorporating these decisions can be done in humble ways which may facilitate the development of a mastery team climate as well as more adaptive achievement goals in male teams.

## **Limitations**

As in any study, there are several limitations to mention. First, this study utilized a cross-sectional design which does not allow for cause / effect determinations. A longitudinal study would be a more comprehensive way to analyze these relationships. Utilizing more sophisticated longitudinal or true-experimental designs would allow for more precise cause / effect conclusions. Secondly, the sample size was somewhat small. With 82 participants, only nine coaches were assessed, and not many statistically significant relationships emerged for the whole group. Further, the males in this study were the only group which met statistical criteria necessary to run a mediation analysis, thus, only 34 participants and four coaches were included in this analysis. Third, data was collected during the fall tennis season. This is a limitation because it did not allow much time for new athletes (i.e., freshman and transfers) to be coached by their new head coach. Finally, because the instruments used were self-report questionnaires, there is a possibility the athlete's responses were biased due to social-desirability concerns. Regrettably, a social desirability instrument was not used in the questionnaire.

## **Future Research Recommendations**

Future research should have a larger participant and coach sample size and should include different sports. Because the 3x2 achievement goal model is relatively new for the sport domain, additional research should use this model to analyze achievement motivation. This will help address the unclear results that emerged regarding avoidance goals and motivational climates. Additionally, future research should measure how athletes' achievement goals changed over the course of four years on a collegiate team through a longitudinal approach. Finally, because servant leadership is a relatively new

construct in sport, additional research utilizing more sensitive measures and larger samples is certainly warranted.

### **Conclusions**

The results of this study suggest that motivational climate does partially mediate the relationship between servant leadership and achievement goals among male tennis players. More specifically, performance climate mediates the relationship between the servant leader construct humility and self- and task-avoidance goals in male collegiate tennis players. This indicates that a coach who is high in humility is less likely to generate a performance climate and also less likely to have athletes with self-avoidance and task-avoidance goals. It appears that incorporating humility into coaching practice is one area worth further- and serious- consideration for coaches.

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Table 1

*Characteristics of Sample*

Variable	n	%
<b>Gender</b>		
Male	48	58.5
Female	34	41.5
<b>Age</b>		
17	1	1.2
18	15	18.3
19	19	23.2
20	20	24.4
21	21	25.6
22	6	7.3
<b>Grade</b>		
Freshman	24	29.3
Sophomore	18	22.0
Junior	19	23.2
Senior	20	24.4
Missing	1	1.2
<b>School</b>		
Eastern Washington University	19	23.2
Seattle University	13	15.9
Whitworth University	15	18.3
Whitman University	3	3.7
Pacific Lutheran University	20	24.4
University of Puget Sound	12	14.6

Table 2

*Male Bivariate Correlations of RSLP-S, 3x2 AGQ-S, and PMCSQ-2 Items*

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Trust-Inclusion	-----											
2. Humility	.70**	-----										
3. Service	.78**	.63**	-----									
4. RSLP-S Total	.94**	.87**	.86**	-----								
5. Task-Avoidance Goal	-.19	-.33	-.05	-.23	-----							
6. Self-Avoidance Goal	-.17	-.41*	-.08	-.26	.94**	-----						
7. Other-Avoidance Goal	-.24	-.25	-.11	-.24	.93**	.81**	-----					
8. Other-Approach Goal	-.12	-.24	.04	-.14	.42*	.40*	.51**	-----				
9. Task-Approach Goal	-.01	.03	.28	.07	.01	-.08	-.04	.31	-----			
10. Self-Approach Goal	-.11	-.20	.17	-.09	.18	.17	.20	.65**	.56**	-----		
11. Mastery Climate	.53**	.45**	.58**	.57**	-.19	-.15	-.29	.08	.24	.16	-----	
12. Performance Climate	-.65**	-.66**	-.48**	-.69**	.48**	.53**	.43*	.26	-.07	.28	-.32	-----

