THE RELATIONSHIP OF COACHES’ LEADERSHIP STYLES AND GENDER TO PERFORMANCE OUTCOMES AND ACADEMIC PERFORMANCE IN COLLEGE BASKETBALL

by

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ABSTRACT

THE RELATIONSHIP OF COACHES’ LEADERSHIP STYLES AND GENDER TO PERFORMANCE OUTCOMES AND ACADEMIC PERFORMANCE IN COLLEGE BASKETBALL

The purpose of this cross-sectional study was to explore the relationship between leadership styles among head basketball coaches from NCAA Division II men’s and women’s basketball teams and performance outcomes and academic performance. A second purpose of this study was to explore gender differences in leadership styles and outcomes. The participants for the study included 16 men’s (n= 12) and women’s (n= 4) head basketball coaches from the California Collegiate Athletic Association (CCAA), which is a NCAA Division II level conference. Four of the men and all four women were head coaches of women’s programs. This study employed self-reported measures including a demographic coaching questionnaire and the Leadership Scale for Sports (LSS: Chelladurai, 1993; 1998) to assess leadership behavior styles and related factors among the coaches. Performance and academic performance data were obtained from each institution. The results of a series of Pearson product moment correlations supported significant positive relationships between Autocratic leadership behavior and performance outcomes including margin of victory and rebounding margin. A 2X2 MANOVA revealed no significant gender differences among coaches for leadership behaviors. There were, however, several significant relationships among the continuous performance variables including a positive relationship between field goal percentage and
points per game with total years of coaching experience. There were no correlations between coaching leadership style and overall team GPA.
DEDICATION

This body of work is dedicated to my entire family, whose incessant love and support has been and shall remain my drive and inspiration to succeed. I love you all very much.

-Bryce
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CHAPTER ONE

Introduction

Problem Statement.

“Each member of your team has a potential for personal greatness; the leader’s job is to help them achieve it.” (Wooden, pg. 178, 2005). A challenge for coaches is to find a leadership style that is conducive to team success. Despite considerable research on coaching styles, the answer to the following question remains elusive: Which style of coaching in sport is most effective for optimal team performance?

Currently, there is no research regarding the leadership behavior styles of NCAA Division II men’s and women’s head basketball coaches. There is also a lack of information relating leadership behavior styles to performance measures such as win/loss record, statistical categories and team grade point average (GPA). It has yet to be determined which leadership style correlates to successful performance outcomes in sport (Jambor & Zhang, 1997). Hence, the current study shall help coaches better understand how their leadership behaviors relate to their team’s performance, and enhance the literature in this area. Another area that has received little research attention is the relationship of gender and coaching in cross-gender situations (e.g., male coach of a female team) to leadership behaviors and team performance (Fasting & Pfister, 2000). As such, this study will help explore these potential differences in leadership behavior styles and performance, which are largely unknown. Ultimately, the results of this study may provide coaches with better awareness of the effect of their leadership styles on performance and help determine which style or styles are most effective.
Nature of the Problem.

The Importance of Leadership in Sport. College coaches assume diverse leadership roles including teacher/instructor, organizer/planner, counselor, communicator, and motivator (Gould, 1987). College coaches often assume dual roles as both teachers and coaches. They must be able to provide instruction, guide skill development, and offer performance feedback, while directing a team toward a specific goal or outcome. It is not surprising then that coaches play an integral role in the success of their athletes and athletic teams, influencing factors such as their athletes’ self-esteem (Barnett, Smoll, & Smith, 1992), skill learning (Chelladurai, 1984), mental development (Gould, Dieffenbach, & Moffett, 2002), sport performance satisfaction (Horn, 2002), as well as performance outcomes (Horne & Carron, 1985, Schliesman, 1987).

Research has shown that the above factors are directly affected by coaching behaviors and more specifically, leadership (Horn, 2002). Case (1987) suggested that although leader behavior is often discussed, it is one of the least understood aspects of coaching. This is ironic, considering that the coach is the definer, supplier, and deliverer of the sport experience for the athlete (McGuire, 1992). Also, the type of leadership behavior displayed by the head coach can have a significant effect on the performance and psychological well being of the athlete, as mentioned earlier (Horn, 2002).

A Conceptual Framework for Leadership in Sports. Leadership continues to increase in importance as a determinant of effective functioning for any organization or team (Kent & Chelladurai, 2001). Leadership is defined as a process where a select individual influences a group toward a common goal (Northouse, 2001). Leaders significantly influence the thoughts, behaviors, and feelings of others in group settings.
Effective leadership can help an organization or team develop new directions and promote change toward proposed objectives (Bennis & Nanus, 1985). Not only does the concept apply to business, but it is also relevant in sport. Some researchers have tried to translate some leadership concepts to sports (Smith & Smoll, 1989; Chelladurai, 1993) to better understand effective sport leadership. Smith and Smoll (1989) devised the Cognitive Behavioral Model of Leadership (CBML), which identified individual difference variables, situational factors and cognitive processes assumed to mediate interactions between athletes and coaches. Smith and colleague’s approach has focused more on training and behavioral change for coaches in youth sport, and has less relevance to leadership behaviors used when coaching adult athletes.

Chelladurai devised (1993) and subsequently revised (1999) the Multidimensional Model of Leadership (MML) to apply situational leadership theory directly to the adult sport setting. The MML concentrates on three aspects of coaching leadership: a) actual behavior, b) preferred behavior, and c) required behavior. Performance and satisfaction of the athlete are viewed as the products of the interaction of these three aspects of coaching leaderships. Athlete satisfaction is often used as a measure of organizational effectiveness (Chelladurai & Riemer, 1997). According to the model, leadership behaviors are largely a function of leaders’ personal attributes.

To measure these leadership attributes, Chelladurai and Saleh (1980) developed the Leadership Scale for Sports (LSS). The LSS is a 40-item measure divided into the following sub-scales based on five coaching dimensions:

- a. Training and Instruction: coaching behavior aimed at improving the athletes’
performance by emphasizing and facilitating hard and strenuous training; instructing them in the skills, techniques, and tactics of the sport; clarifying the relationship among the members; and by structuring and coordinating the members’ activities (Chelladurai, 1990).

b. Democratic Behavior: coaching behavior that allows greater participation by the athletes in decisions pertaining to group goals, practice methods, and game tactics and strategies (Chelladurai, 1990).

c. Autocratic Behavior: coaching behavior which involves independent decision making and stresses personal authority (Chelladurai, 1990).

d. Social Support: coaching behavior characterized by a concern for the welfare of individual athletes, positive group atmosphere, and warm interpersonal relations with members (Chelladurai, 1990).

e. Positive Feedback: coaching behavior which reinforces an athlete by recognizing and rewarding good performance (Chelladurai, 1990).

Taken together, these five dimensions provide conceptually distinct categories of overall coaching behavior and inasmuch as they are measures with items similar to other leadership scales, they allow for comparison and extension of research findings in other fields beyond sport (Chelladurai & Saleh, 1980).

The five behavior subscales of the LSS have been classified along three dimensions: one direct task factor (i.e. training and instruction behavior), two decision style factors (i.e. autocratic and democratic behaviors), and two motivational factors (i.e. positive feedback and social support). The scale has been used to measure athletes’ perceptions of their coaches’ behavior, their preferred leadership behaviors, and the
coaches’ perceptions of their own behavior. For more than two decades, the behavioral categories of the LSS have been used by a wide range of researchers to measure coaching behaviors in sport. To date, the majority of research utilizing the LSS has focused on the leadership behaviors of coaches in sport (Loughead & Hardy, 2005)

Leadership in Team Sports. A study by Tsorbatzoudis, Barkoukis, and Iordanoglou (1997) looked at possible differences between individual and team sports coaches’ perceptions. The sample of the study consisted of 220 coaches of different individual and team sports. Sixty-two coached soccer, 13 rhythmic gymnastics, 15 swimming, 18 tennis, 10 track and field, 8 gymnastics, 10 martial arts, 10 volleyball, 8 basketball, 2 handball, aerobics, skiing and body-building, 1 boxing and 1 wrestling. Fifty-six coaches did not report their sport. The subjects completed the coach’s version of the LSS, which consisted of 40 items describing the five aspects of leader behavior. From these items, 13 were used to describe Training and Instruction, 9 Democratic Behavior, 5 Autocratic Behavior, 8 Social Support, and 5 Positive Feedback. The coaches rated their perceived behavior on a five point Likert scale ranging from 1 (never) to 5 (always). The results of the study showed that coaches of individual sports tended to be more democratic than the coaches of team sports.

Another study by Mondello and Janelle (2001) looked at the leadership styles of head coaches and assistant coaches at the University of Florida. According to the National Sports rankings, the University of Florida’s athletic program has ranked among the nation’s top 10 programs for 16 consecutive years (1983/84 – 1998/99), along with ranking as the best combined men’s and women’s program in the Southeastern Conference in 9 of the previous 11 years. Thirteen head coaches and 24 assistant coaches
participated in the study, and they each completed the 40 item LSS. Leadership styles of the head coaches and assistant coaches were analyzed with five separate analyses of variance (ANOVAs). The results showed that no main effects or interactions were identified for autocratic behavior, democratic behavior, or training and instruction. Under social support, a significant effect emerged for coaching status. Head coaches exhibited more social support behavior than did assistant coaches ($M = 24.63$, $SD = 5.02$).

A study by Loughead and Hardy (2005) examined the leadership behaviors of coaches and peer leaders. Two hundred and thirty eight athletes from 15 teams representing a wide range of independent and interdependent team sports. Coach behaviors were measured using the LSS. A repeated measures MANOVA showed that coaches and peer leaders exhibited different leadership behaviors. Follow-up post-hoc ANOVAs revealed significant differences between coaches and peer leaders in use of each of the five behaviors measured by the LSS. The results indicated that coaches exhibited training and instruction and autocratic behaviors to a greater extent than peer leaders. Conversely, peer leaders exhibited more social support, positive feedback, and democratic behaviors than coaches.

