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Transformational Leadership in Sport:
Coaching Behaviors, Team Cohesion,
and Student-Athlete Commitment

By Stephanie E. Parazak

Advisor: Dr. Mistie D. Germek

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Dr. Mistie D. Germek
Project Advisor

Dr. Janet Panter
Second Reader

Dr. Marshall Boswell
Extra-Departmental Reader

Dr. Natalie Person
Department Chair
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Abstract

Although transformational leadership has been utilized as a successful leadership model in business, education, and military settings, more research is needed to extend its applicability to sport. Based on survey data collected from 356 National Collegiate Athletic Association student-athletes representing eight different sports, the present study examined the relationship between transformational leadership and student-athlete gender as these variables predict student-athlete ratings of team cohesion and athlete commitment to the sport team. Results indicated that transformational leadership predicted increased team cohesion and that female athletes rated their teams as more cohesive than did male athletes. Further, ratings of coach transformational leadership behaviors significantly and positively predicted student-athlete commitment, but this effect was stronger for male athletes than female athletes. Additional exploratory analyses indicated that the four subscales of the transformational leadership paradigm were strongly correlated; thus the components of transformational leadership are unlikely to have unique effects on team dynamics and are vulnerable to critique due to their lack of discriminant variability as subscales. These findings suggest that utilizing transformational leadership behaviors may be an effective way for collegiate athletic coaches to increase cohesion and commitment among their student-athletes and raise questions as to the uniqueness of the four dimensions of transformational leadership.
Transformational Leadership in Sport: Coaching Behaviors, Team Cohesion and Student-Athlete Commitment

Currently, there are more than 400,000 college students participating in Division I, II, or III athletics at institutions sponsored by the National Collegiate Athletic Association (NCAA, 2010). In 1971, roughly 4 million students participated in high school sports; in 2005, that number had grown to 7.2 million (U.S. Department of Health and Human Services, 2006). Consequently, an increasing number of high school athletes are continuing their athletic careers in college. This has resulted in an all-time high for the number of students participating in intercollegiate athletics (Acosta & Carpenter, 2004). Clearly, participation in athletics is a prominent activity for college students, and an integral component of that experience is the coach, whose leadership will shape the experience. Sport coaches play an essential role in the overall experience of the athlete, including the athlete’s emotional and psychological well-being (Horn, 2008). In addition, coaches have a significant impact on multiple aspects of team dynamics, such as team cohesion and athlete commitment (Horn, 2008). Given the large number of college students participating in intercollegiate athletics every year, the study of how coaches are affecting their athletes is instrumental to ensuring sport positively impacts those involved (NCAA, 2006). To better understand how coaches impact team functioning, research has examined the leadership practices of sport coaches in relation to these team dynamics; however, in sport, there is currently no agreement on the optimal style of leadership that results in increased positive team outcomes.

Historically, leadership in sport was dominated by trait and behavioral models used in the corporate and educational realms (Horn, 2002). Under these models, effective leadership
behavior was conceptualized as a function of either the leader’s personality or dominant behavior (Antonakis, Cianciolo, & Sternberg, 2004). When these models failed to produce results in the sport domain, research began to explore alternative leadership models. Research on sport leadership has taken three different approaches to more effectively meet the demands of a sport-specific leadership paradigm. These approaches are (a) the multidimensional model of leadership (Chelladurai, 1978), (b) the cognitive-mediational model of leadership (Smith, Smoll & Curtis, 1979), and (c) the normative model of decision styles in coaching (Chelladurai & Haggerty, 1979).

Chelladurai was one of the first researchers to respond to the need for a sport-specific leadership model, creating the multidimensional model of leadership in 1978. His theory provided a framework for specifying or identifying effective leadership behavior in specific sport situations (Horn, 2002; Singer et al., 1993). Chelladurai’s model is a synthesis and extension of early leadership theories that focused on the leader, the follower, or the situation in which they were placed. Chelladurai brought these three elements together to create his model, which views the leader, follower, and situation as equally important components to effective leadership (Singer et al., 1993).

The multidimensional model of leadership proposes that group performance and athlete satisfaction are a result of the congruence between three aspects of leader behavior: required, preferred, and actual (Horn, 2002; Singer et al., 1993). With regard to required leader behavior, the leader is required to behave in certain ways based on situational characteristics (e.g., type of sport, program structure, organizational goals, social norms, cultural values) and by team member characteristics (Horn 2002; Singer et al., 1993). Preferred leader behavior refers to the leader behavior preferred by the athletes (Horn, 2002).
These preferences are based on the individual characteristics of the group members that often entail personality variables such as need for achievement, affiliation, social support, and feedback (Singer et al., 1993). The actual behavior of the leader is not only influenced by the leader’s characteristics but by situational and member characteristics as well. Thus, when there is a high degree of congruence between required leader behavior, preferred leader behavior, and actual leader behavior, positive outcome performance and higher degrees of member satisfaction are more likely to occur (Horn, 2002; Singer et al., 1993).

Chelladurai and Saleh (1978) developed the Leadership Scale for Sport (LSS), which was the first sport-specific instrument used to test the applicability of the multidimensional model of leadership (Silva & Stevens, 2002). The five dimensions of the LSS include training and instructional behavior, democratic behavior, autocratic behavior, social support behavior, and positive feedback. It is important to note that the normative sample used for the LSS predominately consisted of male physical education students and collegiate athletes at various Canadian universities.

From a somewhat different perspective, Smith et al. (1979) created the cognitive–mediational model of leadership, which is based on relationships among cognitive, situational, behavioral, and individual difference variables. Similar to the multidimensional model of leadership, the cognitive-mediational model of leadership also proposes that situational, leader, and member characteristics will affect coaching behaviors. In addition, Smith et al.’s (1979) model places importance on the cognitive processes, such as the meaning athletes attribute to coaching behaviors, and individual difference variables for the coach and athlete. Coaches’ individual difference variables include coach’s goals, behavioral intentions, norms associated with the coaching role, coach’s perceptions of players’ motives,
self-monitoring, and sex of the coach. Athletes’ individual variables include (a) sex of the athlete, (b) age of the athlete, (c) the degree to which an athlete attaches to various coaching behaviors, (d) the athlete’s level of achievement motivations in sport, (e) competitive trait anxiety, (f) general self-esteem of athlete, and (g) athletic self-esteem (Singer et al., 1993).

Smith et al. (1979) incorporated cognitive processes and individual difference variables for the coach and athlete into their model because these variables are assumed to mediate relationships between antecedents (e.g., situational characteristics, leader characteristics, member characteristics), leader behavior (e.g., required behavior, actual behavior, preferred behavior), and outcome (e.g., performance outcome, member satisfaction). In addition to the multidimensional model of leadership and the cognitive-mediational model of leadership, the normative model of decision styles is another leadership paradigm that has been incorporated into the world of sport.

Because decision-making is an important component of effective leadership, Chelladurai and Haggerty (1979) created the normative model of decision-making styles in coaching. The model included three decision-making styles: autocratic, participative, and delegative. A coach who has an autocratic decision-making style may seek team members’ opinions about the problem, but will ultimately make the final decision. A coach with a participatory decision making style would include the group in the decision making process, where the coach’s influence is viewed at the same level as the athletes. A delegative coach would choose one or two members from the team to make the decision, and the coach’s involvement is limited to announcing or implementing the decision.

Although there have been numerous studies conducted to examine the leadership styles of coaches, mainly using Chelladurai’s multidimensional model of leadership, much
remains to be learned (Horn, 2002). In stark contrast to a business world that is constantly updating and advancing leadership theory, the multidimensional model has dominated the study of leadership in sport for the past 30 years (Singer et al., 2002).

Although substantial research has applied models such as the multidimensional model of leadership, meditational model of leadership, and the motivational model of the coach-athlete relationship to sport, such models may not tap into every type of leadership behavior that a coach exhibits. One model that has yet to be thoroughly extended to sport, but has shown promising results in the areas of business, education and the military (Boerner and von Streit, 2005; Cho & Dansereau, 2010; Lazzaro, 2010; Luria, 2008; Rowold, 2008; Stadelmann, 2010), is the transformational leadership paradigm.

Upon review of the existing literature, it is clear that the transformational leadership paradigm is strongly connected to variables such as performance, cohesion, commitment and satisfaction in numerous professional domains (Hardy, Arthur, Jones, Shariff, Munnoch, Isaacs, et al., 2010; Lazzaro, 2010; Luria, 2008; Rowold, 2008; Smith, Montagno, & Kuzmenko, 2004). Regardless of these positive results, the transformational leadership paradigm has yet to be thoroughly applied to sport settings. To date, there appear to be only four published empirical studies on transformational leadership in sport (i.e., Charbonneau, Barling, & Kelloway, 2001; Davis, 2002; Rowold, 2006; Zacharatos, Barling, & Kelloway, 2000).