Note. \*\*  $p < 0.01$ , \* $p < .05$

Table 3

*Female Bivariate Correlations of RSLP-S, 3x2 AGQ-S, and PMCSQ-2 Items*

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Trust-Inclusion	-----											
2. Humility	.64**	-----										
3. Service	.78**	.77**	-----									
4. RSLP-S Total	.93**	.86**	.91**	-----								
5. Task-Avoidance Goal	.07	.10	.04	.08	-----							
6. Self-Avoidance Goal	.11	.14	.08	.13	.92**	-----						
7. Other-Avoidance Goal	.02	-.01	-.03	.00	.93**	.76**	-----					
8. Other-Approach Goal	-.13	-.19	-.23	-.19	.57**	.39**	.71**	-----				
9. Task-Approach Goal	-.07	.08	-.04	-.02	.51**	.49**	.40**	.28	-----			
10. Self-Approach Goal	.04	.01	-.11	.00	.35*	.46**	.22	.10	.58**	-----		
11. Mastery Climate	.63**	.39**	.58**	.60**	.00	.09	-.05	-.22	-.02	.05	-----	
12. Performance Climate	-.57**	-.35*	-.54**	-.55**	-.02	-.04	-.01	.15	.04	-.16	-.61**	-----

Note. \*\*  $p < 0.01$ , \* $p < .05$

Table 4

*Mediated (by performance motivational climate) effect sizes of RSLP-S Humility variable on Self-Avoidance Achievement Goal, Sobel z test statistic, unmediated effect sizes of RSLP-S Humility variables on Self-Avoidance Achievement Goal, and attenuated direct effect size of RSLP-S Humility variable on Self-Avoidance Achievement Goal.*

Mediation Model	Path (a)( b) effect size	Sobel z	Path (c) R <sup>2</sup>	Path (c') R <sup>2</sup> change after controlling for performance climate relationship with self-avoidance achievement goals
RSLP-S Humility	-.34	-2.09 (p = .037)	.17	.12



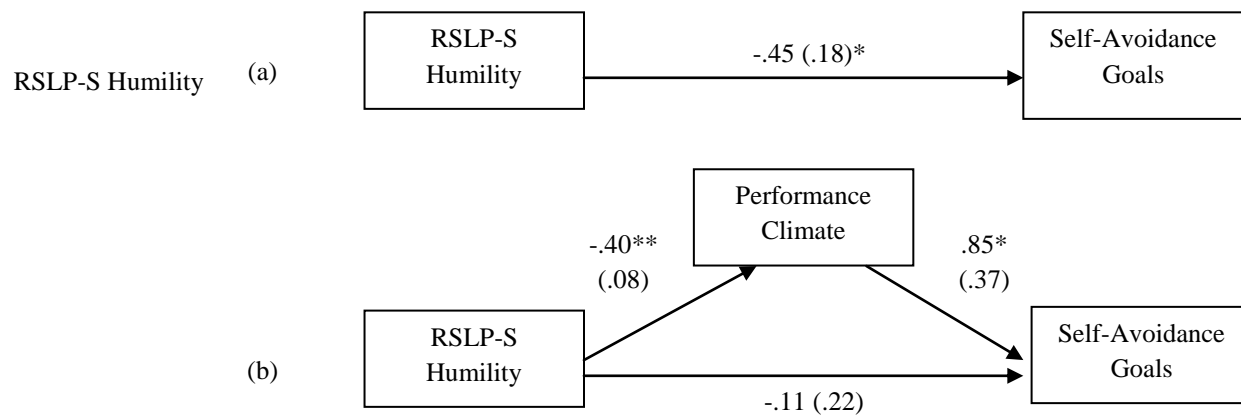
Table 5

*Mediated (by performance motivational climate) effect sizes of RSLP-S Humility variable on Task-Avoidance Achievement Goal, Sobel z test statistic, unmediated effect sizes of RSLP-S Humility variables on Task-Avoidance Achievement Goal, and attenuated direct effect size of RSLP-S Humility variable on Task-Avoidance Achievement Goal.*

