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Preferred Leadership of NCAA Division I and II Intercollegiate Student-Athletes

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**Preferred Leadership of NCAA Division I and II
Intercollegiate Student-Athletes**

Joel W. Beam

August, 2001

A dissertation submitted to the Doctoral Faculty of the College of Education
and Human Services in partial fulfillment of the requirements for the degree of

Doctor of Education

University of North Florida

College of Education and Human Services

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DEDICATION

This dissertation is dedicated to my family. Without their support, I would not have been able to achieve my educational goals.

To the student-athletes I have been privileged to work with during the past 19 years, few people can comprehend your commitment to sport. I dedicate this project to you and future intercollegiate student-athletes to improve the understanding of sport leadership behavior.

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ABSTRACT

The purpose of this study was to examine the differences of student-athletes' preferred leadership behavior for their coaches based on gender, competition level, task dependence, and task variability. Four hundred and eight male and female student-athletes from four NCAA Division I and six Division II universities expressed their preferences using the Revised Leadership Scale for Sport (RLSS) (Zhang, Jensen, & Mann, 1997). The preference version of the RLSS included six behavior dimensions, autocratic, democratic, positive feedback, situational consideration, social support, and training and instruction behaviors.

A split-plot ANOVA was performed on the individual preference scores grouped by gender, competition level, task dependence, and task variability for the six dimensions of coaching behavior. The ANOVA also computed interactions. Fisher's LSDs were performed on all significant interactions. Among genders, the ANOVA demonstrated a significant gender by level interaction for democratic behavior. Fisher's LSD failed to detect any significant interactions. Among competition levels, the ANOVA demonstrated a significant task dependence by level interaction for autocratic behavior. Division I independent sport student-athletes had significantly higher preferences than Division II independent sport student-athletes. A significant task variability by level interaction revealed Division I open sport student-athletes had significantly greater preferences for autocratic behavior than did Division II open sport student-athletes. The results also demonstrated a significant task dependence by level interaction for democratic behavior. Division I independent sport student-athletes showed significantly greater preferences for democratic behavior than Division I interdependent sport student-athletes and Division II

independent sport student-athletes showed significantly greater preferences than did Division II interdependent sport student-athletes. Independent sport student-athletes, regardless of gender or competition level, showed significantly greater preferences for democratic, positive feedback, situational consideration, and social support behaviors. The results also indicated a significant task variability by level interaction for autocratic behavior. Division I open sport student-athletes had significantly greater preferences for these coaching behaviors than Division I closed sport student-athletes. Open sport student-athletes, regardless of gender or competition level, had significantly greater preferences for democratic, positive feedback, and social support behaviors.

The results demonstrate support for a portion of the multidimensional model of leadership (Chelladurai, 1979; 1990) with differences in behavior preferences based on student-athlete characteristics of competition level, task dependence, and task variability. The results may aid in the evaluation of coaching behavior and coaching method and in defining training preparation programs that would enhance the congruence between student-athlete behavior preferences and actual coaching behaviors. The results suggest the use of the multidimensional model of leadership and the related instruments for future investigations of sport leadership behavior.

CHAPTER 1

INTRODUCTION TO THE STUDY

Sport leadership behavior is frequently discussed yet may be the least understood aspect of coaching (Case, 1987), perhaps because of sporadic and peripheral research efforts (Chelladurai, 1984). The limited investigations conducted on coaching leadership behaviors and student-athletes have produced various and at times conflicting findings. To date, these efforts have concentrated on coaches, focusing on their personality traits and individual behaviors, as well as the assessment of their behavior styles.

The student-athlete represents an equally important member of the sport leadership dyad, but has largely been ignored in the research. This is unfortunate because investigations determining student-athlete preferences for and perceptions of coaching behavior may lead to uncovering important leadership variables in sport. The types of leadership behavior styles student-athletes prefer from their coach and whether differences in these preferences exist between student-athletes engaged in team versus individual sports, male versus female student-athletes, or student-athletes participating at different competition levels appear appropriate areas of investigations.