Zacharatos, Barling, and Kelloway (2000) investigated the impact of transformational leadership among adolescents on high school athletic teams. This study found that adolescents who utilized transformational leadership behaviors were rated by their teammates and coaches as more effective, satisfying, and effort-evoking leaders. In addition,
Charbonneau, Barling, and Kelloway (2001) extended the transformational leadership paradigm to collegiate athletics. Their inquiry developed and tested a model in which transformational leadership affects performance through the mediating role of intrinsic motivation. Their results suggest that transformational leadership may increase intrinsic motivation and in turn enhance performance of university sports teams.

In 2002, Davis conducted a study examining the leadership styles of junior college athletic directors as perceived by head coaches. Results showed that head coaches reported their athletic directors as using mostly transformational leadership behaviors; coaches perceived these transformational leadership behaviors as satisfying. Furthermore, there was a significant positive relationship between the athletic directors’ utilization of transformational leadership methods and the coaches’ perceived level of satisfaction.

Most recently, Rowold studied martial arts students’ perceptions of their coaches’ leadership styles (2006). This study compared another common form of leadership, transactional leadership, with transformational leadership. Transactional leaders have a very similar focus to that of transformational leaders: creating clear goals, clarifying individual roles, and motivating their followers; however, these behaviors occur only through “first-order” exchanges and commonly use external rewards rather than more intrinsic motivation (Avolio & Bass, 2004). Rowold’s (2006) results indicated that although transactional leadership was significantly related to leadership effectiveness, transformational leadership added unique variance for predicting leadership effectiveness beyond that accounted for by transactional leadership behavior alone. This suggests that transformational leadership goes above and beyond the effects of transactional leadership in terms of efficacy. Given that these studies demonstrate the benefits of transformational leadership when applied to athletic
teams, it is important to further explore the construct in order to understand how transformational leadership works and how it may be further applied to sport.

Transformational leaders are defined as those who are able to inspire followers to accomplish great things while understanding the importance of adapting to the needs and motives of their followers (Avolio & Bass, 2004; Judge & Piccolo, 2004). This model is further characterized by four dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individual consideration (Bass, 1997 as cited in Geothals et al., 2005).

The first dimension, idealized influence, refers to the degree to which the leader behaves in commendable ways, thus allowing followers to identify with the leader (Judge & Piccolo, 2004). Leaders who score highly in idealized influence act in moral and ethical ways, maintain high personal regard from their followers, and create genuine loyalty from and among the group (Avolio & Bass, 2004; Bono & Judge, 2004). In turn, these behaviors enable the group to build trust on a moral and ethical foundation, strengthening the bond of the group (Homrig, 2003).

Inspirational motivation is another dimension of transformational leadership. This dimension describes a leader’s ability to articulate a clear, appealing, and inspiring vision of the future based on the values and ideals of the group (Bono & Judge, 2004). Leaders utilizing inspirational motivation challenge their followers with high standards, promote positive expectations for tasks at hand, and make tasks meaningful for their followers (Avolio & Bass, 2004; Judge & Piccolo, 2004). These leaders provide both challenges and meaning for their followers, creating a compelling, goal-oriented environment (Homrig, 2003).
In addition to idealized influence and inspirational motivation, intellectual stimulation represents a third dimension of transformational leadership. Intellectual stimulation describes the extent to which a leader challenges organizational norms, encourages innovation, promotes taking risks, and solicits new ideas from followers (Avolio & Bass, 2004; Bono & Judge, 2004; Judge & Piccolo, 2004). Intellectual stimulation trains followers to think in novel ways, to approach problems from a new angle, and to challenge their own and others’ beliefs. As a result, followers develop the ability to solve unanticipated problems, an important ability given that a primary indicator of leaders’ effectiveness is how capable their followers are of functioning when the leader is not present (Avolio & Bass, 2004).

Finally, the fourth dimension of transformational leadership is individualized consideration. Leaders who demonstrate individualized consideration act as mentors, listening to needs and concerns of their followers and thus demonstrating an understanding of the unique developmental needs of their followers (Avolio & Bass, 2004; Bono & Judge, 2004; Judge & Piccolo, 2004). This aspect of transformational leadership most clearly sets the paradigm apart from other leadership models because it serves to educate the next generation of leaders, fulfilling followers’ need for self-actualization, self-fulfillment, and self-worth (Homrig, 2003). For these reasons, individualized consideration most clearly differentiates “managers” from true leaders (Avolio & Bass, 2004). Whereas managers work to simply “get the job done,” leaders work on a deeper level, aiming to establish congruence between individual and organizational needs and ultimately promoting positive outcome for both the individual and the group.

Studies from business, the military, education and the arts have identified the benefits of these transformational leadership behaviors. In business, research shows that leaders who
exhibit higher levels of transformational leadership behaviors have followers who report increased levels of inspiration, motivation, empowerment, commitment and lower rates of absenteeism, as well as extra effort and effectiveness (Rowold, 2008; Smith, Montagno, & Kuzmenko, 2004).

Research on transformational leadership in the military has shown similar results to those found in the business realm. Studies have found that the transformational leadership behaviors exhibited by tactical trainers significantly predicted successful training completion by followers in the British Royal Navy (Hardy, Arthur, Jones, Shariff, Munnoch, Isaacs, et al., 2010). Additionally, transformational leadership is significantly and positively correlated with cohesion (Luria, 2008), as well as motivation and empowerment among military fighting brigades (Masi, 1995). Further, transformational leadership has also shown to be an effective model in the area of education, wherein principals’ use of transformational leadership skills significantly and positively predicted teachers’ job satisfaction (Ejimofor, 2008) along with increasing teacher retention rates (Lazzaro, 2010).

In addition to the positive impact of transformational leadership behaviors in business, the military, and education, research has also shown its benefits in the arts. For example, Boerner and von Streit (2005) discovered an interaction between transformational leadership and cohesion such that both transformational leadership and a collaborative and connected group environment were necessary components for observed higher-quality orchestra performance. This highlights the importance of leadership and cohesion as they relate to performance and achieving success.

Given the results of the existing literature on transformational leadership in business, military, education, and, to some extent, sport, it is reasonable to propose that this leadership
method would have a positive impact on collegiate athletic teams, including team cohesion and student-athlete commitment. While the current literature provides support for the potential benefits of transformational leadership on satisfaction, intrinsic motivation, and performance, there are still many aspects of team functioning yet to be explored through transformational leadership. Because of the previously established relationship between transformational leadership and followers’ satisfaction and increased intrinsic motivation, it is logical to propose that it may also relate to other positive outcomes in a team environment. Two such outcomes could be team cohesion and student-athlete commitment.

Cohesion is defined as “a dynamic process which is reflected in the tendency for a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of member affective needs” (Carron et al., 1997, p. 229). This definition reflects the nature of cohesiveness as it is manifested in most groups, including sport teams (Carron et al., 2002, p. 3).

Commitment can be defined in terms of both behaviors and attitudes (Mowday, Steers, & Porter, 1979). The present study utilized an adaptation of Mowday, Steers, and Porter’s (1979) development of the Organizational Commitment Questionnaire for businesses. This definition of commitment contains three components: belief in the team’s goals and values, a willingness to put forth a great deal of effort on behalf of the team, and a desire to remain a member of the team. More specifically, it was defined as “an active relationship with the [team] such that individuals are willing give something of themselves in order to contribute to the [team’s] well-being” and is recognizable through both beliefs and actions (Mowday, Steers, & Porter, p. 224, 1979).
Because past research has shown a positive relationship between team cohesion, athlete commitment, and personal and team performance (Bailey, 2007), these outcomes were of particular interest. The present study aimed to further advance this research by extending it to examine the effects of transformational leadership on cohesion and commitment. Because previous research in several domains supported a relationship between transformational leadership and various positive team dynamics, it was proposed that transformational leadership would show a significant positive relationship with measures of team cohesion and student-athlete commitment when applied to NCAA athletes.

In addition to the effects of transformational leadership alone, another important issue to consider when analyzing leadership styles is whether females and males differentially prefer and react to transformational leadership. There is substantial literature showing that men and women tend to lead differently (Jambor & Zhang, 1997; Reynaud, 2005). Additionally, there is research showing that leadership behaviors, such as transformational leadership behaviors, are viewed by followers as more effective when utilized by women rather than men (Duehr, 2007). Relatively few studies, however, examine the potential for differential perceptions of leadership effectiveness based on the gender of the followers. One study in the business realm found that female subordinates of a transformational leader rated this style more highly than their male counterparts (Fein, Tziner, & Vasiliu, 2010). Further, research among NCAA Division I and II teams has suggested that male student-athletes prefer more autocratic leadership, wherein coaches give more commands and punishments and involve athletes less in team decision-making, significantly more than female athletes (Beam, Serwatka, & Wilson, 2004). In the same study, female athletes tended to prefer leaders who displayed situational consideration and instructional behaviors; two behaviors
that could be linked to the transformational leadership domains of individualized consideration and intellectual stimulation. Given this information, it is reasonable to expect that gender may have an effect on student-athletes’ perception of and preference for their coaches’ transformational leadership behaviors.