Mediation Model	Path (a)( b) effect size	Sobel z	Path (c) R <sup>2</sup>	Path (c') R <sup>2</sup> change after controlling for performance climate relationship with task-avoidance achievement goals
RSLP-S Humility	-.31	-2.06 (p = .04)	.11	.12

Figure 1

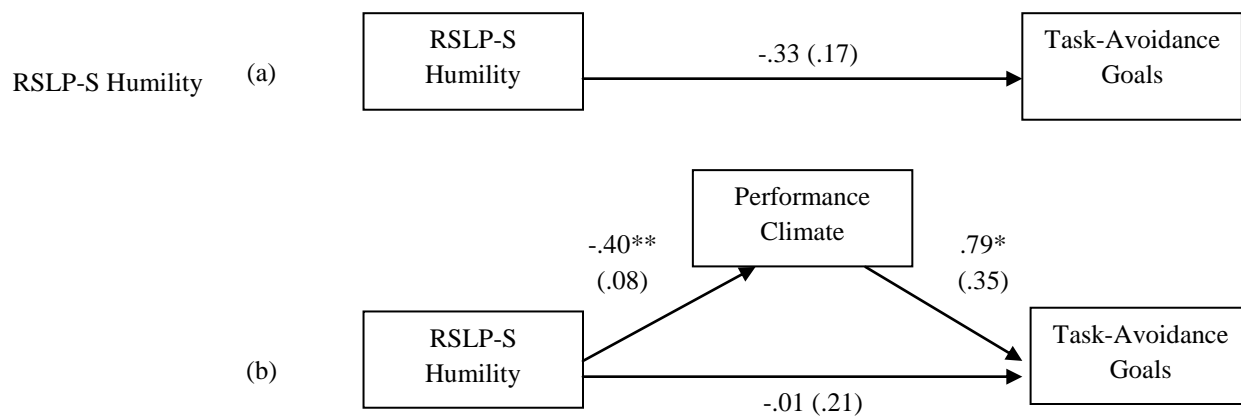
Structural models of (a) unmediated and (b) performance motivational climate mediated effect of RSLP-S Humility on Self-Avoidance Achievement Goal.



\*Note. Numbers represent regression coefficients, standard errors \*\* $p < .01$ , \* $p < .05$ .

Figure 2

Structural models of (a) unmediated and (b) performance motivational climate mediated effect of RSLP-S Humility on Task-Avoidance Achievement Goal.



\*Note. Numbers represent regression coefficients, standard errors  $**p < .01$ ,  $*p < .05$

## Appendix A: 2 x 2 Achievement Goal Model (Elliot &amp; McGregor, 2001)

**Definition**

Mastery (absolute/intrapersonal)    Performance (Interpersonal)

<b>Valence</b>	Positive (approaching success)	Mastery-Approach Goal	Performance-Approach Goal
	Negative (avoiding failure)	Mastery-Avoidance Goal	Performance-Avoidance Goal

## Appendix B: 3 x 2 Achievement Goal Model (Elliot, Murayama, &amp; Pekrun, 2011)

		<b>Definition</b>		
		Task (absolute)	Self (intrapersonal)	Others (interpersonal)
<b>Valence</b>	Positive (approaching success)	Task-Approach Goal	Self-Approach Goal	Other-Approach Goal
	Negative (avoiding failure)	Task-Avoidance Goal	Self-Avoidance Goal	Other-Avoidance Goal

## Appendix C: IRB Protocol Approval

To: Leah Parton, Department of Physical Education, Health and Recreation,  
200 PEB

From: Sarah Keller, Chair, Institutional Review Board for Human Subjects  
Research

Date: May 10, 2016

Subject: Review of HS-5068 *Examining the Relationship Between Servant Leader  
Coach Behaviors and Achievement Goals in Collegiate Tennis Players: The Mediating  
Effect of Motivational Climate*