Chelladurai (1980), addressing the need for sport leadership investigations and the need to understand the role of the athlete in these investigations, proposed the multidimensional model of leadership. Based upon contingency and situational leadership theories, the model has applications in the sport environment and implications for coaches and student-athletes. Synthesized in the multidimensional model of leadership, contingency theory (Fiedler, 1967), situational leadership theory (Hersey & Blanchard, 1977), path-goal theory (House, 1971), and adaptive-reactive leadership theory (Osborne

& Hunt, 1975) explore how varying situations and the environment influence leader effectiveness.

The multidimensional model of leadership focuses upon three states of leader behavior. Actual coaching behavior describes what is done or can be done to influence student-athletes. Required behavior describes behavior prescribed by the situation. Preferred behavior describes the type of behavior student-athletes would like from their coaches. The basic tenet of the model states student-athlete performance and satisfaction are functions of the congruence between the three types of leader behavior. A second tenet of the model is that antecedents of situational, leader, and student-athlete characteristics may affect these coaching leadership behaviors.

This study examined the preferred leadership behavior of National Collegiate Athletic Association (NCAA) Division I and Division II intercollegiate student-athletes. The study also examined whether the specific characteristics of gender, competition level, task dependence, and task variability could predict student-athletes' preferences for leadership behavior.

The review of literature for this study covers the theoretical background of sport leadership and in particular the multidimensional model of leadership. It also covers the assessment of student-athlete behavior preferences with the Leadership Scale for Sport and the Revised Leadership Scale for Sport and the relationship of these preferences to student-athlete attributes of gender, competition level, task dependence, and task variability.

Past applications of the multidimensional model of leadership and its associated scales to the intercollegiate setting have yielded some interesting but incomplete results.

These results have demonstrated differences based on student-athletes' gender and type of sport. However, the relationship between preferred leadership behavior and competition level has to date received limited investigation.

Investigations using other models of leadership behavior have generated findings that have more limited generalizations to NCAA intercollegiate student-athletes. This is the result of the fact that most of these studies have used assessment instruments from the business and industry settings and have involved non-NCAA student-athletes.

In contrast, research based on the multidimensional model of leadership and use of the related instruments may yield findings that can be generalized to NCAA intercollegiate student-athletes. These investigations may lead to an improved understanding of coaching behaviors and to the enhancement of student-athlete performance and satisfaction.

Significance of the Research

Investigations with the multidimensional model of leadership and leadership theories have examined coaches and student-athletes. However, these studies have not provided conclusive support for the theories underlying the model. In an effort to further examine the model, this study extends previous research findings on the multidimensional model of leadership. In particular, the current study examines whether there are differences in student-athlete preferences for leadership behavior that are attributable to the variables of gender, competition level, task dependence, and task variability.

The results of this study could help better predict student-athletes' preferred leadership behavior of their coaches. The ability to predict behavior preferences based on

student-athletes' gender, competition level, task dependence, and task variability would enable coaches to better understand their student-athletes' preferences. By modifying their own behavior accordingly, coaches could build congruence between preferred and actual behaviors. If the multidimensional model of leadership is correct, this improved congruence between actual and preferred behaviors should result in improved student-athlete performance and satisfaction.

Coaching method and training programs could also benefit from the research, with the findings influencing changes in curriculum and instruction. Coaching curriculums currently stress sport method and technique, with little emphasis on leadership theory. The effectiveness of the leader in the sport environment is a function of both situational and individual characteristics (Gibb, 1969), reflected in the multidimensional model of leadership. Curriculum changes could reflect the multidimensional characteristic approach to form a new leadership paradigm, improving the congruence between student-athletes' preferred and coaches' actual behavior.

During their revision of the LSS, Zhang, Jensen, and Mann (1997) noted that there has been little to no research on differences in preferred leadership behaviors of student-athletes that may be attributable to competition level. These researchers point to the need to study this variable with particular attention given to NCAA student-athletes. The NCAA divides member institutions into three competition level categories: Division I, Division II, and Division III. Differences between the divisions may affect student-athletes' preferences for coaching leadership behavior. The NCAA (NCAA Division I and II Manual, 1999) requires each division to adhere to different standards in regards to

sports sponsorship, scheduling, and financial aid. These standards are discussed in the review of literature and listed in Appendix A.

Significant differences in the findings may be generalized to a large population of intercollegiate student-athletes. The sport environment is unique in various ways and different than the areas of business and industry, requiring a sport specific assessment instrument. Theory, measurement, and significant results in the athletic setting will provide for generalizations to similar NCAA intercollegiate student-athletes.