Because this study specifically examined the effect of transformational leadership on athlete ratings of team cohesion and student-athlete commitment, it is also important to consider the potential effect of gender on these two variables. Qualitative studies have revealed that female athletes describe “off the field” team experiences as significantly more important to them than do their male counterparts (McClain, 2006). As a result, team cohesion may be a higher priority for female student-athletes due to their tendency to develop interpersonal relationships with teammates outside of designated team activities. This is coupled with findings indicating females’ stronger preference for transformational leaders (Fein, Tziner, & Vasiliu, 2010). Given this information, this research addressed the prediction that gender would have an interaction with transformational leadership in predicting team cohesion such that female student-athletes would react more positively to transformational leadership and also show higher levels of team cohesion.

With regard to gender differences in athlete commitment, Crocker and Augaitis (2010) were unable to identify any gender difference in commitment to sport in male and female triathletes; however, it was suspected that this finding might not hold true for more team-oriented sports, which is what this study examined. In a study of youth athletes, Weiss and Smith (2002) found that friendship quality positively predicted commitment on tennis teams regardless of gender. Because other research has indicated that “off the field” team experiences are more important to female athletes, and because these are a major part of team
athletics at the collegiate level, these factors could lead to a stronger level of commitment from female athletes. Further, as previously noted, research indicates that females prefer transformational leadership more than do males (Fein, Tziner, & Vasiliu, 2010). Thus, it was hypothesized that gender would interact with transformational leadership in predicting commitment such that women would show higher levels of commitment and benefit more from coach transformational leadership behaviors in these domains.

**Review of the Problem**

It is a common belief that coaches exert considerable influence on both their individual athletes and their team as a whole (Horn, 2008). Because numerous factors impact group performance, this influence can occur in a variety of areas such as team cohesion and commitment. Logically, the leadership behaviors employed by a coach will result in varied outcomes for how cohesive the team is and how committed athletes are to maintaining their involvement with the team. While there has been substantial research with regard to leadership in sport, most of this research has been based on three sport-specific models of leadership (e.g., multidimensional model of leadership, meditational model of leadership and the motivational model of the coach-athlete relationship). Studies based on these models did not examine alternative leadership behaviors, such as transformational behaviors, that could offer a great deal of information on effective leadership in sport. Because effective leaders more often utilize transformational leadership behaviors than other leadership methods, logic would deduce that transformational leadership is a superior method (Rubin, Muniz, & Bommer, 2005).

Transformational leadership goes beyond the scope of other forms of leadership to encourage followers to not only meet standards, but to exceed standards and develop beyond
expectations (Avolio & Bass, 2004). In organizations led by a transformational leader, there is a more sophisticated level of exchange such that followers tend to shift their orientation beyond meeting standards and toward more advanced short-term and long-term development and performance (Avolio & Bass, 2004). As an example, leaders utilizing transactional leadership often rely on contingent reward and punishment to elicit specific desired behaviors (Avolio & Bass, 2004). While this method may be successful in achieving desired behaviors in the short term, it fails to motivate followers on a deeper, more mature level. Followers may take short cuts in order to achieve rewards or avoid punishment; therefore, the quality of work can suffer. In contrast, transformational leaders motivate followers to accomplish more than they ever thought possible (Avolio & Bass, 2004). Consequently, research in various professional domains has consistently shown that transformational leadership is superior to other methods like transactional leadership in relation to aspects of performance (Avolio & Bass, 2004). For an athletic team, this could translate to the difference between simply achieving an expected outcome, such as a winning record, and exceeding expectations to achieve even greater feats, such as a championship. Thus, because of the potential for a coach’s utilization of transformational leadership to exert a great deal of influence on athletes and their athletic teams, this study examined specific manifestations of this leadership influence in the forms of team cohesion and student-athlete commitment. Additionally, given previous research revealing significant differences between male and female followers’ perceptions of and reactions to different leadership styles, the present study also explored the differences between the effects of coach transformational leadership behaviors according to the athletes’ gender. With this in mind, the following research hypotheses were formed.
Research Hypotheses

Given the present research in transformational leadership and the need for literature to apply this paradigm to sport, this study examined the relationship among transformational leadership coaching styles, student-athlete gender, team cohesion, and student-athlete commitment. The following hypotheses guided this research:

1. Transformational leadership, as measured by the Multifactor Leadership Questionnaire-Member Form, and student-athlete gender will significantly predict team cohesion, as measured by the Group Environment Questionnaire. These effects will be qualified by a significant interaction such that transformational leadership will have a stronger positive relationship with cohesion for female student-athletes than for male student-athletes.

2. Transformational leadership, as measured by the Multifactor Leadership Questionnaire-Member Form, and student-athlete gender will significantly predict student-athlete commitment, as measured by the Organizational Commitment Questionnaire. These effects will be qualified by a significant interaction such that transformational leadership will have a stronger positive relationship with commitment for female student athletes than for male student-athletes.

In addition to addressing these research hypotheses, this study also investigated how the four dimensions of transformational leadership (idealized influence, inspirational motivation, intellectual stimulation, and individual consideration) behave in relation to one another through some additional exploratory analyses.
Method

Participants

Participants were 355 student-athletes at Division-I, Division-II, and Division-III institutions sponsored by the NCAA. Participants were required to be at least 18 years old. Of 428 surveys distributed to teams, 356 were returned, yielding a 83.2% response rate. The sample consisted of 193 males (54.4%), 158 (44.5%) females, and 4 individuals identifying as “other” or “decline to state” (1.5%). Participants were 86.5% White/Caucasian, 7.3% African-American/Black, 0.6% Mexican/Mexican-American or Chicano, 1.4% other Spanish or Latino, 1.1% biracial, 1.1% multiracial, 0.3% Japanese/Japanese-American, 0.6% Pacific Islander, and 1.1% identified as “other”. This sample contains slightly more White/Caucasian athletes and slightly fewer minority athletes than the NCAA as a whole; however, it is relatively close to demographic data provided by the NCAA based on the 2009-2010 academic year (NCAA, 2010). Athletes varied in their academic year with 120 first-year students (33.7%), 102 second-years (28.7%), 61 third-years (17.1%), and 73 fourth-year students (20.5%). The study captured 11 NCAA-Division I athletes (3.1%), 23 Division II athletes (6.5%), and 322 (90.4%) NCAA-Division III athletes. In terms of specific sport played, the following sports were represented: 15.7% of participants played soccer, 6.2% volleyball, 5.3% field hockey, 12.4% swimming, 6.5% softball, 18.3% football, 21.3% basketball, and 14.3% baseball.

Materials and Procedure

Student-Athlete Demographic Information: The Student-Athlete Demographic Information Form (Appendix A) was created for this study and included demographic variables relevant to the study and were assessed by self-report. Participants indicated their
primary ethnic origin, gender, year in school, sport, their team’s NCAA Division affiliation, and how long they have been with their current team.

**Transformational Leadership:** The *Multifactor Leadership Questionnaire - Member Form (MLF-MF: Form 5X Short* (Avolio & Bass, 2004) (Appendix B) was used to measure student-athletes’ perceptions of their coach’s leadership behaviors. The MLQ-MF is a 45-item questionnaire that measured multiple aspects of transactional, transformational, and laissez-faire leadership behaviors. Each item on the questionnaire contains a descriptive statement and a 5-point rating scale (0 = not at all, 1 = once in a while, 2 = sometimes, 3 = fairly often, and 4 = frequently, if not always) designed to correspond with the frequency with which the individual being described fits these statements. The MLQ-MF contains statements such as “My coach gets me to look at problems from many different angles” and “My coach talks about his/her most important values and beliefs.” The MLQ-MF has show adequate reliability and validity in use with samples from multiple professional domains (Avolio & Bass, 2004).

**Team Cohesion:** The *Group Environment Questionnaire (Carron et al., 2002)* (Appendix C) is an 18-item survey that was used to measure team cohesion as perceived by student-athletes. Carron, Brawley, and Widmeyer (1985) created the GEQ, which has four subscales: Attraction to the Group- Social, Group Integration- Social, Attraction to the Group- Task, and Group Integration- Task. These subscales assess individual and group aspects of both social and task-oriented cohesion, although the present study only examined overall cohesion.

All items are rated on a nine-point scale with anchors of 1 (strongly disagree) and 9 (strongly agree). There are 5 items in both the ATG-S and GI-T scales and 4 items in both
the ATG-T and GI-S. Scores for each subscale can be obtained by computing either the sum or average of the items in each subscale. Higher scores reflect stronger perceptions of cohesiveness. Numerous studies have demonstrated that the GEQ possesses adequate reliability and validity as a measure of group cohesion for traditional college aged student-athletes, 18-23 years of age (Brawley, Carron & Widmeyer, 1987; Carron et al., 1985).