Human subjects protocol HS-5068 *Examining the Relationship Between Servant Leader  
Coach Behaviors and Achievement Goals in Collegiate Tennis Players: The Mediating  
Effect of Motivational Climate* has been reviewed and determined to be exempt from  
further review according to federal regulations for the Protection of Human Subjects  
under CFR Title 45, Part 46.101(b)(1-6), conditional upon the changes listed below being  
made and approved. Research qualifying for an exemption is valid for a period of one  
year, to May 10, 2017. If you wish to continue gathering data for the study after that date,  
you must file a Renewal of Approval application *prior to its expiration*, otherwise the  
project will be closed and you would need to submit a new application for IRB review if  
you wish to continue the research.

A signed, approved copy of your application is enclosed.

**Before you begin:**

1. Your recruiting information for both online and in person subjects needs to include contact information for you, Dr. Hammermeister (phone and email) and the following required sentence: If you have any concerns about your rights as a participant in this research or any complaints you wish to make, you may contact Ruth Galm, Human Protections Administrator at Eastern Washington University (509-359-7971/6567) [rgalm@ewu.edu](mailto:rgalm@ewu.edu).
2. Please also tell them whom you intend to share your results with.
3. If you can arrange it, it would be useful to give the subjects advance notice about the study so they have time to think about whether they want to participate or not. I realized this may not be possible in all instances.
4. Please send me copies of the contact information you are going to provide the subjects and the revised documents that include a statement of who you will share the results with.

If subsequent to initial approval the research protocol requires minor changes, the Office of Grant and Research Development should be notified of those changes. Any major departures from the original proposal must be approved by the appropriate IRB review process before the protocol may be altered. A Change of Protocol application must be submitted to the IRB for any substantial change in protocol.

If you have additional questions please contact me at 359-7039; fax 509-359-2474; email skeller@ewu.edu. It would be helpful if you would refer to HS-5068 if there were further correspondence as we file everything under this number. Thank you.

cc: C.Brewer  
R.Galm  
J.Hammermeister  
Graduate Office

#### Appendix D: Email to Coaches

Dear collegiate tennis coach,

My name is Leah Parton. I am a graduate student in the Physical Education, Health, and Recreation: Exercise Science program at Eastern Washington University. I received my undergraduate degree at Pacific Lutheran University where I played four years of collegiate tennis. I currently volunteer as an assistant tennis coach for the women's tennis team at EWU. In partial fulfillment of my Masters degree, I am working with Dr. Jon Hammermeister (professor and sport psychology consultant for the Pittsburgh Pirates) on a thesis aimed to understand the relationship between perceived coach behaviors and an athlete's achievement motivation. In order to perform the study, I am relying on collegiate tennis players to complete a short survey (25 minutes).

It is my hope that I can collect survey responses in person at your team's location. As a former student-athlete, I realize that time is limited; so I created a questionnaire that will only take 20-25 minutes to complete. My hope is that athletes will take the questionnaire in a quiet, private area, perhaps before or after a tennis practice or team session.

Your athletes' responses to the questionnaire will be completely anonymous. There will be no way for me to identify participants based on their responses. I am only interested in group means and while I may share these results in the peer-reviewed scientific community, the institution you are affiliated with will be blinded in these reports. While I appreciate any attempt to recruit your athletes for my study, please keep in mind that in order to maintain validity in the data, it is important that athletes do not feel pressured to participate. Results from this study will add valuable information to the sport psychology and coaching literature, specifically on how coaches can enhance athlete motivation. Please let me know if you are willing to help me in this process.

If you have any questions or concerns about the research study, please contact me (509-630-5824) [leahparton@eagles.ewu.edu](mailto:leahparton@eagles.ewu.edu) or Dr. Jon Hammermeister (509-359-7968) [jhammermeister@ewu.edu](mailto:jhammermeister@ewu.edu). If you have any concerns about your athletes' rights as participants in this research or any complaints you wish to make, you may contact Ruth Galm, Human Protections Administrator at Eastern Washington University (509-359-7971/6567) [rgalm@ewu.edu](mailto:rgalm@ewu.edu).