The findings of this study also provide data for future investigations of the basic tenet of the multidimensional model of leadership. These future studies could determine if greater congruence between actual and required leader behaviors and leader behavior preferred by the student-athlete leads to improved student-athlete performance and satisfaction.

Statement of Purpose

As stated above, the purpose of this study was to examine the differences of student-athletes' preferred leadership behavior of their coaches based on student-athletes' gender, competition level, and the task dependence and task variability of the student-athletes' chosen sport. If differences occurred, this study determined which group of student-athletes preferred which type of leadership behavior.

Four research questions guided the study. The questions were

1. Do the coach leadership behavior preferences of student-athletes differ based on gender?
2. Do the coach leadership behavior preferences of student-athletes differ based on competition levels?

3. Do the coach leadership behavior preferences of student-athletes who participate in interdependent sports differ from those who participate in independent sports?
4. Do the coach leadership behavior preferences of student-athletes who participate in open sports differ from those who participate in closed sports?

To meet the purpose of the study, the dependent variables for this study were student-athlete preference scores on each of the six coaching leadership behavior dimensions, as measured by the RLSS (Chelladurai & Saleh, 1980; Zhang, Jensen, & Mann, 1997). The leadership behavior dimensions include autocratic, democratic, positive feedback, situational consideration, social support, and training and instruction behaviors.

Autocratic leader behavior refers to the extent a coach stresses her or his authority and limits involvement of student-athletes in decisions. Democratic leader behavior reflects the amount of participation a coach permits student-athletes in decision-making. Positive feedback leader behavior refers to the extent a coach expresses appreciation and compliments student-athletes for their performance and contribution. Situational consideration leader behavior refers to the degree to which a coach reflects situational factors in her or his behavior. Social support leader behavior reflects the extent coaches involve themselves in satisfying the interpersonal needs of student-athletes. Training and instruction leader behaviors refer to the extent coaches involve themselves in the improvement of the physical performance level of the student-athletes.

The independent variables for this study were gender, competition level, task dependence, and task variability. The study sought to determine whether there were differences in preferred leadership behavior attributable to these variables.

To understand the meaning of this study, it is necessary to operationally define three of the independent variables: competition level, task dependence, and task variability. The National Collegiate Athletic Association (NCAA) is a diverse, voluntary, unincorporated Association of four-year colleges and universities, conferences, affiliated associations and other educational institutions (NCAA Division II Manual, 1999). Each active and provisional NCAA member institution is designated as a member of Division I, Division II or Division III for certain legislative and competitive purposes (NCAA Division II Manual, 1999). For this study, competition level was defined based on the NCAA division rankings of the universities from which the student-athletes were drawn. The study included student-athletes from both Division I and Division II schools. The exclusion of Division III in this study occurred because of limited access by the researcher to these institutions. NCAA requirements for Division I and Division II schools appear in Appendix A.

Chelladurai (1979) classified sports according to task dependence and task variability and these categories were utilized in this study. Task dependence refers to the degree of interaction an athlete has with others during the execution of the task. A sport in which successful completion of the task relies upon efficient interaction among teammates is termed interdependent. A sport in which successful completion of the task does not require interaction among teammates is termed independent.

Task variability refers to the degree the environment changes and the extent to which the athlete responds to these changes. High task variability requires an open form of behavior in which skills are used to respond to objects that move in space and require spatial/temporal adjustment on the part of the student-athlete. Low task variability

requires a closed form of behavior in which skills are executed in an environment where the stimuli are relatively stable, static and unchanging.

Examples of both individual and team sports classified based on task dependence and task variability appear in Figure 1.

		Variability	
		Open	Closed
Dependence	Independent	Tennis	Track/Cross Country Golf
	Interdependent	Baseball Basketball Soccer Volleyball	Rowing Synchronized Swimming

Figure 1. Classification of Sports.

For this study, there were no student-athletes involved in interdependent/closed sports. The absence of interdependent/closed sports in the sample occurred because the sample institutions did not sponsor sports such as rowing and synchronized swimming.

Research Design

This study utilized a causal comparative design to answer the four research questions. The pre-defined groups consisted of the NCAA intercollegiate student-athletes at the participating universities. The dependent variables of the study were the individual student-athlete preference scores for the six dimensions of coaching behavior. The independent variables were gender, competition level, task dependence, and task variability.