**Team Commitment:** The *Organizational Commitment Questionnaire* (Mowday, Steers, & Porter, 1979) (Appendix D) measured athletes’ commitment to their team based on three components of commitment: belief in an organization’s goals and values, willingness to exert effort on behalf of the organization, and desire to remain a member of the organization (Mowday, Steers, & Porter, 1979). The OCQ is a 15-item questionnaire and was completed by student-athletes. Each item contains a statement such as “I talk up this team to my friends as a great team to play for” and “I am willing to put in a great deal of effort beyond that normally expected in order to help this team be successful.” Each of these statements are rated by athletes on a 9-point scale ranging from 1 (strongly disagree) to 9 (strongly agree). There are six “reverse scoring” questions that are worded negatively (“I feel little loyalty to this team”) such that selecting 1 or “strongly disagree” would indicate the greatest level of “commitment” based on that item. During analysis, these items will be scored in reverse such that a score of “9” is assigned to the response “strongly disagree” and so on.

The organizational commitment questionnaire has shown adequate reliability and validity when tested with diverse samples in business populations (Mowday, Steers, & Porter, 1979). The OCQ has been used in several studies in business (Wang & Walumbwa, 2007; Walumbwa et al., 2004), one of which measured commitment as predicted by transformational leadership (Walumbwa et al., 2004).
Procedure

Permission to conduct this study was granted by the Rhodes College Institutional Review Board on April, 26 2010 (Appendix E). The principal investigator contacted coaches of fall and winter sport teams from local colleges who are represented by the NCAA via phone and email. The principal investigator gave a detailed description of the study to each of these coaches and asked for each coach’s participation. Coaches agreeing to participate in the study received a packet in the mail containing information about the current study, a summary of potential benefits of participating in the study, and an explanation of what would be required of participants in the study (Appendix F).

For each coach who agreed to participate in the study, the team captain(s) were contacted and asked to participate in the study. If the captain(s) agreed, he/she was responsible for distributing the surveys to the student-athletes, collecting surveys from student-athletes who voluntarily completed them, and returning them by mail to the principal investigator within three weeks of receiving them. After sending the packets to each team, the investigator confirmed that coaches and athletes had received the packets and checked on the status of the packets after two weeks.

The student-athlete surveys were mailed to the coach in a sealed envelope. The coach then gave the envelope to the captain to distribute to the team at a time when the coach was not present. The student-athlete envelopes contained a project information sheet (that included a statement that participation was voluntary and anonymous) (Appendix G), the Student-Athlete Demographic Information Form, the MLQ-MF, the GEQ, and the OCQ. Each student-athlete was allowed to anonymously place their surveys back in the envelope.
Student-athlete survey packets included self-addressed and stamped envelopes so the surveys could be easily returned to the researchers.

The team captain was responsible for collecting the surveys in the sealed envelope and placing them in the addressed envelope for return. To avoid situation specific response bias, participants were asked to not complete the surveys immediately before or after a competitive match.

Results

The purpose of this study was to examine the relationships between transformational leadership behaviors of coaches, the gender of followers, team cohesion, and student-athlete commitment in collegiate sport teams. The three sections below address the following: (a) data preparation, (b) descriptive statistics, and (c) results of the data analyses for each research hypothesis and research question.

Data Preparation

All surveys were entered into an SPSS database of student-athlete survey responses. After the data were entered, frequency tables and descriptive statistics for each variable were examined for accuracy of data input. When frequency tables indicated that data were missing or that variables had values that were out of their given range, individual surveys were reviewed and data entry errors were corrected. No outliers were identified, and all assumptions were met for each analysis. Because this study analyzed gender differences, only responses indicating “male” or “female” gender orientation were included.
Descriptives of the Assessments

Descriptive statistics were computed for the MLQ-MF (transformational leadership), OCQ (athlete commitment), and the GEQ (team cohesion) at the individual level. Following is a review of the results from the descriptive analyses, which are also presented in Table 1 and Table 2.

The overall mean rating of transformational leadership behaviors that student-athletes reported from their coach on the MLQ-MF was 2.73 (responses ranged from 1.10 to 4.00). On the GEQ, the mean level of overall cohesion reported by student-athletes was 7.42 (responses ranged from 3.10 to 9.00). The mean rating of commitment reported by student-athletes on the OCQ was 6.77 (responses ranged from 3.30 to 9.00). The descriptive statistics for all athletes are summarized in Table 1.

Table 1

Descriptive Statistics for the Study Instruments at the Individual Level

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Number of Items</th>
<th>Observed Range</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLQ-MF</td>
<td>21</td>
<td>1.10-4.00</td>
<td>2.73</td>
<td>.57</td>
</tr>
<tr>
<td>GEQ</td>
<td>18</td>
<td>3.10-9.00</td>
<td>7.42</td>
<td>1.07</td>
</tr>
<tr>
<td>OCQ</td>
<td>15</td>
<td>3.30-9.00</td>
<td>6.77</td>
<td>1.29</td>
</tr>
</tbody>
</table>

Note. N=356 for the MLQ-MF (Multifactor Leadership Questionnaire – Member Form Revised), GEQ (Group Environment Questionnaire), and OCQ (Organization Commitment Questionnaire).

For male student-athletes only, the mean rating of transformational leadership behaviors that student-athletes reported from their coach on the MLQ-MF was 2.67 (responses ranged from 1.30 to 3.90). On the GEQ, the mean level of overall cohesion reported by male student-
athletes was 7.26 (responses ranged from 3.10 to 9.00). The mean rating of commitment reported by male student-athletes on the OCQ was 6.57 (responses ranged from 3.30 to 9.00). For female student-athletes only, the mean rating of transformational leadership behaviors that student-athletes reported from their coach on the MLQ-MF was 2.79 (responses ranged from 1.00 to 3.80). On the GEQ, the mean level of overall cohesion reported by female student-athletes was 7.60 (responses ranged from 4.50 to 9.00). The mean rating of commitment reported by female student-athletes on the OCQ was 7.04 (responses ranged from 4.60 to 9.00). These descriptive statistics for male and female student athletes’ ratings are summarized in Table 2.

Table 2
Mean Ratings on Study Measures for Male and Female Athletes

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Male Student-Athletes</th>
<th>Female Student-Athletes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLQ-MF (Transformational Leadership)</td>
<td>2.68 0.58</td>
<td>2.79 0.55</td>
</tr>
<tr>
<td>GEQ (Team Cohesion)</td>
<td>7.26 1.18</td>
<td>7.60 0.87</td>
</tr>
<tr>
<td>OCQ (Athlete Commitment)</td>
<td>6.57 1.40</td>
<td>7.04 1.08</td>
</tr>
</tbody>
</table>

Note. N = 193 males and N = 159 females for the MLQ-MF (Multifactor Leadership Questionnaire – Member Form Revised), GEQ (Group Environment Questionnaire), and OCQ (Organization Commitment Questionnaire).

Results for Hypothesis 1 and Hypothesis 2

Hypothesis 1 and Hypothesis 2 addressed whether student-athletes’ ratings of overall transformational leadership behaviors of their coaches, as assessed by the MLQ-MF, would interact with the athletes’ gender in predicting overall cohesion and commitment, respectively. To test these hypotheses, two stepwise regressions were conducted. Prior to running the regressions, the data were examined with regard to the four assumptions of
regression: (1) linearity, (2) homoscedasticity, (3) independence of residuals, and (4) normality of residuals. Once the assumptions were addressed and upheld, stepwise regression analyses were conducted with transformational leadership and gender as the independent variables and cohesion as the dependent variable in one regression analysis and commitment as the dependent variable in the other regression analysis.

For hypothesis 1, results of the regression analysis revealed that gender significantly predicted team cohesion, F (2, 350) = 4.29, p < .01. Female student-athletes reported their teams as more cohesive than did male student-athletes (b = .102). The analysis also revealed that transformational leadership significantly and positively predicted cohesion, F (2, 350) = 59.37, p < .01. Individuals reporting their coaches as using more transformational leadership behaviors also rated their teams as more cohesive (b = .378). There was a marginally significant gender by transformational leadership interaction, F (1, 349) = 3.42, p = .065.

Table 3

Summary of Stepwise Regression Analysis for Transformational Leadership and Student-Athlete Gender Predicting Cohesion

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>5.261</td>
<td>.269</td>
<td></td>
</tr>
<tr>
<td>Transformational Leadership (MLQ-MF)*</td>
<td>.149</td>
<td>.072</td>
<td>.102</td>
</tr>
<tr>
<td>Student-Athlete Gender*</td>
<td>.709</td>
<td>.092</td>
<td>.378</td>
</tr>
<tr>
<td>Gender by Transformational Leadership (MLQ-MF)</td>
<td>-.238</td>
<td>.129</td>
<td>-.524</td>
</tr>
</tbody>
</table>

Note. N=352 for all cells; * p < .01, ** p < .10
For hypothesis 2, results of the stepwise regression analysis for commitment indicated that gender significantly predicted commitment, $F(2, 350) = 8.63, p < .01$. Female athletes indicated being more committed to their teams than did male student-athletes ($b = .648$).