A study by Sherman and Fuller (2000) investigated the preferred coaching behaviors of athletes from three distinct Australian sporting contexts. The coaching preferences of 317 athletes (Australian football $n = 110$, netball $n = 88$, and basketball $n = 114$), aged between 18-35 years old, were obtained using the LSS. The levels of competition were not identical, yet every effort was made to include comparable levels. Results revealed an overwhelmingly high level of similarity in the coaching preferences between all athletes regardless of gender. Athletes from all three sports indicated that
positive feedback, training and instruction and democratic behavior were preferred coaching behaviors. Social support, and autocratic behavior were not preferred.

*Gender and Other Factors Influencing Leadership in Sport.* The Revised LSS was used in a study by Jambor and Zhang (1997), to determine possible differences in leadership behaviors between male and female coaches and among different coaching styles. Participants included 162 coaches (male = 118; female = 44) at the junior high (n = 25), high school (n = 99), and college level (n = 38). The researchers found no significant differences between male and female coaches. Males and females differed on only one leadership behavior: social support ($F(1,160) = 4.47; p \leq .05$). Females scored significantly higher on social support than did males, indicating a greater tendency for helping athletes with personal problems and making sport part of the enjoyment of an athlete’s life. They also found significant differences between the three coaching levels. Within the area of democratic leadership behavior, high school coaches reported this behavior to a significantly higher degree than did college coaches. Junior high coaches viewed training and instruction behavior at a significantly lesser amount than did high school and college coaches. College and high school coaches viewed social support leadership at a significantly greater amount than did junior high coaches.

In the studies of Dubois (1981) and Millard (1990), male coaches gave more technical instruction and less encouragement than did the female coaches. Studies that have examined gender differences in motivation to participate in sports generally indicate that females place greater value on friendship and social interaction and less value on competition and achievement than do males (Alderman, 1988; Gould, Feltz, & Weiss, 1986). Millard (1996) looked at differences in coaching behaviors of male and female
high school soccer coaches. Using the Coaching Behavior Assessment System (CBAS), Millard recorded coaching behaviors of 29 male and 29 female coaches during competition. Male coaches engaged more frequently in technical instruction than did the females and less frequently in general encouragement.

Lam (2007) focused on the preferred and perceived leadership styles of NCAA basketball players using the 60-item RLSS (Zhang, Jensen, & Mann, 1997). Participants of the study included 113 male and 92 female basketball players from nine Midwestern NCAA universities. The results indicated significant difference in the perception and preference mean vector scores for all six subscales of the RLSS. Post hoc analyses indicated that female basketball players preferred a higher degree of (a) democratic behavior, (b) social support, (c) positive feedback, (d) situational consideration, and (e) teaching and instruction but a lower degree of autocratic behavior than what they perceived from their coaches. Male basketball players preferred a higher degree of (a) social support, (b) situational consideration, and (c) teaching and instruction than what they perceived from their coaches.

When preferred coaching behaviors were assessed, there were significant differences in the mean scores between male and female basketball players in positive feedback, situational consideration, teaching and instruction, and autocratic behavior. Overall, female players preferred a higher degree of positive feedback, situational consideration and teaching and instruction, but a lesser degree of autocratic behavior from their coaches than their male counterparts. Both male and female basketball players perceived their coaches had a lower degree of social support, situational consideration, and teaching and instruction than what they expected. The findings suggested that
collegiate basketball coaches should use different coaching styles for male and female players.

Erle (1981) assessed the effects of sex, experience, and motivation on the leadership preferences of university and intramural players. Results indicated that males preferred training and instruction to females. Athletes high on task motivation preferred more training and instruction; on the other hand, athletes high on affiliation motivation and extrinsic motivation preferred more social support.

A 1986 study performed by Weiss and Friedrichs examined the relationship of collegiate basketball players’ perceptions of coach behavior, coach attributes, and institutional variables to team performance and athlete satisfaction. Results yielded neither institutional nor coach attribute variables were significantly related to team performance or satisfaction. Leader behaviors were significantly related to the team outcomes. Positive feedback was found as the most predictive of team satisfaction. It was concluded that school size, coach attributes, and leader behaviors were predictive of athlete satisfaction. Athletes were found to be more satisfied with coaches who engaged in frequent rewarding behavior, social support behavior, and democratic behavior.

Chelladurai (1984) reported that among basketball players, discrepancy scores in all dimensions were significantly related to satisfaction with leadership. He also found that the greater the perceptions of training and instruction, democratic behavior, social support, and positive feedback, and the lower the perceptions of autocratic behavior relative to the preferences, the greater the satisfaction. A similar study performed by Horne and Carron (1985), looked at Canadian university volleyball, basketball, track and field, and swimming athletes (N = 74). They reported only three significant predictors of
satisfaction with leadership: the discrepancy scores of training and instruction, social support, and positive feedback, accounting for 28.9%, 11.8%, and 3.1% of the variance. Finally, Schliesman (1987) examined the relationship of discrepancy scores with general satisfaction and satisfaction with a specific dimension of leader behavior. Results showed an increase in general satisfaction as the perceived leader behaviors of social support and democratic behavior increased relative to the preferences for such behavior. Also, significant positive linear relationships were found between the perceived behavior scores of social support and positive feedback, and general satisfaction with leadership.

Penman, Hastad, and Cords (1974), measured the degree of authoritarianism in interscholastic male football and basketball head coaches and then tested the degree of correlation between the particular personality characteristics and coaching success. Penman et al. reported that more successful coaches (i.e., those with highest win-loss percentages) were more authoritarian than less successful coaches.

Ryan, Connell, and Deci (1985) and Horn and colleagues (Amorose & Horn, 2002; Horn, 1987; Horn & Harris, 2002) have argued that high frequencies of positive and information-based feedback from coaches in response to athletes’ performance successes and particularly their performance errors leads athletes to increased competence. As a result of increased competence, intrinsic motivation increases as well.

As people get older and mature athletically (reach college age), they increasingly prefer coaches who are more autocratic and socially supportive (Weinberg & Gould, 2003). College athletes tend to be more serious about their sport and want a coach who is organized and serious about their sport. Specifically, preferences were for coaches who allowed athlete participation in decision-making, who gave positive feedback, and who
gave lots of tactical and technical instruction (Martin, Jackson, Richardson, & Weiller, 1999).

Males tend to prefer training and instructive behaviors and an autocratic coaching style more than females do and females prefer more democratic coaching behaviors and a participatory coaching style that allows them to help make the decisions (Weinberg & Gould, 2003). Even given these differences, it is important to note that there are more similarities than differences between male and female preferences for specific coaching behaviors (Horn, 2002). Along with age and gender, nationality and cultural background may influence leadership preferences. Athletes from the United States, Great Britain, and Canada prefer similar coaching styles, however, Japanese athletes prefer more social support and autocratic behaviors than do Canadian athletes, while Canadian athletes prefer more training and instruction behaviors than that of the Japanese athletes (Weinberg & Gould, 2003). Research has also been done on preferred leadership behaviors related to the type of sport played. Riemer and Chelladurai (1995) found that athletes who performed different tasks within a sport differ in their preferred coaching behaviors. Particularly, defensive players preferred greater amounts of democratic, autocratic, and social support behaviors than did offensive players. Also, athletes who play highly interactive team sports, such as basketball, volleyball, and soccer, prefer an autocratic coaching style more than do athletes in co-acting sports such as swimming, tennis or golf (Weinberg & Gould, 2003).

Beam, Serwatka, and Wilson (2004) investigated the differences among student-athletes’ preferred leadership behavior based on gender, competition levels, task dependency, and task variability. Participants included 408 student-athletes from NCAA
Division I and Division II schools. 293 athletes played open sports such as baseball, basketball, football, soccer, volleyball, etc., and 115 played closed sports such as golf, tennis, track and field, cross-country, etc. The athletes completed the Revised LSS (Zang et al, 1997) in order to measure the preferred leadership behavior of their coaches. Results indicated significant differences in gender, task dependence, and task variability. Female athletes preferred democratic behavior in closed sports while male athletes preferred autocratic behavior overall, however, males preferred democratic behavior in open sports. There were no differences of preferred leadership behavior found in competition level. Student-athletes preferences for leadership behaviors are influenced by gender, task dependence and task variability of their sport.

The study done by Riemer and Chelladurai (1995) as noted earlier included 201 male NCAA Division I-AA football players from three different universities, who ranged in age from 17 to 25 years ($M = 20.09$). After the LSS was administered to the athletes, a MANOVA was used to assess the differences between defensive and offensive players in the five dimensions of preferred leadership, five dimensions of perceived leadership, and satisfaction with leadership. The total explained variance in satisfaction ranged from a low of 4.8% in democratic behavior to a high of 23.9% in training and instruction. Training and instruction and positive feedback variables explained the highest amount of variance in satisfaction with leadership at 23.9 and 17%. Riemer and Chelladurai concluded that coaches may be better off when they emphasize training and instruction as well as positive feedback behavior, in accordance with task demands and member performance, than with member preferences. Coaches’ leadership behaviors
also need to match member preferences in the case of democratic behaviors, autocratic behavior, and social support.

Sullivan and Kent (2003) examined the relationship between the efficacy of intercollegiate coaches and their leadership styles. An international sample of 224 coaches (165 male, 58 female) completed Feltz et al’s Coaching Efficacy Scale, and the LSS. Two of the three regression models were significant, with coaching efficacy accounting for up to 42% of the variance in leadership style. Motivation and technique efficacy served as significant predictors for both models. Results concluded that as coaches were more confident in their roles as motivators and teachers, they were closer to their image of the ideal leader with respect to using positive feedback and appropriate training and instruction, and engaged in these behaviors to a greater extent (Sullivan & Kent, 2003).

Mondello and Janelle’s study, which looked at the leadership styles of head coaches and assistant coaches at the University of Florida, also found that under positive reinforcement, a significant effect was identified for the Team Gender variable ($F(1,21) = 6.66, p < .05$. Specifically the coaches of male teams ($M = 22.90, SD = 1.87$) reported significantly higher levels of positive reinforcement than did the coaches of female teams ($M = 21.38, SD = 2.42$).