Sample

The participants in this study consisted of student-athletes from four NCAA Division I universities and six NCAA Division II universities in the southeastern United States. The participants included male respondents chosen from athletic rosters in baseball, basketball, golf, tennis, and track/cross country. Female respondents were chosen from athletic rosters in basketball, soccer, tennis, track/cross country, and volleyball.

Research Instrument

The Revised Leadership Scale for Sport (Zhang, Jensen, & Mann, 1997) was utilized to measure student-athletes' preferred leadership behavior of their coaches. The RLSS as used in this study consists of 60 leadership behavior preference items and five demographic items. The 60 leadership items cover the behavior dimensions of autocratic, democratic, positive feedback, situational consideration, social support, and training and instruction behaviors. Participants indicated coaching leadership behavior preferences by marking the appropriate response on a Scantron scoring sheet. Responses to the 60 leadership items were made on a five-point Likert scale.

Data Analysis

The data for this study underwent quantitative analyses. The Scantron scoring sheets underwent a manual scan with OMR procedures. The data were then transferred to the Statistical Package for Social Sciences 10.0 (SPSS) for statistical analyses. Individual student-athlete preference scores for the six dimensions of coaching behavior were derived by summing the scores for all of the items in a particular dimension and then dividing by the number of items in that subscale (Chelladurai & Saleh, 1980).

To determine whether there were differences among the variables of gender, competition level, task dependence, and task variability, a split-plot analysis of variance (ANOVA) was computed. The ANOVA also computed gender by level, task dependence by level, and task variability by level interactions. A Fisher's LSD was performed for all significant interactions.

Delimitations and Limitations

The delimitations of this study were as follows: (a) subjects were college age males and females, ranging from 18-25 years of age; (b) subjects were included on the official team roster in their sport; (c) subjects were full-time students, currently registered for at least twelve class credit hours during the semester; and (d) the student-athletes in this study were an experimentally accessible population.

Generalizations cannot be made regarding interdependent/closed sports because of the absence of these sports in many institutions. Results from this study may only be generalized to other populations having similar intercollegiate student-athletes. Situational variables such as institutional size, sport popularity, and sport environment might have acted as confounding variables in the study.

Organization of the Study

The study is organized into five chapters. Chapter One introduced the study: the research problem, the background and rationale for the study, significance of the research, statement of purpose, research questions, definitions of the variables studied, research design, sample studied, research instrument, data analysis, and delimitations and limitations.

Chapter Two reviews related literature. The literature review begins with a discussion of investigations based on personality traits and leadership behavior of coaches followed by a discussion of situational coaching leadership. The multidimensional model of leadership and student-athlete attributes of gender, competition level, task dependence, and task variability are discussed. A discussion of the assessment of preferred leadership behavior with the LSS and RLSS concludes the review.

Chapter Three describes the methods and procedures used in the study. The chapter opens with an introduction to the research design. Following are the research instrument, data collection, and study participants. A review of the study's research questions and a discussion of the data analysis procedures conclude the chapter.

Chapter Four presents a detailed analysis of the data. Included are the design and analysis overview and findings for each of the behavior subscales. A summary of the data analysis in relation to the research questions concludes the chapter.

Chapter Five summarizes the study, discusses the study's findings, draws conclusions, and makes recommendations for future practice and research based on the data analysis.

CHAPTER 2

REVIEW OF THE LITERATURE

This review of literature discusses investigations of sport leadership. The first approaches used in these investigations centered on personality traits of coaches, leadership behavior of coaches, and situational coaching leadership. Evolving from these approaches, the multidimensional model of leadership developed as a synthesis of contingency and situational theories. A discussion of student-athlete attributes of gender, competition level, task dependence, and task variability follows. The assessment of student-athletes' preferred leadership behavior with the LSS and RLSS concludes the review. Throughout the review, leader and coach can be used interchangeably, as can member and student-athlete.

Review of Sport Leadership Literature

Early research efforts in sport leadership focused on the investigation of personality traits of coaches. Later attempts concentrated on determining specific leadership behaviors of coaches. In contrast to these earlier studies, situational coaching leadership attempted to integrate both behavioral and situational factors of leadership.