Analyses also revealed that transformational leadership significantly and positively predicted commitment, $F(2, 350) = 28.91, p < .01$. Athletes who indicated their coach as using more transformational leadership behaviors also indicated being more committed to their team ($b = .734$). These predictions were qualified by a significant gender by transformational leadership interaction, $F(1, 349) = 3.88, p < .05$. This revealed that transformational leadership significantly predicted commitment for both genders; however, transformational leadership had a greater effect in predicting male student-athlete commitment than female student-athlete commitment ($b = -.526$). Additional correlation analyses illustrated this interaction; for males, transformational leadership was slightly more strongly correlated with commitment ($r = .52$) than it was for females ($r = .46$). The results for hypothesis two are summarized in Table 4 and Figure 1.

Table 4

*Summary of Stepwise Regression Analysis for Transformational Leadership and Student-Athlete Gender Predicting Commitment*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>$b$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.924</td>
<td>.823</td>
<td></td>
</tr>
<tr>
<td>Transformational Leadership (MLQ-MF)*</td>
<td>1.533</td>
<td>.285</td>
<td>.734</td>
</tr>
<tr>
<td>Student-Athlete Gender*</td>
<td>1.632</td>
<td>.556</td>
<td>.648</td>
</tr>
<tr>
<td>Gender by Transformational Leadership (MLQ-MF) Interaction*</td>
<td>-.374</td>
<td>.190</td>
<td>-.536</td>
</tr>
</tbody>
</table>

Note. $N = 352$, * $p < .05$
Additional exploratory analyses aimed to investigate the relationship of the four components of transformational leadership (idealized influence, inspirational motivation, intellectual stimulation, and idealized influence), as measured by the MLQ-MF, with one another and to determine whether it would be worthwhile to analyze each dimension independently as they related to the dependent variables. As a precursor to analyzing the four dimensions individually, a correlation matrix was created to examine the relationship among the four dimensions. The results of the correlation analysis indicated that all of the components of transformational leadership are rather highly correlated, with correlation
coefficients among the components ranging from $r = .55$ to $r = .70 \ (p < .01)$. The correlations among the four components are presented in Table 5. A factor analysis indicated that the four components are highly related by a single, latent factor, which accounted for 73% of the variance in the subscales. There were no additional factors present. Factor loadings ranged from .803-.897 for the four dimensions loading into the single latent factor, indicating that idealized influence, inspirational motivation, intellectual stimulation, and individual consideration were all highly and similarly related to the single factor. Because the subscales were rather highly correlated and related by a single factor, it did not seem warranted to analyze each of the components individually as they relate to the dependent variables; thus, no further analyses were conducted.

Table 5

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Idealized Influence (MLQ-MF)</td>
<td></td>
<td>.689</td>
<td>.700</td>
<td>.666</td>
</tr>
<tr>
<td>2. Inspirational Motivation (MLQ-MF)</td>
<td>.689</td>
<td></td>
<td>.533</td>
<td>.546</td>
</tr>
<tr>
<td>3. Intellectual Stimulation (MLQ-MF)</td>
<td>.700</td>
<td>.533</td>
<td></td>
<td>.704</td>
</tr>
<tr>
<td>4. Individual Consideration (MLQ-MF)</td>
<td>.666</td>
<td>.546</td>
<td>.704</td>
<td></td>
</tr>
</tbody>
</table>

Note. $N = 352$; all correlations are significant at $p < .01$

**Summary**

In summary, the results of the stepwise regression analysis for Hypothesis 1 suggested that both gender and transformational leadership behaviors significantly predict ratings of team cohesion. The stepwise regression analysis for Hypothesis 2 indicated that transformational leadership and student-athlete gender interact in predicting student-athlete commitment such that transformational leadership had a greater effect in predicting
commitment for male athletes than for female athletes. The results of the preliminary, exploratory factor analysis suggested that 73% of the variance in the independent variables was due to a single latent factor, and that the four dimensions of transformational leadership are highly intercorrelated. Thus, it is unlikely that any of the four dimensions would have unique effects on the dependent variables given that they seem to be closely related to one another.

**Discussion**

Although existing research has studied the impact of transformational leadership on group cohesion and commitment in business (Jansen et al., 2008; Smith et al., 2004), military (Hardy et al.; Luria, 2008), and educational settings (Lazzaro, 2010), these relationships have not been thoroughly examined in sport. Because transformational leadership has consistently shown positive results with regard to cohesion and commitment in many professional domains, it seemed logical to extend this leadership paradigm to sport.

The goal of this study was to further extend the transformational leadership paradigm to sport. Specifically, this study looked at how transformational leadership coaching behaviors interacted with the gender of student athletes to predict levels of cohesion and commitment on NCAA athletic teams. The study also investigated whether there were notable differences between each component of transformational leadership (i.e., inspirational motivation, idealized influence, intellectual stimulation, or individual consideration). While the results of the study did not exactly support the research hypotheses, they did provide promising evidence for the role of transformational leadership in relation to team cohesion and athlete commitment. Overall, results provide support for the benefits of the transformational leadership paradigm in sport. This study highlights the vital
role that coaches play in the development of team cohesion and student-athlete commitment to the team, along with the differences that may arise when coaching male versus female athletes.

Because it was unclear whether the findings from research on transformational leadership in various professional domains would extend to sport, it is encouraging that this leadership style significantly and positively predicted both cohesion and commitment in men’s and women’s collegiate sport teams, albeit it did have slightly different effects for male and female student athletes.

The first of the findings was that transformational leadership significantly and positively predicted team cohesion, although women rated their teams as more cohesive than did their male counterparts. This finding was not consistent with the prediction that women would show greater cohesion than men only when transformational leadership behaviors were high. Rather, the transformational leadership by gender interaction in predicting cohesion was only marginally significant. This may be due to the fact that women rated their teams as more cohesive overall, thus blunting the effect of transformational leadership on cohesion specifically. Overall, however, it is important to note that transformational leadership did have a positive relationship with team cohesion, suggesting that transformational leadership may be a viable method for coaches to increase cohesion regardless of their athletes’ gender.

The relationship between transformational leadership and cohesion indicates that coaching behaviors influence how well members of a team connect with one another. One explanation for this relationship is that coaches who are perceived to use transformational leadership behaviors by their athletes provide a sense of the value of membership, teamwork,
and enjoyment. These variables in turn increased student-athletes’ perceptions of cohesion on their teams. This finding was expected given previous research that shows the leadership behaviors of sports coaches have a major influence on the development of group cohesion. For example, Westre and Weiss (1991), Kozub (1993), and Lee et al. (1993) found that higher levels of instruction behavior, social support behavior, positive feedback, and a democratic style were related to higher levels of cohesion in athletes. Because these leadership behaviors are inherent in transformational leaders, it makes sense that this style of leadership would strongly connect with cohesion.

This relationship between transformational leadership and cohesion is an important one. Given that high levels of cohesion have been linked to increased levels of satisfaction and outcome performance (Jowett et al., 2003; Weinberg & Gould, 2003), coaches will want to reflect on the leadership strategies they use to help their teams become more cohesive. A highly cohesive team is better able to work together toward a successful performance, something that could also result in increased levels of satisfaction with team membership. Specific transformational leadership behaviors such as how to articulate a vision, how to behave in ways that allow athletes to identify with their coach, and how to provide individualized support for each athlete are essential ingredients for coaches to consider.

Although studies examining methods for teaching transformational leadership are rare, Barling, Weber, and Kelloway (1996) provided evidence that transformational leadership skills can be taught. One idea may be to have coaches attend a training program aimed at increasing transformational leadership behaviors with the goal of helping athletes have positive experiences in sport. Coaches will also want to be aware of research indicating that cohesion does not develop solely from the athletes on the team, but that coaches also
have an impact on how connected members of a team feel to one another (Singer et al., 1993).

With regard to the results indicating that gender also had an effect on athletes’ ratings of team cohesion, this finding is something to keep in mind when analyzing team dynamics and coaching styles. It could be that female athletes are simply more attuned to the cohesion of their group; dynamics such as cohesion may also be something that is more important to females than males in determining team success. However, because there was no significant gender by transformational leadership interaction in predicting team cohesion, the results of this study suggest that transformational leadership is a significant predictor of team cohesion regardless of gender. Thus, coaches of both men’s and women’s athletic teams may reap the benefits of implementing transformational leadership styles as a way to enhance team cohesion. Further study of the relationship between the gender of student-athletes and cohesion on their athletic teams would provide more information about how gender may consequently relate back to transformational leadership styles as they apply to team cohesion.

Another important finding of this study was a significant gender by transformational leadership interaction in predicting student-athlete commitment. That is, student-athletes who perceived their coach as portraying more transformational leadership behaviors indicated that they were more committed to their team; however, this effect was stronger for male student-athletes than for female student-athletes. Therefore, the utilization of transformational leadership behaviors by coaches did significantly predict student-athlete commitment, especially for coaches of men’s athletic teams. This finding is interesting for two major reasons. First, it seems to contradict research in business that found women to have a greater preference for transformational leadership styles than their male counterparts (Fein, Tziner,
& Visilin, 2010). If women do have a greater preference for transformational leaders than men, one would expect to find that transformational leadership would have a stronger effect on variables such as commitment for women than for men. However, this study found evidence to the contrary. This may be due to the fact that women reported being more committed overall; thus the effect of transformational leadership may have been minimized. Additionally, it could be that previous research explored transformational leadership in business while this study applied it to sport; because athletic team dynamics may be different from those on a business work team, there is no guarantee that findings in business will always translate to sports. This finding could also indicate a more complicated relationship between the gender of followers, leadership style preference, and leadership style efficacy, especially because preference for a leadership style does not necessarily presume its efficacy. Additionally, it is possible that this finding could reflect differential effects of the gender of the coaches as well as the gender of the athletes. Because female athletic teams tend to have either or both male and female coaches, whereas male athletic teams tend only to have male coaches (NCAA, 2010), there could be a significant difference in the cohesion and commitment of these teams due to coach gender. This may be because males and females do tend to utilize different coaching behaviors ((Jambor & Zhang, 1997; Reynaud, 2005). Further research on how the gender of followers specifically relates to transformational leadership in sport would shed more light on this issue.