Leadership and Performance Outcomes in Sport. As noted by Carron and Hausenblas (1998), the two main responsibilities of formal leaders of organizations (i.e., coaches), is to ensure that the team is effective in reaching its goals and objectives, and to ensure that team members’ needs are satisfied. In sports, leadership has been studied primarily in terms of coaching leadership and its effects on player performance.
(Chelladurai & Carron, 1983; Riemer & Chelladurai; Zhang & Jensen, 1997; Ipinmoroti, 2002). Other research in this area has focused on the youth and Olympic sport levels, and has explored the associations among coach characteristics (e.g., beliefs), coach behaviors, and outcomes among athletes (e.g., satisfaction, efficacy, and performance) (Csikszentmihalyi, Rathunde, & Whalen, 1993; Gould, Dieffenbach, & Moffett, 2002; Smith, Smoll, & Curtis, 1979; Smith, Zane, Smoll, & Coppel, 1983; Smith & Smoll, 1990).

The study of coaching behaviors, their antecedents, and their effects on athletes, has long occupied the attention of sport science researchers (Cumming, Smith & Smoll, 2006). Interviews with U.S. Olympic champions (Gould, Dieffenbach, & Moffett, 2002) showed that influential coaches taught athletes both directly (i.e., mentoring, teaching mental skills, planned teaching) and indirectly (i.e., fostering/nurturing/instilling important skills, modeling). According to Chelladurai (1990, 1993), when a coach leads in a style that matches the team members’ preferences, optimal performance and satisfaction are the result. Generous social support, rewarding behavior, and democratic decision-making are generally associated with high satisfaction among athletes (Weinberg & Gould, 2003).

Team cohesion is also affected by leadership styles. Studies have shown that coaches perceived as high in training and instruction (Gardner, Shields, Bredemeier, & Bostrom, 1996); democratic, social support (Pease & Kozub, 1994); and positive feedback behaviors; and also low in autocratic behavior (Westre & Weiss, 1991), had teams that were more cohesive.
Research supports the notion that specific coaching behaviors are related to increases in performance, especially when the actual and preferred coaching behaviors are congruent (Weinberg & Gould, 2003). A study done by Weiss and Freidrichs (1986) indicated that frequent social support behaviors were related to poorer team performance (i.e., win-loss record). The results suggested that loosing teams need more social support from leaders to sustain motivation. Another study performed by Vallerand and Losier (1999) looked at the relationship between coaching styles and intrinsic motivation within athletes. Results showed that coaches exhibiting a more autocratic style engaged lower levels of intrinsic motivation and perceived competence in athletes than coaches who exhibited a more democratic leadership style.

Coaching styles may change based on context and team membership. Coaches can effectively integrate and blend democratic and autocratic leadership styles (Blake & Moulton, 1969). In order to adapt to their philosophy, the coaches must be flexible and understand situational factors and characteristics of the members of their team. Situational factors include type of sport (team or individual), interactive or independent, size of the team, time availability, and level of competition.

*Leadership and Academic Performance of Athletes.* According to physical education professionals, sports can play an integral role in the development of students and contribute to the value of traditional educational programs (Harris, 1991; Eitzen, 1996; Pressley & Whitley, 1996). Additional literature has indicated that sports participation provides student-athletes with an assortment of beneficial results. Smith (1994) concluded student-athletes were less likely to encounter discipline problems within the school and more likely to graduate than non student-athletes.
In contrast to the above positive data, according to 2002 data on graduation rates at NCAA Division I universities, graduation rates are lowest in the revenue-producing sports, especially men’s basketball (43%) and football (52%) (Lapchick, 2002). Schools ranked in the top 20 in performance in football and men’s and women’s basketball have lower graduation rates among athletes in those sports than the rates at less highly ranked schools; basketball teams that go to the NCAA postseason tournaments and football teams that go to bowl games have lower graduation rates than basketball and football teams at other schools (Jackson, 2000, 2001; Lapchick, 2002).

Research has resulted in inconclusive findings regarding whether or not student-athletes earn higher grades than non-athletes (Newman, 2005). Countless studies examined the grades of student-athletes and concluded athletes did receive better grades than non-athletes (Dowell, Badgett, & Hunkler, 1972; Soltz, 1986; Kostel, 1993). Other researchers implied additional factors have not been accounted for, thus leading some researchers to advise against conclusive statements supporting a positive relationship between athletic participation and academic success (Schafer & Armer, 1968; and Soltz, 1986).

Kostel (1993) interviewed student-athletes and concluded that an increase in GPA was a result in part of the support and concern of coaches. In addition to these findings, Safran et al. (1990), found that students reflecting upon their high school years mentioned coaches as having a significant impact on their lives. Scherer (1990) pointed out examples of successful coaches at major universities with higher than average graduation rates. Scherer found that increases in the academic success of student-athletes resulted from coaches who paid careful attention in the recruiting phase, focused on selecting
individuals willing to work hard, monitored the progress of athletes, and addressed discipline concerns.

A study by Newman (2005) looked at the role of the coach in the academic achievement of male student-athletes in high school. Participants included 137 male, high school student-athletes who played a variety of team and individual sports. The purpose of the study was to highlight the ways in which coaches may positively impact the academic achievement of high school student-athletes. The results indicated that 75% of the athletes scored the coach as one of the top three categories of people with the most influence on their academic performance. Approximately 85% of the athletes believed that their coach cared about their academic progress. The majority (51%) of coaches believed that mandatory study halls were effective in raising student-athletes’ GPAs, and 53% of the coaches conducted weekly/monthly progress reports, and 46% conducted weekly/monthly attendance checks for study hall. Newman concluded that the combination of increased training and a more active role in student-athlete achievement may help increase the GPA’s of student-athletes. Unfortunately, Newman did not explore how leadership behavior styles might have influenced academic performance.

Summary. Leadership plays a significant role in determining the sport experience including outcomes and athletes’ satisfaction. Research suggests that leadership behaviors may affect performance in sport. However, there is limited research relating leadership behavior styles to performance outcomes beyond wins and losses. Research also indicates that gender may play a role in leadership behaviors styles and their effectiveness. Moreover, there are only limited studies exploring the effect of leadership behavior styles on academic performance such as GPA.
**Purpose of the Study**

The purpose of this study was to explore the relationship between leadership styles and performance outcomes among head basketball coaches for NCAA Division II men’s and women’s basketball teams in a single competitive season. This study also assessed gender differences in coaching styles and performance outcomes.

**Hypotheses and Exploratory Questions**

The following hypotheses were proposed for this study:

1. Direct task-related behaviors (i.e. training and instruction) and autocratic decision making styles will be positively related to team performance outcomes.
2. Team GPA will not be related to leadership style.
3. There will be gender differences in leadership behavior styles, and these differences might be influenced by cross-gender coaching (i.e., men coaching women’s teams).

The following exploratory questions were proposed for this study:

1. Does team gender affect the relationship between leadership style and team performance?
2. Which factors best predict overall team GPA?
3. Is team GPA influenced by coach or team gender?
4. What are the interrelationships among the continuous variables in this study?

**Operational Definitions**

For the purpose of this study, the following terms were used:

*Training and Instruction.* Coaching behavior aimed at improving the athletes’ performance by emphasizing and facilitating hard and strenuous training;
instructing them in the skills, techniques, and tactics of the sport; clarifying the relationship among the members; and by structuring and coordinating the members’ activities (Chelladurai, 1990).

Democratic Behavior. Coaching behavior that allows greater participation by the athletes in decisions pertaining to group goals, practice methods, and game tactics and strategies (Chelladurai, 1990).

Autocratic Behavior. Coaching behavior which involves independent decision making and stresses personal authority (Chelladurai, 1990).

Social Support. Coaching behavior characterized by a concern for the welfare of individual athletes, positive group atmosphere, and warm interpersonal relations with members (Chelladurai, 1990).

Positive Feedback. Coaching behavior which reinforces an athlete by recognizing and rewarding good performance (Chelladurai, 1990).

Points Per Game (PPG). Average number of points each team scored per game during the season.

Scoring Margin. Total points scored compared to total points allowed during the season.

Field Goal Percentage (FG %). Team field goal percentage during the season.

Defensive Field Goal Percentage (Def FG%). Opponents FG %.

Rebound Margin. Total number of team rebounds compared to total number of team rebounds by an opponent during the season.

Turnover Margin. Total number of team turnovers compared with those of each team’s opponents during the season.
Team Grade Point Average (GPA). 2006 fall semester average GPA of all team
members.

Assumptions

The following assumptions were made for this study:

1. The CQ and LSS are valid and reliable.
2. The participants completed the CQ and LSS honestly and accurately.
3. All performance variables and GPA data are valid and reliable.

Limitations

The following factors limited the study and may have influenced its internal
validity:

1. The study was cross-sectional and did not account for changes in any of the
   variables measured.
2. The data was self-reported by coaches and limited by biases including:
   answering questions honestly, and ideal self perception of leadership style.

Delimitations

The following factors delimited the study and may have influenced its external
validity:

1. The study was limited to 12 NCAA Division II institutions.
2. The participants were limited to current head coaches from both the men’s
   and women’s basketball teams.
3. Season performance statistics were from the 2006-07 season.
4. Team GPAs were from the 2006-2007 academic year.
5. The study included cross-gender coaches for only women’s teams.
CHAPTER TWO

Method

Design

This cross-sectional study was designed to explore the relationship between leadership styles of head coaches and performance outcomes and academic performance among a sample of NCAA Division II men’s and women’s basketball teams during a single competitive season. This study used self-report measures including a coaching demographic questionnaire and the Leadership Scale for Sports (LSS: Chelladurai & Salleh, 1980) to assess the relationship between coaching styles and performance, and any gender differences that exist.

Participants

The participants for this study consisted of 16 men’s (n= 12) and women’s (n= 4) head basketball coaches from the California Collegiate Athletic Association (CCAA), which is a NCAA Division II level conference. Four of the men and all 4 women were head coaches of women’s programs. The remaining 8 men were head coaches of men’s programs. All of the participants voluntarily participated in the study.