Studies on personality traits focused on innate characteristics of the coach. Researchers based these studies on the assumptions that leadership qualities were innate and successful coaches were born with certain traits associated with leader effectiveness (Zhang, Jensen, & Mann, 1997). However, the researchers investigating personality traits failed to identify any universal leadership effectiveness traits (Hendry, 1972; Schriesheim, Tolliver, & Behling, 1980).

Hendry (1972) examined coaches in an attempt to identify a stereotypic trait pattern in dealings with athletes. The personality trait of dominance appeared as an advantage and disadvantage for a coach. A dominant, aggressive coach might be able to make rapid decisions during play, which were vital to team success. The dominant coach might also drive athletes towards higher physical achievement levels. In contrast, the coaching traits of dominance and aggression might lower an athlete's desire to participate when the athlete could not identify with this type of behavior. Schriesheim, Tolliver, and Behling (1980) reviewed personality trait approaches and suggested the findings were not consistent across the studies. The personality trait theory ignored consideration of coaching behaviors, situational factors, and student-athlete needs.

Later, researchers examined the leadership behavior of coaches in the attempt to identify specific behaviors of effective leadership. These researchers assumed that coaching behaviors could be learned and reinforced (Murray, 1986). The development of interpersonal skills, motivation and goal-setting techniques, skill and tactic techniques, and understanding power and influence might be developed and reinforced through team success and positive growth of the athletes (Murray, 1986). Although certain coaching behaviors might be associated with successful performance outcomes in specific circumstances (Fiedler, 1969), Singer (1972) and Weiss and Friedrichs (1986) noted the lack of consideration of situational factors in these behavioral theories.

Fiedler (1969) suggested the autocratic coach was task-oriented and directed team members towards achievement. The goal of the autocratic coach was to win. The democratic coach was group-oriented and provided structure for group participation in decision-making. Winning and the method of achievement were important to the coach.

Fiedler (1969) and Singer (1972) proposed that no particular style of leadership or type of person could represent effective leadership under all conditions. Situational differences such as levels of competition and type of sport might influence leadership behavior (Weiss & Friedrichs, 1986).

Situational coaching leadership focused upon both behavioral and situational factors of effective leadership. Situational factors such as the leader's personality, task requirements, and the needs, attitudes, and expectations of members influenced the effectiveness of the leader. This dual factor approach was evident in leadership models such as the contingency theory (Fiedler, 1967), the situational leadership theory (Hersey & Blanchard, 1977), the path-goal theory (House, 1971), and the adaptive-reactive leadership theory (Osborne & Hunt, 1975). Chelladurai and Carron (1983) emphasized that these approaches acknowledged the member as a significant element influencing leadership and its effectiveness.

Fiedler's (1967) contingency theory proposed that effective group performance depended upon the match between the personality of the leader and the situation. Personality orientation of the leader centered on a task or interpersonal style. Situational factors that influence leader effectiveness included leader-member relations, degree of task structure, and power-position of the leader. Leader-member relations referred to the quality of the relationship between the leader and member. A strong relationship would result in greater leader influence upon members. Task structure referred to how clearly the goals and methods to achieve the goals were stated and understood. As tasks become more structured for the group, the leader could effectively influence the members. Power-position of the leader referred to control over rewards and sanctions, authority over group

members, and support provided from the organization. The more power possessed by the leader, the more influence with members.

Hersey and Blanchard's (1977) situational leadership theory postulated that leaders should vary their behaviors according to the member's maturity. Hersey and Blanchard (1977) classified leader behaviors along two dimensions: initiating structure and consideration. Initiating structure, termed task behavior, described one-way communication by the leader in providing direction for the member. Consideration, termed relationship behavior, described two-way communication by the leader in providing social-emotional support for the member. Member maturity or readiness referred to the ability and willingness of members to take responsibility for directing their behavior in relation to a specific task.

As the maturity level of the member moved from 1) low, to 2) moderately low, to 3) moderately high, to 4) high, Hersey and Blanchard (1977) suggested that the orientation of the leader's behavior should change from 1) high task/low relationship, to 2) high task/high relationship, to 3) low task/high relationship, and finally to 4) low task/low relationship. High task/low relationship leader behavior referred to one-way communication, "telling," to define the roles of members. High task/high relationship leader behavior included defining of member roles and two-way communication to provide social-emotional support to get members to psychologically "buy into" decisions. Low task/high relationship leader behavior referred to leader and member sharing in decision making, "participating" with facilitating leader behavior. Low task/low relationship leader behavior referred to the leader "delegating" responsibilities to members.