Primarily, though, it is notable that transformational leadership does have a significant and positive relationship with athlete commitment. Obviously, commitment of the student-athlete is an integral component of building a successful team environment. Mowday, Steers, and Porter (1979) claimed that commitment to an organization has both
attitudinal and behavioral characteristics. They distinguished three components of commitment: belief in the team’s goals, willingness to put forth a great deal of effort on behalf of the team, and desire to remain a member of the team. These three points highlight the importance of athlete commitment on a sport team and reflect the importance of coaches to implement transformational leadership behaviors in an attempt to increase student-athlete commitment to the team. Benefits of athlete commitment could include a higher retention rate, more consistent athlete effort, and deeper investment in the success of the team on the athletes’ part.

Discussion of Exploratory Analyses’ Results

The exploratory analyses in this study aimed to investigate how the four dimensions of transformational leadership behaved as individual subscales, and found that they are all highly inter-correlated. This is consistent with previous analyses conducted with normative samples (Avolio & Bass, 2004). The four dimensions of transformational leadership - idealized influence, inspirational motivation, intellectual stimulation, and individual consideration (Avolio & Bass, 2004) - organize the larger construct of transformational leadership into more specific behaviors.

Based on review of the dimensions of transformational leadership, there are many logical connections that can be made between idealized influence, inspirational motivation, intellectual stimulation and individual consideration and cohesion and/or commitment. While each dimension differentiates specific behaviors consistent with pieces of the transformational leadership construct as a whole, there is the distinct possibility that these dimensions are essentially different manifestations of one core leadership attribute and thus do not measure anything especially unique from one another. Accordingly, results from this
study showed that all four of these dimensions were highly inter-correlated with one another. Further, a single factor accounted for a majority (73%) of the variance among these four components, and factor loadings among the four dimensions were all very high in relation to this single, latent factor. This suggests that it is unlikely that any of the individual components of transformational leadership affected cohesion and commitment uniquely. Although it seems worthwhile to study the construct as a whole, any future implementation of this model needs to closely examine the four dimensions.

The evidence that the four dimensions of transformational leadership are notably related can be interpreted in one of two ways. One view is that this finding might seem limiting. Information about the specific domains of transformational leadership that are most predictive of team cohesion and commitment would be invaluable to coaches in terms of developing specific leadership skills that most significantly predict these variables. From this perspective, the transformational leadership paradigm is vulnerable to critique. This model could be improved by identifying subscales that both define transformational leadership behaviors and have adequate discriminant validity. An alternate view is that this finding provides even stronger support for the construct of transformational leadership on the whole. However, it is evident that while transformational leadership seems to be connected to positive outcomes for athletic teams, the four dimensions of transformational leadership may be flawed. While the transformational leadership paradigm has shown clear connections to positive outcomes in previous research as well as the present study, the fact that the four dimensions are so highly intercorrelated makes it unclear as to what these studies are actually measuring as “transformational leadership”. Rafferty and Griffin (2004) also identified a lack of empirical support for the four subscales of transformational leadership as they stand.
Given this, they proposed five more specific domains of transformational leadership: vision, inspirational communication, intellectual stimulation, supportive leadership, and personal recognition. While these dimensions seem very similar to the original four dimensions of transformational leadership, subsequent confirmatory factor analyses supported this refined structure and indicated discriminant validity among the five revised dimensions. Further, these subdimensions showed unique relationships with several different leadership-oriented outcomes. Given the initial empirical support of Rafferty and Griffin’s revised transformational leadership model, it is logical to consider alternatives to the original construct.

While the individual components of transformational leadership appear to be very much related, results of this study did show that the four dimensions are significant predictors of positive team dynamic factors such as cohesion and commitment. For this, the study supports that coaches may benefit from implementing all of the behaviors associated with transformational leadership in an attempt to increase cohesion and commitment amongst their team members. However, an examination of the discriminant validity of the four dimensions of transformational leadership is warranted given the high correlations among the four dimensions. The construct on the whole could be clarified through formulating more unique and sensitive subscales.

**Limitations of the Study and Suggestions for Future Research**

While this study has several strengths, it is also important to note limitations of the present findings. Although this study surveyed both men’s and women’s teams, it analyzed only the differences between gender of the student athletes and did not compare differences in the gender of the coaches. Future research should explore potential variation in the impact
of transformational leadership behaviors shown by male compared to female coaches. Because research shows that men and women do tend to lead in different ways (Jambor & Zhang, 1997; Reynaud, 2005), it would be worthwhile to see how these differences translate within the framework of the transformational leadership paradigm. Also, while this study examined NCAA teams from several states, the participating teams were primarily from the Midwest and Southern regions of the United States. Because of differences in culture and social norms among the different regions of the United States, future research would benefit from addressing differences in transformational leadership outcomes regionally.

This study demonstrates that student-athletes’ perceptions of their coaches’ transformational leadership behaviors contribute significantly to the explanation of variance in cohesion and commitment. However, student-athletes’ perceptions are subjective, and it may be that their perceptions are affected by variables that were not examined in this study. For example, research shows that member cooperation, team stability, and collective efficacy (Spink, 1990) are some of the determinants of cohesion and commitment in sport teams (Cox, Qui, & Liu, 1993). Inclusion of these variables in future research in sport would be helpful to better understanding the factors that explain cohesion and commitment. Because leadership is a dynamic and fluid process, future research would also benefit from investigating the impact of transformational leadership at multiple times during a team’s season by using both direct (i.e., observation) and indirect (coach and athlete perceptions) methods of assessing coach leadership behaviors.

Because of the nature of the study and analyses used, another limitation of this study is that causation cannot be presumed from the results. It is not clear whether team cohesion and athlete commitment developed before or after coaches utilized transformational
leadership behaviors. Athletes’ commitment, as well as team cohesion, could stem from additional variables not assessed in this study. To illustrate, a team could be highly cohesive and committed due to social factors. For example, many athletes, especially at the division III level, may see the team as an opportunity to socialize. This could create a highly cohesive team as well as committed athletes who are invested in the good of the team because they care for their teammates as friends. If a coach responded to this positive, cohesive, and committed environment with inspired and stimulating leadership behaviors, it could be that cohesion elicited transformational leadership in the coach, rather than transformational leadership eliciting cohesion and commitment. Another interesting research approach could be to study teams longitudinally; following a team beginning during the coach’s first season for several years (and even through athlete turnover as players graduate) could provide a great deal of information on the effect of coaching leadership behaviors on cohesion and commitment of an evolving group.

It is important to note that fewer NCAA division-I and-II athletes submitted responses to the surveys for this study. Thus, NCAA division-III athletes were overrepresented in the sample. Because division III athletes in the NCAA are not allowed to receive athletic scholarship, the importance of commitment may be especially salient in these teams, where players can truly just choose to “walk away” from the team at any time without financial penalty. This could mean several things: (a) that division III athletes are generally more committed because they choose to participate in athletics without external motivation, (b) that the role of coaches in developing athletes’ sense of commitment to the team is especially important and relevant for division III athletes, or (c) that commitment takes on a different importance for athletes at the division I or II level who have scholarship as a motivating
factor. For athletes on scholarship, deeper, attitude-based commitment would be an important trait to promote through coaching behavior; they may not necessarily be intrinsically motivated to put in effort beyond what is expected of them on behalf of the team. Nonetheless, future research should focus on on athlete commitment cross-divisionally as well as how it relates to transformational leadership. This could be accomplished with a larger, more diverse sample that makes it possible to compare divisional groups’ outcomes for transformational leadership, cohesion, and commitment.

Further, the fact that the four dimensions of transformational leadership were so highly intercorrelated in this and other (Avolio & Bass, 2004) analyses, future research should focus on critiquing the transformational leadership construct and its subscales. Perhaps inquiry into Rafferty & Griffin’s (2004) redefined dimensions of transformational leadership could lead to more clearly defined and discriminant subscales and a clearer definition of the paradigm on the whole.