Measures

Coaches’ Questionnaire. An online coaches’ questionnaire (CQ: see Appendix A) was developed for this study. The 12-item CQ measures demographics including age, race/ethnicity, and gender; and other characteristics such as coaching experience, and education. The CQ was completed individually by each participant online using the Survey Monkey internet questionnaire platform. Each participant was provided with a secure access code needed to complete the questionnaire.
Leadership Scale for Sports. The coach’s self-perception version of the Leadership Scale for Sports (LSS: Chelladurai & Saleh, 1980) was used in this study to measure leadership behavior styles. The LSS (see Appendix B) consisted of 40 self-report items divided into five subscales of leader behavior styles including: Training and Instruction Behavior, Democratic Behavior, Autocratic Behavior, Social Support Behavior, and Positive Feedback. The stem for each item asked coaches to indicate how they perceive their own leadership behaviors. For example, “As a coach, I see to it that athletes work to capacity.” Responses were made using the following 5-point Likert-type scale (1) never, (2) seldom, (3) occasionally, (4) often, and (5) always. Upon completion of the LSS, total scores were determined and categorized. Total scores for each category were obtained by adding up the scores of all the items and dividing that number by the number of items in each subscale. The LSS was also administered individually to each participant using the Survey Monkey internet questionnaire platform. Each participant was provided with a secure access code needed to complete the questionnaire.

Dwyer and Fischer (1988) and Salminen and Liukkonen (1994) determined that the internal consistency (i.e., Cronbach’s alpha coefficients) of the subscales, with the exception of Autocratic Behavior, ranged from .57 to .86 and from .71 to .85, respectively. The internal consistency for Autocratic Behavior was only .04 and .12 in the two studies. Hence, any results in the current study regarding the Autocratic Behavior subscale should be interpreted cautiously. Despite the low internal consistency of the Autocratic Behavior factor, the LSS has been shown to be an internally consistent and valid instrument, provided caution is exercised with the Autocratic Behavior subscale (Chelladurai, 1990).
**Performance Outcomes.** Performance outcomes for this study were obtained from public domain data available from the CCAA website. Each of the outcomes represented season averages or best/worst performances for the 2006-2007 season. The specific performance variables included: points per game, scoring margin (i.e., differential between team and opponents’ scores), field goal %, defensive field goal %, rebound margin and turnover margin. Team grade point average (GPA) for the 2006-2007 academic year was obtained through compliance officers at each institution.

**Procedures**

Upon receiving permission from the Human Subjects Committee at Humboldt State University, participants were contacted using contact information from the CCAA website regarding their participation in the study. An initial phone call was made to each of the 24 head coaches prior to the study concerning the purpose and procedures of the study. Following this call, the researcher sent an email to each coach explaining the online consent process and the use of the Survey Monkey. Upon agreeing to participate in the study by completing their online consent forms (using the links and secure access code provided in the email), coaches completed the CQ and the LSS using the Survey Monkey. After receipt of their completed questionnaires, each coach was sent an email and hand written letter thanking them for their participation in the study. Following this, the researcher obtained from the CCAA website the performance outcome information described above for each team/coach that participated in the study.

**Statistical Analysis**

All results were analyzed using SPSS Version 15.1 (SPSS Inc., 2007). Means and standard deviations for the continuous demographic variables were reported along with
the LSS total and subscale scores. Gender data were reported as frequencies. Statistical analysis concentrated on the three hypotheses, however, other relationships among the continuous variables in the study were also analyzed. A series of Pearson product-moment correlations were used to test Hypotheses 1 and 2. The correlations were also used to determine any interrelationships among the continuous variables in this study (i.e., Exploratory Question 3). To test Hypothesis 3, a 2 (coach gender) x 2 (team gender) MANOVA was used to determine if there were gender differences on the LSS subscales. For Exploratory Question 1, separate Pearson product-moment correlations were run for men’s and women’s teams. For Exploratory Question 3, a series of two independent samples t-test were used to investigate gender differences in overall team GPA. Finally, a multiple regression was used to determine which LSS subscale and coach demographic variables were most predictive of overall team GPA (i.e., Exploratory Question 2).
CHAPTER THREE

Results

Introduction

This chapter includes the descriptive statistics for the sample population. This is followed by a review of results for the hypotheses and exploratory questions. Throughout the chapter, tables are included to summarize and more clearly depict the results.

Descriptive Statistics for Coach Demographics

There were a total of 16 Division II, male \((n=12)\) and female \((n=4)\) basketball coaches who served as the participants for this study. Of the 16 head coaches, 8 coached men’s teams and 8 coached women’s teams. The eight men’s teams were coached by all males while the eight women’s teams were coached by four males and four females. The average age of all 16 coaches was 46.6 \((SD=8.7)\) years. Male coaches averaged 49.75 \((SD=7.14)\) years of age, and female coaches averaged 37.25 \((SD=6.06)\) years of age. Male coaches’ ages ranged from 39 to 64 years, and the female coaches’ ages ranged from 32 to 46 years. Participants had been the head coach at their current institution for an average range of 4-5 years \((SD=1.5)\) and had been coaching basketball for an average range of 10-12 years \((SD=.70)\). Of the eight men’s coaches, seven were members of the National Association of Basketball Coaches (NABC) (87%), and five of the eight women’s coaches were members of the Women’s Basketball Coaches Association (WBCA) (62%). Eight male coaches (five coached men’s team, three coached women’s teams) had taken course work in sport psychology prior to the study. Of the four female coaches, two had taken course work in sports psychology prior to the study.
Male and female frequencies for coaching experience, coaching certifications, and previous course work in sports psychology is shown in Table 1. The results showed that all head coaches had been coaching the game of basketball for at least 7 years. The results also showed a wide variety in head coaching experience in their current position, ranging from 1 year to 13+ years. 75% (n= 12) of all coaches surveyed were members of either the NABC or WBCA and more than half (n= 10) had previously taken course work in sports psychology.

Reliability of the Coaches’ Version of the LSS

The reliability (i.e., internal consistency) of each of the five subscales of the LSS was examined using Cronbach’s alpha coefficient. Cronbach’s alpha for the overall LSS was .83. Cronbach’s alpha coefficient for the five factors was: (a) Training and Instruction Leadership Behavior, \( \alpha = .78 \); (b) Democratic Leadership Behavior, \( \alpha = .81 \); (c) Social Support Leadership Behavior, \( \alpha = .65 \); (d) Positive Feedback Leadership Behavior, \( \alpha = .86 \); (e) Autocratic Leadership Behavior, \( \alpha = .55 \). The reliability coefficients were consistent with previous findings (e.g., Chelladurai, 1993) in other studies that incorporated the coaches’ version of the LSS. The reliability for Autocratic Leadership Behaviors was low in the current study, supporting previous findings (e.g, Chelladurai, 1993). Hence, subsequent findings in the current study involving this factor should be interpreted with caution.
Table 1

Overall, Male and Female Frequencies for Coaching Experience, Coaching Certifications, and Previous Course Work in Sports Psychology (N=16).

<table>
<thead>
<tr>
<th></th>
<th>1-3 yrs</th>
<th>4-6 yrs</th>
<th>7-9 yrs</th>
<th>10-12 yrs</th>
<th>13+ yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Years Coaching</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basketball</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males (n = 12)</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>Females (n =4)</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Total (n =16)</td>
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<td>0</td>
<td>2</td>
<td>1</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>0-1 yrs</th>
<th>2-3 yrs</th>
<th>4-5 yrs</th>
<th>6-7 yrs</th>
<th>8+ yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Years Head Coach</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current School</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males (n = 12)</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Females (n =4)</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total (n =16)</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>NABC</th>
<th>WBCA</th>
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</thead>
<tbody>
<tr>
<td><strong>Coaching Certifications</strong></td>
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<td></td>
</tr>
<tr>
<td>Males (n = 12)</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Females (n =4)</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Total (n =16)</td>
<td>7</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Previously Taken Course Work in Sports Psychology</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males (n = 12)</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Females (n =4)</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total (n =16)</td>
<td>10</td>
<td>6</td>
</tr>
</tbody>
</table>
Evaluation of Hypotheses

**Hypothesis 1** - Direct task-related behaviors (i.e. training and instruction) and autocratic decision making style will be positively related to performance outcomes. A series of Pearson product moment correlations were used to test this hypothesis. Overall, the results supported some significant hypothesized correlations between autocratic leadership style and select performance outcomes (See Table 2 for correlation matrix).

Table 2

**Pearson Correlations among Leadership Behaviors and Performance Outcomes for All Teams (N= 16).**

<table>
<thead>
<tr>
<th></th>
<th>TI</th>
<th>Dem</th>
<th>Aut</th>
<th>SS</th>
<th>PF</th>
<th>PPG</th>
<th>FG%</th>
<th>SM</th>
<th>DFG%</th>
<th>TO</th>
<th>RB</th>
<th>GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>TI</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dem</td>
<td>.52*</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aut</td>
<td>-.31</td>
<td>-.38</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>SS</td>
<td>.30</td>
<td>.72**</td>
<td>-.34</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PF</td>
<td>.69**</td>
<td>.14</td>
<td>-.32</td>
<td>.20</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PPG</td>
<td>.02</td>
<td>.03</td>
<td>.00</td>
<td>-.05</td>
<td>.09</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FG%</td>
<td>-.32</td>
<td>-.29</td>
<td>.23</td>
<td>-.14</td>
<td>-.01</td>
<td>.71*</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SM</td>
<td>-.32</td>
<td>.02</td>
<td>.48*</td>
<td>-.20</td>
<td>-.41</td>
<td>.27</td>
<td>.46</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DFG%</td>
<td>.12</td>
<td>-.22</td>
<td>-.28</td>
<td>-.01</td>
<td>.43</td>
<td>.58*</td>
<td>.42</td>
<td>-.52*</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TO</td>
<td>.28</td>
<td>.19</td>
<td>.24</td>
<td>-.01</td>
<td>.12</td>
<td>.08</td>
<td>-.01</td>
<td>.46</td>
<td>-.34</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RB</td>
<td>-.44</td>
<td>-.11</td>
<td>.49*</td>
<td>-.31</td>
<td>-.53*</td>
<td>.19</td>
<td>.36</td>
<td>.80**</td>
<td>-.42</td>
<td>.02</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>GPA</td>
<td>.20</td>
<td>.07</td>
<td>.03</td>
<td>.01</td>
<td>-.25</td>
<td>-.17</td>
<td>-.23</td>
<td>-.03</td>
<td>-.22</td>
<td>-.12</td>
<td>.10</td>
<td>-</td>
</tr>
</tbody>
</table>

*Note.* TI = Training and Instruction; Dem = Democratic; Aut = Autocratic; SS = Social Support; PF = Positive Feedback; PPG = Points Per Game; FG% = Field Goal Percentage; SM = Scoring Margin; DFG% = Defensive Field Goal Percentage; TO = Turnover Margin; RB = Rebounding Margin.