We can arrange a time and place to meet based on your team's availability. I appreciate your help!

Sincerely,  
Leah Parton- Graduate Student/ Principal Investigator  
509-630-5824  
[leahparton@eagles.ewu.edu](mailto:leahparton@eagles.ewu.edu)



## Appendix E: In-Person Recruitment Script

“Hello, my name is Leah Parton. I am a graduate student at Eastern Washington University, studying sport psychology. As partial fulfillment of my graduate degree, I am conducting a study on perceived coach behaviors and athlete achievement motivation. I am collecting responses from collegiate tennis players in Washington State. The questionnaire should take about 15 minutes, and you may ask me questions/express concerns at any point during the survey.

Your participation is completely voluntary. If you choose to fill out the survey, you will be giving implied consent. Your responses on the questionnaire will be anonymous and you may omit any questions that you choose not to answer. Be assured that your name will never be used. I am only interested in group means and while I may share these results in the peer-reviewed scientific community, the institution you are affiliated with will be blinded in these reports. Again, you do not have to participate- but I would appreciate your help.

If you have any questions or concerns about the research study, please contact me (509-630-5824) [leahparton@eagles.ewu.edu](mailto:leahparton@eagles.ewu.edu) or Dr. Jon Hammermeister (509-359-7968) [jhammermeister@ewu.edu](mailto:jhammermeister@ewu.edu). If you have any concerns about your rights as a participant in this research or any complaints you wish to make, you may contact Ruth Galm, Human Protections Administrator at Eastern Washington University (509-359-7971/6567) [rgalm@ewu.edu](mailto:rgalm@ewu.edu). Thank you for your time.”

## Appendix F: Revised Servant Leadership Profile in Sport (RSLP-S)

Please use the following scale to indicate your agreement or disagreement with each of the statements in describing your head coaches attitudes and practices as a leader. There are no right or wrong answers. Simply rate each question in terms of what your head coach normally does in leadership situations.

1	2	3	4	5	6	7
Strongly disagree		Undecided				Strongly agree

### **RSLP-S Trust/Inclusion**

#### **The Head Coach:**

1. Inspires team spirit by communicating enthusiasm and confidence
2. Listens actively and receptively to others
3. Practices plain talking (means what he says and says what he means)
4. Always keeps his promises and commitments to others
5. Grants all players a fair amount of responsibility
6. Willing to accept other's ideas whenever they are better than his own
7. Promotes tolerance, kindness, and honesty
8. Creates a climate of trust and openness to facilitate participation in decision making
9. Wants to build trust through honesty and empathy
10. Devotes a lot of energy to promoting trust, mutual understanding, and team spirit
11. Has the courage to assume full responsibility for his mistakes

### **Humility**

#### **The Head Coach:**

1. Believes the leader should not be front and center
2. Is not primarily concerned with always having full authority
3. Doesn't have to have his name attached to every initiative
4. Doesn't look at his position as one of power
5. Allows his subordinates to have some control
6. Doesn't have to be seen as superior to subordinates in everything

### **Service**

#### **The Head Coach:**

1. Serves others and does not expect anything in return
2. Is willing to make personal sacrifices in serving others
3. Finds enjoyment in serving others in whatever role or capacity
4. Has a heart to serve others
5. Takes great satisfaction in bringing out the best in others.

### Appendix G: 3 x 2 Achievement Goal Questionnaire for Sport (3 x 2 AGQ-S)

The following statements represent types of goals that you may or may not have when you play sport. Circle the score on the scale that indicates your level of agreement with the statement. There are no right or wrong answers, so please be open and honest.

1	2	3	4	5	6	7
Strongly disagree		Undecided				Strongly agree

In sport, my goal is...