Conclusion

This study represents a first step toward understanding the interaction between the transformational leadership behaviors of sport coaches, the gender of student-athletes, and their relationship with team cohesion and commitment. Transformational leadership appears to have a significant positive relationship with team cohesion and commitment for both males and females participating in collegiate athletics, and an even stronger relationship with commitment among male student-athletes. The results of the current study, as well as research on transformational leadership in general (Bass, 1998), suggest that transformational leadership provides sport coaches with a model that can help them lead in an effective manner, while increasing levels of cohesion and commitment within their teams. Given this,
it seems warranted that future research continues to examine the transformational leadership paradigm in sport. However, the high intercorrelation among the four dimensions of transformation leadership suggest that critiquing the construct’s four subscales could be valuable in achieving a clearer, improved definition of the transformational leadership paradigm that can be more specifically applied to team dynamics.
References


Davis, D. J. (2002). An analysis of the perceived leadership styles and levels of satisfaction of selected junior college athletic directors and head coaches. *The Sport Journal, 5*, 1-5.


Appendix A

Student-Athlete Demographic Information Form

1. How would you classify your gender?
   □ Male  □ Female  □ Transgender
   □ Intersex  □ Genderqueer  □ Other
   □ Decline to state

2. How would you classify your race/ethnicity?
   □ African-American/Black  □ American Indian/Alaska Native
   □ Chinese/Chinese-American  □ East Indian/Pakistani
   □ Filipino/Filipino-American  □ Japanese/Japanese-American
   □ Korean/Korean-American  □ Pacific Islander
   □ Mexican/Mexican-American/Chicano/a  □ Vietnamese/Vietnamese-American
   □ White/Caucasian  □ Other Asian
   □ Other Spanish-American/Latino/a  □ Biracial
   □ Multiracial  □ Other

3. What year are you in school?
   □ Freshman  □ Sophomore
   □ Junior  □ Senior
   □ Fifth year or Graduate student

4. What sport are you currently participating in? (If you are a multi-sport student-athlete, please only select the sport for which you are completing this survey)
   □ Soccer  □ Tennis
   □ Volleyball  □ Football
   □ Field Hockey  □ Basketball
   □ Swimming  □ Baseball
   □ Softball

5. What Division is your sport?
   □ NCAA Division I  □ NCAA Division II
   □ NCAA Division III

6. I am currently participating in my
   □ First season on this team  □ Second season on this team
   □ Third season on this team  □ Fourth season on this team
   □ Fifth season on this team  □ Sixth season on this team
Appendix B

Multifactor Leadership Questionnaire - Member Form

This questionnaire is used to describe your coach’s leadership style as you perceive it. Please answer all items on this answer sheet. If an item is irrelevant, or you are unsure or do not know the answer, leave the answer blank. Twenty descriptive statements are listed on the following page. Judge how frequently each statement fits how you perceive your coach.

1. Provides me with assistance in exchange for my efforts
   Not at all | Once in a While | Sometimes | Fairly Often | Frequently, if not always
   0 | 1 | 2 | 3 | 4

2. Re-examines critical assumptions to question whether they are appropriate
   Not at all | Once in a While | Sometimes | Fairly Often | Frequently, if not always
   0 | 1 | 2 | 3 | 4

3. Fails to interfere until problems become serious
   Not at all | Once in a While | Sometimes | Fairly Often | Frequently, if not always
   0 | 1 | 2 | 3 | 4

4. Focuses attention on irregularities, mistakes, exceptions, and deviations from standards
   Not at all | Once in a While | Sometimes | Fairly Often | Frequently, if not always
   0 | 1 | 2 | 3 | 4

5. Avoids getting involved when important issues arise
   Not at all | Once in a While | Sometimes | Fairly Often | Frequently, if not always
   0 | 1 | 2 | 3 | 4

6. Talks about his/her most important values and beliefs
   Not at all | Once in a While | Sometimes | Fairly Often | Frequently, if not always
   0 | 1 | 2 | 3 | 4

7. Is absent when needed
   Not at all | Once in a While | Sometimes | Fairly Often | Frequently, if not always
   0 | 1 | 2 | 3 | 4

8. Seeks differing perspectives when solving problems
   Not at all | Once in a While | Sometimes | Fairly Often | Frequently, if not always
   0 | 1 | 2 | 3 | 4

9. Talks optimistically about the future
   Not at all | Once in a While | Sometimes | Fairly Often | Frequently, if not always
   0 | 1 | 2 | 3 | 4
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<tr>
<td>10. Instills pride in me for being associated with him/her</td>
<td>Not at all</td>
<td>Once in a While</td>
<td>Sometimes</td>
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<tr>
<td>11. Discusses in specific terms who is responsible for achieving performance targets</td>
<td>Not at all</td>
<td>Once in a While</td>
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<tr>
<td>12. Waits for things to go wrong before taking action</td>
<td>Not at all</td>
<td>Once in a While</td>
<td>Sometimes</td>
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<tr>
<td>13. Talks enthusiastically about what needs to be accomplished</td>
<td>Not at all</td>
<td>Once in a While</td>
<td>Sometimes</td>
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<tr>
<td>14. Specifies the importance of having a strong sense of purpose</td>
<td>Not at all</td>
<td>Once in a While</td>
<td>Sometimes</td>
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<tr>
<td>15. Spends time teaching and coaching</td>
<td>Not at all</td>
<td>Once in a While</td>
<td>Sometimes</td>
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<tr>
<td>16. Makes clear what one can expect to receive when performance goals are achieved</td>
<td>Not at all</td>
<td>Once in a While</td>
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<tr>
<td>17. Shows that he/she is a firm believer in “if it ain’t broke, don’t fix it”</td>
<td>Not at all</td>
<td>Once in a While</td>
<td>Sometimes</td>
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<td>18. Goes beyond self-interest for the good of the group</td>
<td>Not at all</td>
<td>Once in a While</td>
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<tr>
<td>19. Treats me as an individual rather than just a member of the group</td>
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<td>Once in a While</td>
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<tr>
<td>20. Demonstrates that problems must become chronic before taking action</td>
<td>Not at all</td>
<td>Once in a While</td>
<td>Sometimes</td>
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21. Acts in ways that builds my respect

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<th>Not at all</th>
<th>Once in a While</th>
<th>Sometimes</th>
<th>Fairly Often</th>
<th>Frequently, if not always</th>
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22. Concentrates his/her full attention on dealing with mistakes, complaints, and failures

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<th>Once in a While</th>
<th>Sometimes</th>
<th>Fairly Often</th>
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23. Considers the moral and ethical consequences of decisions

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<th>Once in a While</th>
<th>Sometimes</th>
<th>Fairly Often</th>
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24. Keeps track of all mistakes

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<th>Sometimes</th>
<th>Fairly Often</th>
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25. Displays a sense of power and confidence

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<th>Sometimes</th>
<th>Fairly Often</th>
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26. Articulates a compelling vision of the future

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<th>Fairly Often</th>
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27. Directs my attention toward failures to meet standards

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<th>Not at all</th>
<th>Once in a While</th>
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<th>Fairly Often</th>
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28. Avoids making decisions

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<th>Fairly Often</th>
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29. Considers me as having different needs, abilities, and aspirations from others

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<th>Fairly Often</th>
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30. Gets me to look at problems from many angles

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<th>Fairly Often</th>
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31. Helps me to develop my strengths

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<th>Fairly Often</th>
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</table>
32. Suggests new ways of looking at how to complete assignments
Not at all  Once in a While  Sometimes  Fairly Often  Frequently, if not always
0        1              2               3                    4

33. Delays responding to urgent questions
Not at all  Once in a While  Sometimes  Fairly Often  Frequently, if not always
0        1              2               3                    4

34. Emphasizes the importance of having a collective sense of mission
Not at all  Once in a While  Sometimes  Fairly Often  Frequently, if not always
0        1              2               3                    4

35. Expresses satisfactions when I meet expectations
Not at all  Once in a While  Sometimes  Fairly Often  Frequently, if not always
0        1              2               3                    4

36. Expresses confidence that goals will be achieved
Not at all  Once in a While  Sometimes  Fairly Often  Frequently, if not always
0        1              2               3                    4

37. Is effective meeting my job-related needs
Not at all  Once in a While  Sometimes  Fairly Often  Frequently, if not always
0        1              2               3                    4

38. Uses methods of leadership that are satisfying
Not at all  Once in a While  Sometimes  Fairly Often  Frequently, if not always
0        1              2               3                    4

39. Gets me to do more than I expected to do
Not at all  Once in a While  Sometimes  Fairly Often  Frequently, if not always
0        1              2               3                    4

40. Is effective in representing me to higher authority
Not at all  Once in a While  Sometimes  Fairly Often  Frequently, if not always
0        1              2               3                    4

41. Works with me in a satisfactory way
Not at all  Once in a While  Sometimes  Fairly Often  Frequently, if not always
0        1              2               3                    4

42. Heightens my desire to succeed
Not at all  Once in a While  Sometimes  Fairly Often  Frequently, if not always
0        1              2               3                    4
| 43. Is effective in meeting organizational requirements |
| Not at all | Once in a While | Sometimes | Fairly Often | Frequently, if not always |
| 0 | 1 | 2 | 3 | 4 |

| 44. Increases my willingness to try harder |
| Not at all | Once in a While | Sometimes | Fairly Often | Frequently, if not always |
| 0 | 1 | 2 | 3 | 4 |

| 45. Leads a group that is effective |
| Not at all | Once in a While | Sometimes | Fairly Often | Frequently, if not always |
| 0 | 1 | 2 | 3 | 4 |
Appendix C

The Group Environment Questionnaire

Now, a few questions about your team sport experience. Please respond by circling a numerical response for each question.