*p<0.05

**p<0.01
Autocratic leadership style was positively related to higher scoring margins ($r = .48, p = .05$) and higher rebound margins ($r = .49, p = .05$). However, training and instruction was not significantly related to any positive performance. In fact, a non-significant trend suggested that training and instruction may relate to lower rebounding margins ($r = -.44, p = .08$).

**Hypothesis 2- Team GPA will not be related to leadership style.** A series of Pearson product moment correlations were used to test this hypothesis (see Table 2). As expected, there were no significant relationships between the LSS factors and team GPA.

**Hypothesis 3 – There will be gender differences in leadership behavior styles, and these differences might be influenced by cross-gender coaching (i.e., men coaching women’s teams).** A 2 (coach gender) x 2 (team gender) MANOVA was used to examine the effect of both team and coach gender on the use of leadership behavior styles. The results of the MANOVA for both coaches’ gender ($Wilks’ λ = .50, F [5, 9] = 1.82, p = .21, η² = .50$) and team gender ($Wilks’ λ = .83, F [5, 9] = 0.36, p = .86, η² = .17$) were not significant. The interaction between team and coach gender could not be examined due to no women coaching men’s teams in the current study. The descriptive statistics for each subscale of the LSS among male and female coaches are displayed in Table 3. The descriptive statistics for each subscale of the LSS among men and women’s teams are displayed in Table 4. The results showed no significant differences between coach or team gender for leadership behavior styles. The coaches for the men’s and women’s teams reported similar means in Training and Instruction, $4.21 (SD = .37)$ to $4.34 (SD = .30)$. Women’s coaches tended to be more Democratic than the men’s coaches with a mean of $3.02 (SD = .51)$ compared to $2.70 (SD = .47)$. Men’s coaches were more
Autocratic than women’s coaches 2.75 (SD= .58) to 2.90 (SD= .41). However, female coaches of women’s teams were more Autocratic than male coaches of women’s teams with a mean of 3.1 (SD= .47) compared to 2.7 (SD= .25). Male and female coaches produced similar means when it came to Social Support, 3.59 (SD=.30) to 3.64 (SD= .57). Positive Feedback means were higher with men’s coaches than women’s coaches, 4.25 (SD= .47) to 4.0 (SD= .46). However, males who coached women’s teams coached with more Positive Feedback on average than females coaching women’s teams, 4.25 (SD= .47) to 3.75 (SD= .25). Means and standard deviations for the LSS among cross-gender coaches are shown in Table 5.

Table 3

Means and Standard Deviations for LSS Among Male (n= 12) and Female (n= 4) Coaches.

<table>
<thead>
<tr>
<th>Means by Gender of Coach</th>
<th>Train</th>
<th>Dem</th>
<th>Auto</th>
<th>SocSupport</th>
<th>PosFeedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>Mean</td>
<td>4.26</td>
<td>2.82</td>
<td>2.73</td>
<td>3.67</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>.37</td>
<td>.43</td>
<td>.48</td>
<td>.36</td>
</tr>
<tr>
<td>Female</td>
<td>Mean</td>
<td>4.30</td>
<td>3.00</td>
<td>3.10</td>
<td>3.43</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>.25</td>
<td>.74</td>
<td>.47</td>
<td>.65</td>
</tr>
</tbody>
</table>

Note. Train = Training and Instruction; Dem = Democratic; Auto = Autocratic; SocSupport = Social Support; PosFeedback = Positive Feedback.
Table 4

Means and Standard Deviations for LSS among Men’s (n= 8) and Women’s (n= 8) Teams.

<table>
<thead>
<tr>
<th>Means by Team Gender</th>
<th>Auto</th>
<th>Dem</th>
<th>Train</th>
<th>SocSupport</th>
<th>PosFeedback</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men</strong></td>
<td><strong>Mean</strong></td>
<td>2.75</td>
<td>2.70</td>
<td>4.21</td>
<td>3.59</td>
</tr>
<tr>
<td></td>
<td><strong>SD</strong></td>
<td>.58</td>
<td>.47</td>
<td>.37</td>
<td>.30</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td><strong>Mean</strong></td>
<td>2.90</td>
<td>3.02</td>
<td>4.34</td>
<td>3.64</td>
</tr>
<tr>
<td></td>
<td><strong>SD</strong></td>
<td>.41</td>
<td>.51</td>
<td>.30</td>
<td>.57</td>
</tr>
</tbody>
</table>

**Note.** Auto = Autocratic; Dem = Democratic; Train = Training and Instruction; SocSupport = Social Support; PosFeedback = Positive Feedback.

Table 5

Means and Standard Deviations for LSS among Cross-Gender Coaches (n= 4).

<table>
<thead>
<tr>
<th>Means of Cross-Gender Coaches</th>
<th>Auto</th>
<th>Dem</th>
<th>Train</th>
<th>SocSupport</th>
<th>PosFeedback</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td>2.70</td>
<td>3.05</td>
<td>4.38</td>
<td>3.84</td>
<td>4.25</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>.25</td>
<td>.26</td>
<td>.38</td>
<td>.47</td>
<td>.52</td>
</tr>
</tbody>
</table>

**Note.** Auto = Autocratic; Dem = Democratic; Train = Training and Instruction; SocSupport = Social Support; PosFeedback = Positive Feedback.

**Exploratory Question 1: Does team gender affect the relationship between leadership style and team performance?** Separate Pearson product-moment correlations were conducted for men’s and women’s teams. A summary of the separate correlations for women’s and men’s teams is provided in Tables 6 and 7 located in Appendix E and F. Among men’s teams, results supported a positive correlation ($r = .79$, $p = .01$) between
training and instruction and defensive field goal percentage. There was also a positive correlation \((r = .71, p = .04)\) between positive feedback and defensive field goal %.

Among the women’s teams, the results supported a positive correlation \((r = .71, p = .04)\) between autocratic leadership and field goal percentage. There was also a non-significant trend \((r = .62, p = .09)\) between autocratic leadership and scoring margin among women’s teams. Training and instruction correlated with rebound margin \((r = -.64, p = .08)\), and positive feedback \((r = -.63, p = .09)\) also produced a non-significant trend for women’s teams.

**Exploratory Question 2: Which factors best predict overall team GPA?** A multiple regression including the predictors: Training and Instruction, Democratic, Autocratic, Social Support, Positive Feedback; and the outcome Team GPA was used to test Exploratory Question 2. In spite of accounting for 57% of the variance in GPA, the overall regression model was not significant \((p = .28)\). However, and surprisingly, positive feedback was a significant negative predictor of GPA, whereas training and instruction was a significant positive predictor of GPA. The results of the multiple regression are presented in Table 8.
Table 8

*Results of the Multiple Regression for Leadership Styles on Team GPA.*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>Std. Error</th>
<th>$\beta$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training and Instruction</td>
<td>1.32</td>
<td>.52</td>
<td>1.41</td>
<td>2.64</td>
<td>.03*</td>
</tr>
<tr>
<td>Democratic</td>
<td>.14</td>
<td>.291</td>
<td>.27</td>
<td>.50</td>
<td>.62</td>
</tr>
<tr>
<td>Autocratic</td>
<td>.14</td>
<td>.16</td>
<td>.27</td>
<td>.89</td>
<td>.40</td>
</tr>
<tr>
<td>Social Support</td>
<td>-.58</td>
<td>.39</td>
<td>-.88</td>
<td>-1.49</td>
<td>.18</td>
</tr>
<tr>
<td>Positive Feedback</td>
<td>-.73</td>
<td>.29</td>
<td>-1.00</td>
<td>-2.51</td>
<td>.04*</td>
</tr>
</tbody>
</table>

* $p<.05$

**Exploratory Question 3: Is team GPA influenced by coach or team gender?** A series of two independent samples t-test were used to investigate gender differences in overall team GPA. Table 9 shows the average team GPA for men’s and women’s coaches and for men’s and women’s teams. The results of the t-test showed a significant difference in overall team GPA between teams coached by men and women with a mean difference of -.38 ($p = .02$), $t = -2.71$. Average team GPA for teams coached by females ($n = 3$) was 3.14 ($SD = .09$). Average team GPA for those coached by males ($n = 8$) was 2.75 ($SD = .23$). The results did not support a significant difference in overall team GPA between men’s and women’s teams with an mean difference of -.23 ($p = .15$), $t = -1.55$. Average team GPA for the women’s teams ($n = 6$) was 2.97 ($SD = .26$). Average team GPA for the men’s teams ($n = 5$) was 2.73 ($SD = .23$).
**Table 9**

*Average Team GPA Based on Coaching Gender & Average Team GPA Based on Team Gender.*

<table>
<thead>
<tr>
<th>Team GPA</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coaching</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>8</td>
<td>2.75</td>
<td>.23</td>
<td>.08</td>
</tr>
<tr>
<td>Female</td>
<td>3</td>
<td>3.14</td>
<td>.09</td>
<td>.05</td>
</tr>
<tr>
<td>Team</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men’s</td>
<td>5</td>
<td>2.73</td>
<td>.23</td>
<td>.10</td>
</tr>
<tr>
<td>Women’s</td>
<td>6</td>
<td>2.97</td>
<td>.26</td>
<td>.10</td>
</tr>
</tbody>
</table>

**Exploratory Question 4: What are the interrelationships among the continuous variables in this study?** A series of Pearson product-moment correlations were calculated to investigate the interrelationships among continuous variables for all teams (n= 16), such as points per game, field goal %, scoring margin, defensive field goal %, turnover margin, and rebound margin (see Table 8). Field goal % was positively related to total years of coaching experience (r= .69, p=.01), and as expected, points per game (r= .71, p= .01). However, field goal % (r= -.54, p=.03) was negatively correlated with highest level of education completed. Scoring margin was positively related to both turnover margin (r= .46, p =.06) and rebound margin (r= .80, p= .01). Defensive field goal % was negatively correlated with scoring margin (r= -.52, p=.03). Finally, overall team GPA (r= -.63, p=.02) was negatively related to coaches age.
CHAPTER FOUR

Discussion

Introduction

This chapter provides a brief summary of the results of this study. The chapter also provides a general discussion related to the hypotheses and exploratory questions including how leadership style and gender related to performance outcomes. Team and coach gender are also discussed in relation to leadership behavior styles. Descriptive data such as age, gender, total number of years coaching basketball, coaching certifications, and previous course work in sports psychology are discussed in relation to leadership behavior style, performance outcomes, and overall team GPA. Implications for coaches and athletes are then presented. Finally, the limitations of the current study are addressed, and conclusion of the findings and relevance of the study is presented.