#### **Task-approach goals**

1. To perform well
2. To obtain good results
3. To be effective

#### **Self-approach goals**

1. To do better than what I usually do
2. To have better results than I had in the past
3. To be more effective than before

#### **Other-approach goals**

1. To do better than others
2. To be more effective than others
3. To have better results than others

#### **Task-avoidance goals**

1. To avoid performing badly
2. To avoid bad results
3. To avoid being ineffective

#### **Self-avoidance goals**

1. To avoid having worse results than I had previously
2. To avoid doing worse than I usually do
3. To avoid being less effective compared to my usual level of performance

#### **Other-avoidance goals**

1. To avoid doing worse than others
2. To avoid worse results than others
3. To avoid being less effective than others

## Appendix H: Perceived Motivational Climate in Sport Questionnaire-2 (PMCSQ-2)

Circle the number that best represents how you feel about your team atmosphere

\_\_\_\_\_ 1      2      3      4      5 \_\_\_\_\_  
 Strongly disagree      Undecided      Strongly agree

### **Mastery Climate**

1. The coach wants us to try new skills.
2. Each player contributes in some important way.
3. The coach believes that all of us are crucial to the success of the team.
4. Players feel good when they try their best.
5. Players at all skill levels have an important role on the team.
6. Players help each other learn.
7. The coach makes sure players improve on skills they're not good at.
8. Players feel successful when they improve.
9. Each player has an important role.
10. Trying hard is rewarded.
11. The coach encourages players to help each other.
12. The coach emphasizes always trying your best.
13. Players are encouraged to work on their weaknesses.
14. The focus is to improve each game/practice.
15. The players really 'work together' as a team.
16. Each player feels as if they are an important team member.
17. The players help each other to get better and excel.

### **Performance Climate**

18. The coach gets mad when a player makes a mistake.
19. The coach gives most of his or her attention to the stars.
20. The coach praises players only when they outplay team-mates.
21. The coach thinks only the starters contribute to the success of the team.
22. Players are taken out of a game for mistakes.
23. Players are encouraged to outplay the other players.
24. The coach has his or her own favorites.
25. Only the players with the best 'stats' get praise.
26. The coach makes it clear who he or she thinks are the best players.
27. Players are 'psyched' when they do better than their team-mates in a game.
28. If you want to play in a game you must be one of the best players.
29. Players are punished when they make a mistake.
30. Only the top players 'get noticed' by the coach.
31. Players are afraid to make mistakes.
32. The coach favors some players more than others.
33. The coach yells at players for messing up.

## Vita

Author: Leah B. Parton

Place of Birth: Wenatchee, Washington

Undergraduate Schools Attended: Pacific Lutheran University

Degrees Awarded: Bachelor of Arts, 2014, Pacific Lutheran University

Honors and Awards: Graduate Assistantship, Physical Education, Health, and Recreation Department, 2014-2016, Eastern Washington University

American Kinesiology Association Undergraduate Scholar of the Year, Kinesiology Department, 2014, Pacific Lutheran University

Female Athlete of the Year Nominee, Pacific Lutheran University, 2014

George Fisher Scholar-Athlete Nominee, Pacific Lutheran University, 2014

WAHPERD Emerging Leader Nominee, Kinesiology Department, 2013, Pacific Lutheran University

Professional  
Experience:

WWAMI Learning Support Center Assistant, University of Washington School of Medicine, Spokane, WA, 2015-2016

Professional Presentation “The Relationship Between Servant Leader Coach Behaviors and Achievement Goals in Collegiate Tennis Players: The Mediating Effect of Motivational Climate” at the national Association for Applied Sport Psychology conference, Phoenix, AZ, 2016

Volunteer Assistant Women’s Tennis Coach, Eastern Washington University, Cheney, WA, 2014-2016

University Fitness Center Supervisor, Eastern Washington University, Cheney, WA, 2014-2015