1. I enjoy being a part of the social activities of this team.
   - Strongly Disagree
   - Strongly Agree
   1  2  3  4  5  6  7  8  9

2. I am happy with the amount of playing time I get.
   - Strongly Disagree
   - Strongly Agree
   1  2  3  4  5  6  7  8  9

3. I am going to miss the members of this team when the season ends.
   - Strongly Disagree
   - Strongly Agree
   1  2  3  4  5  6  7  8  9

4. I am happy with my team’s level of desire to win.
   - Strongly Disagree
   - Strongly Agree
   1  2  3  4  5  6  7  8  9

5. Some of my best friends are on this team.
   - Strongly Disagree
   - Strongly Agree
   1  2  3  4  5  6  7  8  9

6. This team gives me enough opportunities to improve my personal performance.
   - Strongly Disagree
   - Strongly Agree
   1  2  3  4  5  6  7  8  9

7. I enjoy team parties more than other parties.
   - Strongly Disagree
   - Strongly Agree
   1  2  3  4  5  6  7  8  9

8. I like the style of play on this team.
   - Strongly Disagree
   - Strongly Agree
   1  2  3  4  5  6  7  8  9

9. For me, this team is one of the most important social groups to which I belong.
   - Strongly Disagree
   - Strongly Agree
   1  2  3  4  5  6  7  8  9

10. Our team is united in trying to reach its goals for performance.
    - Strongly Disagree
    - Strongly Agree
    1  2  3  4  5  6  7  8  9
11. Members of our team would rather get together as a team than go out on their own.  
   Strongly Disagree  1 2 3 4 5 6 7 8 9  
   Strongly Agree

12. We all take responsibility for any loss or poor performance by our team.  
   Strongly Disagree  1 2 3 4 5 6 7 8 9
   Strongly Agree

13. Our team members frequently party together.  
   Strongly Disagree  1 2 3 4 5 6 7 8 9
   Strongly Agree

14. Our team members have similar aspirations for the team’s performance.  
   Strongly Disagree  1 2 3 4 5 6 7 8 9
   Strongly Agree

15. Our team would like to spend time together in the off season.  
   Strongly Disagree  1 2 3 4 5 6 7 8 9
   Strongly Agree

16. If members of our team have problems in practice, everyone wants to help them so we can get back together again.  
   Strongly Disagree  1 2 3 4 5 6 7 8 9
   Strongly Agree

17. Members of our team stick together outside of practices and games.  
   Strongly Disagree  1 2 3 4 5 6 7 8 9
   Strongly Agree

18. Members of our team communicate freely about each athlete’s responsibilities during competition or practice.  
   Strongly Disagree  1 2 3 4 5 6 7 8 9
   Strongly Agree
Appendix D

Organizational Commitment Questionnaire

Please answer these questions regarding your level of commitment to your team.

1. I am willing to put in a great deal of effort beyond that normally expected in order to help this team be successful.
   Strongly Disagree: 1 2 3 4 5 6 7 8 9
   Strongly Agree:

2. I talk up this team to my friends as a great team to play for.
   Strongly Disagree: 1 2 3 4 5 6 7 8 9
   Strongly Agree:

3. I feel very little loyalty to this team.
   Strongly Disagree: 1 2 3 4 5 6 7 8 9
   Strongly Agree:

4. I would accept almost any type of task/position assignment in order to keep playing for this team.
   Strongly Disagree: 1 2 3 4 5 6 7 8 9
   Strongly Agree:

5. I find that my values and the team’s values as a whole are very similar.
   Strongly Disagree: 1 2 3 4 5 6 7 8 9
   Strongly Agree:

6. I am proud to tell others that I am part of this team.
   Strongly Disagree: 1 2 3 4 5 6 7 8 9
   Strongly Agree:

7. I could just as well be playing for a different team as long as the type/level of play was similar.
   Strongly Disagree: 1 2 3 4 5 6 7 8 9
   Strongly Agree:

8. This team really inspires the very best in me in the way of athletic performance.
   Strongly Disagree: 1 2 3 4 5 6 7 8 9
   Strongly Agree:

9. It would take very little change in my present circumstances to cause me to leave this team.
   Strongly Disagree: 1 2 3 4 5 6 7 8 9
   Strongly Agree:
10. I am extremely glad that I chose this team to play for over others I was considering at the time I joined.

   Strongly Disagree 1 2 3 4 5 6 7 8 9
   Strongly Agree

11. There’s not too much to be gained by sticking with this team indefinitely.

   Strongly Disagree 1 2 3 4 5 6 7 8 9
   Strongly Agree

12. Often, I find it difficult to agree with this team’s policies on important matters relating to its players.

   Strongly Disagree 1 2 3 4 5 6 7 8 9
   Strongly Agree

13. I really care about the fate of this team.

   Strongly Disagree 1 2 3 4 5 6 7 8 9
   Strongly Agree

14. For me this is the best of all possible teams for which to play.

   Strongly Disagree 1 2 3 4 5 6 7 8 9
   Strongly Agree

15. Deciding to play for this team was a definite mistake on my part.

   Strongly Disagree 1 2 3 4 5 6 7 8 9
   Strongly Agree
Appendix E

IRB Approval

Mistie Germek
Rhodes College
2000 North Parkway
Memphis, TN 38112

Dear Professor Germek,

Your exemption application entitled “Transformational Leadership in Sport: Coaching Leadership Styles, Team Cohesion, and Player Commitment” has been approved by the Rhodes College IRB chair. This approval expires on 4/26/2011. If you make any significant methodological changes, you will need to resubmit to this committee.

If you have any questions about the IRB process please feel free to call me at 901-843-3566. Good luck with your research project.

Sincerely,

C. Nicholas McKinney
Rhodes College IRB chair
Appendix F

Letter to Coaches

Stephanie Parazak
2000 North Parkway
Rhodes Box 2087
Memphis, TN 38112
(720)-261-2424
parse@rhodes.edu

Dear Coach,

Thank you for taking the time to read this letter. I am writing this letter to you to explain a research project I am conducting as an Honors project in Psychology at Rhodes College under the direction of Dr. Mistie Germek. Dr. Germek can be contacted at (901) 843-3516 or germekm@rhodes.edu if you have questions about this research. My interest in Sports Psychology developed as a combination of many years as a nationally competitive volleyball player and my interest in the field of Psychology itself. The subject of leadership is particularly interesting to me because of my experiences with the many coaches I have had over the years and the different ways they have lead my teams. Additionally, I found that these individuals have proven to be some of the most influential people in my own life, which I suspect is the case for many athletes. Coaches influence many aspects of athletes’ well-being, as well as the well-being of the group as a whole, through the leadership behaviors that they display.

While numerous studies have been conducted in the areas of business, military and education regarding the effects of leadership styles, not many have been conducted in the sport realm. The purpose of my research is to address some of these gaps in the literature and help to build the body of research regarding specific leadership styles in sport. Specifically, I am examining the relationships between transformational leadership behaviors, team cohesion and athlete commitment in sport. Results from this study will help develop a better understanding of collegiate coaches’ leadership in sport and how it pertains to cohesion and commitment among collegiate student-athletes. This information will be particularly useful for coaches seeking to learn ways in which they can develop and improve their coaching styles.

I am writing to you because I would like to give surveys to you and to the members of your team. It will take approximately 10 minutes for you to complete the survey and approximately 20 minutes for your athletes to complete their surveys. In return, I will compile the overall results of the study for you and share my findings regarding transformational leadership, cohesion and commitment.

Thank you for your time and consideration.

Stephanie Parazak
Appendix G

Project Information Sheet for Student-Athletes

Transformational Leadership in Sport: Coaching Leadership Behaviors, Team Cohesion, and Student-Athlete Commitment

You are invited to participate in a study that will examine the impact of coach leadership behaviors on cohesion and player commitment. Participation in this study should take approximately 20 minutes of your time, and will involve responding to questions about coach leadership behaviors, cohesion, and player commitment. Participation in this study is strictly voluntary and the risks associated with this project are minimal. If, however, you experience discomfort, you may discontinue your participation at anytime. Refusal to participate or withdrawal from participation will involve no penalty or loss of benefits to which you are otherwise entitled. Your responses are anonymous and no information will be connected that can identify you. The investigators for this study are Stephanie Parazak, Charlotte Wagner and Mistie Germek, Ph.D. If you have questions about this research, please contact Dr. Mistie Germek at 901-843-3516/germekm@rhodes.edu, or Dr. Nick McKinney, Institutional Review Board Chair, at 901-843-3566/mckinneyn@rhodes.edu. Your submission of this survey will serve as your consent to participate in this project and will also reflect that you are at least 18 years of age. Thank you for your time.