Summary of Results

The primary objective of this study was to determine the relationship between coaching leadership style and performance outcomes among men’s and women’s collegiate basketball coaches. The second objective of this study was to examine and determine any effects of gender on leadership behavior styles, especially in regard to men who coached women athletes. The third objective was to identify predictors of overall team GPA. Finally, interrelationships between continuous performance variables such as points per game, field goal %, scoring margin, defensive field goal %, turnover margin, and rebounding margin, were assessed.

The LSS (Chelladurai & Saleh, 1980), which measures leadership behaviors across five dimensions, was used to determine and measure the self-reported leadership
styles of coaches. It is important to note that the Autocratic factor of the LSS was not internally consistent. As mentioned in the methods section, any findings regarding the Autocratic factor should be interpreted cautiously. Training and Instruction leadership behavior was negatively correlated with total years coaching basketball \((p=.06)\) and rebound margin \((p=.08)\), but was not significantly related to any positive performance outcomes. In this study, coaches with more overall coaching experience had less prevalence of Training and Instruction leadership behavior, compared to coaches with less overall coaching experience. These results may have been due to the lack of importance older, more experienced coaches put on teaching fundamentals, especially those related to rebounding the basketball. Women’s coaches utilized more Training and Instruction leadership behavior than men’s coaches, whereas males who coached women’s teams used Training and Instruction more than the female coaches of women’s teams. The reason males who coached women’s teams concentrated more on teaching the overall fundamentals of the game, may be due to the overall skill level of their team.

As indicated by Chelladurai and Riemer (1998), the situation at hand often dictates the behavior demonstrated by the coach. For example, an experienced team with mostly upperclassman may not require as much training and instruction as would a younger, more inexperienced team. Likewise, a younger, more inexperienced team may require more positive feedback and social support than an older, more experienced team would require in order to be successful.

In contrast to what was expected, Democratic leadership behavior was not correlated with any of the descriptive data or performance outcomes. Men’s coaches exhibited far less Democratic leadership behavior than women’s coaches. Males who
coached women’s teams were equally Democratic as the female coaches of women’s teams.

‘Autocratic’ leadership behavior was positively correlated with scoring margin ($p = .05$), and rebounding margin ($p = .05$). Female coaches were far more Autocratic than male coaches, and female coaches of women’s teams were especially more Autocratic than male coaches of women’s teams. ‘Social Support’ showed no positive correlations with the descriptive data or performance outcomes. Males who coached women exhibited the highest amount of ‘Social Support’ leadership behavior, followed by men’s coaches and female coaches. Females utilized the least amount of ‘Social Support’ leadership behavior. ‘Positive Feedback’ leadership behavior was positively correlated to defensive field goal % ($p = .09$), yet significantly negatively correlated to rebounding margin ($p = .03$). Male coaches of both men’s and women’s teams utilized the same amount of ‘Positive Feedback’ leadership behavior, while female coaches exhibited a significantly less amount.

Overall, this study showed that there were no significant gender differences in leadership behavior styles. Female coaches exhibited more Training and Instruction, Democratic, and Autocratic leadership behavior than male coaches. Male coaches exhibited more Social Support, and Positive Feedback leadership behavior than females. Males who coached women’s teams exhibited more Training and Instruction, Democratic, Social Support, and Positive Feedback leadership behavior than female coaches of women’s teams. Female coaches of women’s teams were more Autocratic than males coaching women’s teams. Males coaching men’s teams utilized more
Autocratic leadership behavior, while utilizing Positive Feedback similarly to that of males who coached women’s teams.

Men’s teams (n= 5) had an average team GPA of 2.73 (SD= .23). Women’s teams (n= 6) had an overall team GPA of 2.97 (SD= .26). Male coaches (n= 8) had teams with an average GPA of 2.75 (SD= .23). Female coaches (n=3) had teams with an average GPA of 3.14 (SD= .09). Overall team GPA was negatively correlated with coaches age (p= .02). The results showed that the older the coach, the lower the overall team GPA would be for that team. Training and Instruction was positively correlated to team GPA (p=. 03). However, Positive Feedback was negatively correlated to team GPA (p=. .04).

Leadership Styles and Performance Outcomes

Training and Instruction leadership behavior was negatively correlated with total years coaching basketball and rebound margin. The current results are in contrast to a study by Jambor and Zhang (1997), which found that older, more experienced college coaches utilized Training and Instruction behavior at a significantly higher rate than did less experienced and younger junior high coaches. More experienced coaches tended to spend less time teaching skills and technique, concentrating more on other aspects of the game. This finding may have been a result of older coaches desires to utilize new schemes and strategies rather than concentrating on individual skills and techniques. Younger coaches might feel the pressure to develop a quality program and concentrate on individual player development rather than overall team strategy.

The results showed that older, more experienced coaches tend to not utilize Training and Instruction as much as that of their younger counterparts. The younger head
coaches may have been more obligated to take the necessary time needed to teach
detailed fundamentals and techniques than older head coaches for a number of reasons.
For example, younger coaches may have experienced more pressure to be successful in
order to retain their position, whereas older, more experienced coaches may not
necessarily have experienced that same pressure due to past success or long-term
contracts and job security.

Democratic leadership behavior was not significantly correlated with any
performance outcomes. This finding is surprising based on past research which indicated
female collegiate athletes overwhelmingly prefer democratic coaching behaviors
(Weinberg & Gould, 2003; Beam, Serwatka, & Wilson, 2004; Lam, 2007), and both male
and female college basketball players were found to be more satisfied with greater
perceptions of democratic behavior (Chelladurai, 1984; Schliesman, 1987). However,
athlete satisfaction does not always correlate into team success as was found by a study
done by Weiss & Friedrichs (1986). In contrast, Autocratic leadership behavior was
significantly and positively correlated with scoring margin, and rebounding margin.
These results suggest that those coaches who used autocratic leadership styles coached
more successful teams. These results support previous findings from Penman, Hastad,
and Cords (1974), who measured the degree of authoritarianism in interscholastic male
football and basketball head coaches, and then tested the degree of correlation between
particular personality characteristics and coaching success. They concluded that more
successful coaches (i.e., those with highest win-loss percentages) were more authoritarian
than less successful coaches. One reason for this may be because more mature athletes
prefer autocratic leadership (Weinberg & Gould, 2003). Another reason for this finding
may be due to a higher number of skilled athletes on teams coached by more authoritarian coaches compared to those coaches by less authoritarian coaches. Beam, Serwatka, and Wilson (2004) found that male college athletes preferred autocratic coaching behaviors, however, males participating in open sports such as basketball, baseball and football, preferred democratic coaching behaviors more than males participating in closed sports. Female athletes preferred democratic coaching behaviors and being involved in decision making. The study concluded that male and female student-athletes preferred different coaching behaviors, as do athletes in open and closed sports.

Social Support was not positively related with the descriptive data or performance outcomes. This finding is consistent with previous results from Weiss & Freidrichs (1986), who found a relationship between greater amounts of social support and poor team performance. It was concluded that loosing teams needed more social support from their coach for motivation and positive reinforcement. However, a recent study found a significant positive relationship between social support and winning percentage in 376 NCAA Division I and Division II male and female basketball coaches (Jacob, 2006). These results conflict with earlier studies and suggest that social support plays a significant role in team success.

The Effects of Gender

Since the early 1970’s, factors such as new opportunities, government equal rights legislation, the global women’s rights movement, the health and fitness movement, and increased media coverage of women in sports have accounted for dramatic increases in sport participation among girls and women (Coakley, 2004). Researchers have
concluded that male and female student-athletes prefer different coaching behaviors (Erle, 1981; Millard, 1996; Jambor & Zhang, 1997; Weinberg & Gould, 2003; Beam, et al., 2004). The results of the current study supported a positive correlation between training and instruction and defensive field goal percentage among men’s teams, as well as a positive correlation between positive feedback and defensive field goal percentage. The results confirm that coaches who take the time to teach proper defensive fundamentals and techniques, combined with positive feedback, produced overall better defensive teams.

Among women’s teams, the results supported a significant positive correlation between autocratic leadership and field goal percentage. However not significant, autocratic leadership was also positively correlated to scoring margin. These results are surprising due to past research suggesting female athletes prefer democratic leadership over autocratic leadership (Weinberg & Gould, 2003; Beam, Serwatka, & Wilson, 2004; Lam, 2007). These results show that even though female athletes prefer democratic leadership, autocratic coaches in fact coached the more successful women’s teams. The results endorse the idea that in order to be successful, and to get the most out of each athlete, coaches must push their team outside their preferred comfort zone.

This study also looked at gender differences in leadership styles. Women’s coaches were found to use more Training and Instruction leadership behavior than men’s coaches. These findings are inconsistent with results from Dubois (1981) and Millard (1990, 1996), both of whom reported that male coaches provided more technical instruction than female coaches. However, males who coached women’s teams in the current study were more likely to provide Training and Instruction than female coaches
of women’s teams, corresponding with Dubois and Millard’s findings. One possible reason for this finding may have been due to the fact that the male coaches felt women, who are traditionally less athletic than men, must be more fundamentally sound in order to be successful than their male counterparts.

Women’s coaches in this study exhibited more Democratic leadership behavior than men’s coaches. This finding was consistent with a recent study, which found that female college basketball players preferred a higher degree of democratic behavior than male college basketball players (Lam, 2007).

Male coaches in this study were more Autocratic than female coaches, however, female coaches of women’s teams were more Autocratic than male coaches of women’s teams. These findings are consistent with previous research that found male athletes preferred more autocratic leadership styles than females, although females preferred more democratic leadership styles than males (Weinberg & Gould, 2003). One reason the female coaches in this study contradict previous findings, and tend to be more Autocratic, may be due to previous coaching experiences. Former coaches that they played for or coached under as an assistant coach may have influenced the female coaches.

In the current study, males who coached female athletes exhibited the highest amount of Social Support leadership behavior, followed by men’s coaches of men’s teams and female coaches of women’s teams. These findings go against the findings of Jambor & Zhang (1997), who found female coaches scored significantly higher on Social Support than did males, indicating a greater tendency for helping athletes with personal problems and making sport part of the enjoyment of an athlete’s life. A possible explanation for this discrepancy again may be due to the coaching style of previous
coaches played for or coached under. Males who coached females may have felt the need to be more supportive than women who coached females in order to gain team trust and encourage athletes to confide in a male coach as they would a female coach.

**Team GPA**

As expected, there were no significant relationships between the LSS factors and team GPA. Although the results of the overall multiple regression were not significant ($p=.28$), surprisingly, a significant negative predictor of overall team GPA was Positive Feedback. Kostel (1993) found a significant positive relationship between Social Support from coaches and GPA. However, the current study did not support this finding. Training and Instruction leadership behavior was a significant predictor of overall team GPA.

The results of the present study supported a significant negative correlation between coaches’ age and overall team GPA. This finding may reflect the fact that younger coaches may be more inclined to supervise and be directly involved with the academic progress of their athletes older coaches in order to establish their program academically in the eyes of school administration. Participating head coaches may have delegated academic support responsibilities to assistant coaches, or other support staff, thus affecting their ability to directly influence team GPA. When comparing overall team GPA to coach or team gender, it was found that teams coached by females ($n=3$) had an average team GPA of 3.14 compared to that of the teams coached by males ($n=8$), 2.75.
Implications for Coaches and Athletes

As mentioned earlier, coaches play an integral role in the success of their athletes and athletic teams, influencing factors such as their athletes’ self-esteem (Barnett, Smoll, & Smith, 1992), skill learning (Chelladurai, 1984), mental development (Gould, Dieffenbach, & Moffett, 2002), sport performance satisfaction (Horn, 2002), as well as performance outcomes (Horne & Carron, 1985, Schliesman, 1987). Certainly, there is no one specific leadership style that is conducive to success, but rather a combination of these leadership behaviors. Based on the results of the current study, coaches and athletes will have a better understanding as to the importance of coaching leadership behaviors. The present research attempted to further examine the relationship between leadership behavior styles of head basketball coaches and overall team performance. The results revealed that coaches who utilize a more authoritarian leadership style produce more successful significant performance outcomes than those who don’t. For a new head coach, this information may be influential in developing an overall coaching style. For an experienced coach looking to improve, this information may shed some light on successful and unsuccessful approaches to the profession. For an administrator (i.e., Athletic Director), looking for the right coach to hire and lead a successful program, this information may be vital in choosing the right candidate for the job.

Athletes can use the results as a guide to choosing a school to attend based on the coach and the leadership style he or she implies. If an athlete performs best when given proper instruction combined with positive feedback, he or she may not want to go to a program in which the coach embraces an autocratic leadership style and puts little emphasis on individual instruction while spending more time on overall scheme and
strategy. Even though no correlations existed between gender and leadership behavior styles, there were differences in leadership styles of males and females who coached women’s teams.

Limitations

A limitation of the current study was the fact that all data were self-reported by each individual coach. Horne and Carron (1985) found that coaches rated themselves higher for the Training and Instruction and Positive Feedback leadership behaviors than was perceived by athletes. Consequently, the current sample’s LSS scores may have been inflated and not reflective of actual leadership behaviors. Future research should compare coaches’ perceptions to those of their athletes. Another limitation of this study was the small and relatively homogenous sample size. Only 16 coaches of an originally targeted 22 participated in the study. This may have resulted in a selection effect or good subjects effect. The sample was restricted to NCAA Division II coaches from the CCAA, which also may not reflect coaches from other divisions and locations. Moreover, only four women coaches were included in the current study. Purposeful inclusion of more female coaches would have allotted more robust gender comparisons.

Conclusion

Overall, the results of the current study are consistent with the findings of Lam (2007), which suggested that collegiate basketball coaches should use different coaching styles for male and female players. However, the results are also inconsistent with some researchers’ findings including Dubois (1981) and Millard (1990, 1996), both of whom reported that male coaches provided more technical instruction than female coaches. Although females prefer more democratic leadership styles than males (Weinberg &
Gould, 2003), results of this study proved female coaches to be more autocratic than male coaches, and especially more autocratic than males who coached women. Another inconsistency included the fact that male coaches provided more social support than female coaches which goes against the findings of Jambor & Zhang (1997), who found female coaches scored significantly higher on social support than did males.

Previous research has shown that male collegiate athletes prefer a more autocratic leadership style than female collegiate athletes, and females tend to prefer a more democratic leadership style as compared to males (Beam, Serwatka, & Wilson, 2004). The findings of the current study of NCAA Division II basketball coaches concluded that coaches who utilized autocratic leadership behavior produced teams with larger margins of victory and larger rebounding margins. Scoring margin and rebounding margin are considered reliable indicators of successful basketball teams. In fact, for the current sample, the league champion for both the men’s and women’s teams had the highest average scoring margin, and were both in the top four in rebounding margin.

There were no significant gender differences found among male and female coaches. These results may have been limited to the number of females who participated in the study (n= 4). Moreover, the interaction of coach gender and team gender could not be explored due to the nearly nonexistent nature of women coaching men in collegiate basketball. Women’s teams had a positive relationship with autocratic leadership, field goal percentage and scoring margin. These results showed that the more autocratic the women’s coach was, the more effective their teams were on offense. On the men’s side, defensive field goal percentage was positively related with training and instruction and positive feedback. Coaches who placed a large emphasis on teaching the fundamentals of
defense as well as their specific defensive strategies, coupled with constant positive encouragement, produced better defensive teams.

As hypothesized, there was no correlation between coaching leadership style and team GPA. Surprisingly, Positive Feedback was a negative predictor of overall team GPA. Coaches who were constantly offering positive feedback and encouragement to their athletes had teams with lower team GPA’s than those who didn’t offer as much positive feedback. Training and Instruction was positively related to team GPA. Coaches who had players with higher GPA’s apparently concentrated more on teaching the fundamentals of the game and overall strategy. This may have reflected the player’s cognitive ability to deal with more complex strategies.

Women’s teams had higher overall team GPA’s than men’s teams. Not only did women’s teams have higher overall team GPA’s than men’s teams, but female coaches also had teams with higher overall team GPA’s than male coaches. Again, these results may be limited due to the number of female coaches who participated in the study ($n= 4$) compared to the number of males who participated in the study ($n= 12$). That being said, the results suggested that female coaches might place more emphasis on education and classroom performance or recruit athletes with better academic records.

Finally, the results demonstrated several significant relationships among the continuous variables in the study overall and when comparing male and female coaches. Field goal percentage and points per game were positively related with total years of coaching experience. Experienced coaches were able to produce more offensively efficient teams than those with less coaching experience. Scoring margin was positively related to both turnover margin and rebound margin. Teams that forced a high number of
turnovers and out rebounded their opponents, converted those extra possessions into more scoring opportunities. Conversely, defensive field goal percentage was negatively related to scoring margin. Strong defensive teams relied heavily on their defense to win games, ultimately resulting in low scoring games.
REFERENCES


APPENDIX A

COACHING DEMOGRAPHICS QUESTIONNAIRE
Coaching Demographics Questionnaire

Please provide the requested information by selecting each of your answers. Your responses will be kept completely confidential.

Please select your institution:

- CPP
- CSUB
- CSUDH
- CSULA
- CSUMB
- CSUSB
- CPP
- CSUC
- CSUS
- HSU
- SFSU
- SSU
- UCSD

Please select which team you currently coach:

- Men’s
- Women’s

What is your race/ethnicity?

- African-American/Black-American
- Asian-American
- Caucasian/White/European-American
- Cuban/Cuban-American
- Hispanic/Latino(a)-American
- Indian/Indian-American
- Mexican/Mexican-American/Chicano(a)
- Native American
- Pacific Islander American
- Puerto Rican American
- Other (please specify:____________________)

Approximately how many years have you been the HEAD COACH at your institution?

- 0-1 year
- 4-5 years
- 8+ years
- 2-3 years
- 6-7 years

Approximately how many years have you been COACHING BASKETBALL (in any position, at any level)?

- 1-3 years
- 7-9 years
- 13+ years
- 4-6 years
- 10-12 years
Highest level of education that you have completed:

- High School
- Some College/Technical School/Associate’s Degree
- College
- Professional/Graduate School (Master’s level)
- Professional/Graduate School (Doctoral level)

Current Coaching Certifications (Select all that apply):

- NABC
- WBCA
- None
- Other______________________________________________________

Have you had any additional course work in the areas of sport science or psychology?

- Yes
- No

Please place your answers to the following statements in the blanks provided.

Highest national team ranking at current institution during tenure _____
Number of conference titles at current school during tenure _____
Number of NCAA appearances as a head coach _____
Please indicate your age _____

Thank you for completing the questionnaire. Please click the “NEXT” button.
APPENDIX B

LEADERSHIP SCALE FOR SPORTS
(COACH SELF-PERCEPTION VERSION)
The coach self-perception version of the Leadership Scale for Sport is listed in the following pages. The dimensions of coaching leadership behaviors are as follows:

**Training and instruction behaviors.** Coaching behaviors aimed at improving the athletes’ performance by emphasizing and facilitating hard and strenuous training; instructing them in the skills, techniques and tactics of the sport; clarifying the relationship among the members; and by structuring and coordinating the members’ activities.

**Democratic leadership behaviors.** Coaching behavior which allows greater participation by the athletes in decisions pertaining to group goals, practice methods, and game tactics and strategies.

**Autocratic leadership behaviors.** Coaching behavior which involves independent decision-making and stresses personal authority.

**Social support leadership behaviors.** Coaching behavior characterized by a concern for the welfare of individual athletes, positive group atmosphere, and warm interpersonal relations with members.

**Positive feedback leadership behaviors.** Coaching behavior which reinforces an athlete by recognizing and rewarding good performance.
Leadership Scale for Sport  
*(Coach’s Perception of Own Behavior)*

Each of the following statements describe a specific behavior that a coach may exhibit. For each statement there are five alternatives:

1. **ALWAYS**  
2. **OFTEN** (about 75% of the time)  
3. **OCCASIONALLY** (50% of the time)  
4. **SELDOM** (about 25% of the time)  
5. **NEVER**

For each item, please check the appropriate response indicating which behavior best represents your leadership style in basketball. There are no right or wrong answers. Your first response is most likely the best response. Your spontaneous and honest responses are important for the success of the study. Thank you for participating!

<table>
<thead>
<tr>
<th>As a basketball coach I:</th>
<th>Never</th>
<th>Seldom</th>
<th>Occasionally</th>
<th>Often</th>
<th>Always</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. See to it that athletes work to capacity.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2. Ask for the opinion of the athletes on strategies for specific competitions.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>3. Help athletes with their personal problems.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>4. Compliment an athlete for good performance in front of others.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>5. Explain to each athlete the techniques and tactics of the sport.</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>6. Plan relatively independent of the athletes.</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>7. Help members of the group settle their conflicts.</td>
<td>0</td>
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<td>8. Pay special attention to correcting athletes’ mistakes.</td>
<td>0</td>
<td>0</td>
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<tr>
<td>9. Get group approval on important matters before going ahead.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
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<tr>
<td>10. Tell an athlete when the athlete does a particularly good job.</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>11. Make sure that the coach’s function in the team is understood by all athletes.</td>
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<tr>
<td>12. Do not explain my actions.</td>
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<tr>
<td>13. Look out for the personal welfare of the athletes.</td>
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<tr>
<td>14. Instruct every athlete individually in the skills of the sport.</td>
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<tr>
<td>15. Let the athletes share in the decision-making.</td>
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<tr>
<td>16. See that an athlete is rewarded for a good performance.</td>
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<td>17. Figure ahead on what should be done.</td>
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<td>18. Encourage athletes to make suggestions for ways to conduct practices.</td>
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<td>19. Do personal favors for the athletes.</td>
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<td>20. Explain to every athlete what should be done and what should not be done.</td>
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<td>21. Let the athletes set their own goals.</td>
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<tr>
<td>22. Express any affection felt for the athletes.</td>
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<td>23. Expect every athlete to carry out one’s assignment to the last detail.</td>
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<td>24. Let the athletes try their own way even if they make mistakes.</td>
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<td>25. Encourage the athlete to confide in the coach.</td>
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<td>26. Point out each athlete’s strengths and weaknesses.</td>
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<td>27. Refuse to compromise on a point.</td>
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<td>28. Express appreciation when an athlete performs well.</td>
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<td>29. Give specific instructions to each athlete on what should be done in every situation.</td>
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<td>30. Ask for the opinion of the athletes on important coaching matters.</td>
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<td></td>
<td>31. Encourage close and informal relations with athletes.</td>
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<td>32. See to it that the athletes’ efforts are coordinated.</td>
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<td>33. Let the athletes work at their own speed.</td>
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<td>34. Keep aloof from the athletes.</td>
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<td>35. Explain how each athlete’s contribution fits into the total picture.</td>
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<td>36. Invite the athletes home.</td>
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<td>37. Give credit when it is due.</td>
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<td>38. Specify in detail what is expected of athletes.</td>
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<td>39. Let the athletes decide on plays to be used in a game.</td>
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<td>40. Speak in a manner which discourages questions.</td>
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APPENDIX C

COACH CONSENT FORM
This study will examine the leadership styles of Head Basketball Coaches at Division II programs. It will also examine the relationship between leadership styles and gender to performance outcomes and academic progress. All data collection will be conducted by the lead investigator, Bryce Newell, and will be supervised by Dr. Anthony P. Kontos.

Procedures include:

*Coaches’ Questionnaire:* You will be asked to complete a demographics questionnaire that consists of seven questions that deal with coaching experience and characteristics.

*Leadership Questionnaire:* You will also be asked to complete a series of 40 questions about your leadership behaviors as a head coach. The total amount of time needed to complete both surveys will be 15 minutes. Your participation in this study will be conducted online using a secure website. In addition to these data, the study will include public data from the CCAA website about your team’s performance during the 2006-07 season. All data are anonymous and confidential. Only group data and summary statistics will be reported.

Risks and/or discomforts:

There are no foreseen risks in participating in this study.

Benefits:

I understand that at the end of this study I will receive a summary of the results and group data.

This information was explained to me by:

Bryce Newell

I understand that he or Dr. Kontos will answer any questions I may have concerning this study at any time by calling the phone number below. I also understand that my participation in this study is entirely voluntary, that I must be 18 years old or older, and that I may decline to enter the study or may withdraw at any time without penalty. I also understand that the investigator may terminate my participation in the study at any time.

Contact information for questions about the study:
Dr. Anthony P. Kontos 707-826-3533

I understand I am not receiving any compensation for participating in this study.

☐ Yes, I agree to participate in the study
☐ No, I decline to participate in the study
APPENDIX D

COMPLIANCE OFFICER CONSENT FORM
This study will examine the leadership styles of Head Basketball Coaches at Division II programs. It will also examine the relationship between leadership styles and gender to performance outcomes and academic progress. All data collection will be conducted by the lead investigator, Bryce Newell, and will be supervised by Dr. Anthony P. Kontos. Overall team GPA for both the Men’s and Women’s Basketball Teams is being requested.

Procedures include:

*Coaches’ Questionnaire:* Coaches are to be asked to complete a demographics questionnaire that consists of seven questions that deal with coaching experience and characteristics.

*Leadership Questionnaire:* Coaches are also asked to complete a series of 40 questions about your leadership behaviors as a head coach. The total amount of time needed to complete both surveys will be 15 minutes.

*Overall Team GPA:* Data is to be collected through each participating institutions Compliance Director, or Athletic Director. All data are anonymous and confidential. Only group data and summary statistics will be reported.

Risks and/or discomforts:

There are no foreseen risks in participating in this study.

Benefits:

There are no foreseen benefits in participating in this study.

This information was explained to me by:

Bryce Newell

I understand that he or Dr. Kontos will answer any questions I may have concerning this study at any time by calling the phone number below. I also understand that divulging overall team GPA is entirely voluntary. I also understand that the information will remain confidential and secure, and at no time be connected to the institution.

Contact information for questions about the study:

Dr. Anthony P. Kontos 707-826-3533

I understand I am not receiving any compensation for divulging information for this study.

☐ Yes, I agree to divulge overall team GPA

☐ No, I decline to divulge overall team GPA
APPENDIX E

PEARSON CORRELATIONS AMONG LEADERSHIP BEHAVIORS AND PERFORMANCE OUTCOMES FOR MEN’S TEAMS (N = 8)
Table 6

*Pearson Correlations among Leadership Behaviors and Performance Outcomes for Men’s Teams (N= 8).*

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*Note. TI = Training and Instruction; Dem = Democratic; Aut = Autocratic; SS = Social Support; PF = Positive Feedback; PPG = Points Per Game; FG% = Field Goal Percentage; SM = Scoring Margin; DFG% = Defensive Field Goal Percentage; TO = Turnover Margin; RB = Rebounding Margin.*

*p<0.05

**p<0.01
APPENDIX F

PEARSON CORRELATIONS AMONG LEADERSHIP BEHAVIORS AND PERFORMANCE OUTCOMES FOR WOMEN’S TEAMS (N = 8)
Table 7

*Pearson Correlations among Leadership Behaviors and Performance Outcomes for Women’s Teams (N= 8).*

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*Note.* TI = Training and Instruction; Dem = Democratic; Aut = Autocratic; SS = Social Support; PF = Positive Feedback; PPG = Points Per Game; FG% = Field Goal Percentage; SM = Scoring Margin; DFG% = Defensive Field Goal Percentage; TO = Turnover Margin; RB = Rebounding Margin.

*p<0.05

**p<0.01
APPENDIX G

MEN’S CCAA STATISTICS
<table>
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<th>League Rank</th>
<th>PPG</th>
<th>Scoring Margin</th>
<th>FG %</th>
<th>Def FG %</th>
<th>Rebound Margin</th>
<th>Turnover Margin</th>
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<td>1. HSU</td>
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<td>7. CSUS</td>
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<td>.487</td>
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*Bold Indicates League Leader*
APPENDIX H

WOMEN’S CCAA STATISTICS
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<th>Def FG %</th>
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</table>

* Bold Indicates League Leader

APPENDIX I
Bryce Newell  
1 Harpst Street  
Arcata, CA 95521  

Dear Coach,  

I would like to personally thank you for participating in my study. Because of your participation, the study was a success and the results shall prove to be extremely
beneficial to all involved within the coaching profession. Results of the study will be made available to you in a timely manner. Have a tremendous summer and best of luck to you and your team in the upcoming season!

Sincerely,

Bryce Newell
Graduate Assistant Coach
Humboldt State University