The path-goal theory of leadership (House, 1971) suggested that performance and satisfaction of group members was highly influenced by whether or not leader behaviors were appropriate to member's needs and desires, and characteristics of the task. The leader's functions were to provide coaching, guidance and personal support to members if these were lacking in the environment. The path-goal theory proposed that where tasks were ambiguous, varied, and interdependent, group members preferred a highly structured regime. Initiating structure and close supervision from the leader helped clarify the path-goal relationship and increased coordination, satisfaction, and performance of the student-athlete. The same structured regime would be considered unnecessary and redundant when tasks were non-ambiguous and clear-cut (Terry & Howe, 1984). When members could not make valid judgments about situational requirements because of their characteristics, the leader must decide for the members.

The adaptive-reactive leadership theory (Osborne & Hunt, 1975) proposed distinctions between adaptive and reactive leader behaviors. Dictated by situational requirements, adaptive behaviors reflected the leaders' efforts to adapt to the conditions and requirements of the wider organization system. Formal structure and organizational size controlled these behaviors. Reactive behaviors were at the discretion of the leader and were reactions to member's needs and preferences. Osborne and Hunt (1975) assumed that members responded mainly to the reactive behaviors of the leader, which were constrained and controlled by situational factors.

Although contingency and situational theories focused on behavioral and situational factors, studies conducted have not provided conclusive support for these theories in the sport setting. Investigations of student-athletes' preferences of coaching

leadership (Terry & Howe, 1984), student-athletes' preferences of coaching leadership at various competition levels (Chelladurai & Carron, 1983), and leadership behaviors of coaches at various competition levels (Case, 1987) did provide limited support for Hersey and Blanchard's (1977) situational theory. Investigations of student-athletes' preferences of coaching leadership (Terry, 1984; Terry & Howe, 1984), physical education majors' preferences of leadership behavior (Chelladurai, Malloy, Imamura, & Yamaguchi, 1987; Chelladurai & Saleh, 1978), and differences between student-athletes' preferences and perceptions of leadership behavior (Chelladurai, 1984) demonstrated some support for House's (1971) path-goal theory. Riemer and Chelladurai (1995) examined the relationship between student-athletes' preferred and perceived leadership and member satisfaction. The results provided support for Osborne and Hunt's (1975) adaptive-reactive theory.

The literature suggested that investigations of leadership in the sport environment required a multiple factor approach. The interaction of leader characteristics, leader behaviors, situational factors, and member characteristics appeared to influence the sport leadership dyad of coach and student-athlete.

Multidimensional Model of Leadership

With the multidimensional model of leadership, Chelladurai (1979) provided a framework for the study of leadership in sports that combined elements from a number of previous studies. The model reflects characteristics of the leader (Fielder, 1967), needs and desires of the members (Hersey & Blanchard, 1977; House, 1971), and demands of the organization (Osborne & Hunt, 1975). As a result, the multidimensional model offers a more robust explanation of coaching leadership behaviors than one-dimensional trait

and behavioral theories or situational theories. The model, developed and refined by Chelladurai (1979, 1990), has applications to the sport setting, synthesizing contingency and situational leadership theories. The model used research findings from sport in its development and revision.

The multidimensional model of leadership focuses upon three states of coaching leadership behavior: actual leader behavior, required leader behavior, and leader behavior preferred by the student-athlete. Antecedents of the three behaviors, which may influence the behaviors, include situational, leader, and member characteristics. The basic tenet of the model states student-athlete performance and satisfaction are functions of the congruence between actual and required leader behaviors and leader behavior preferred by the student-athlete (Chelladurai, 1990).

Actual Leader Behavior

In the multidimensional model of leadership, actual leader behavior describes what is done or can be done by the leader to influence student-athletes' performance and satisfaction. Halprin and Winer (1957) described leader behaviors as consisting of two dimensions, consideration and initiating structure. These dimensions were similar to those in Fiedler's (1967) contingency model and Hersey and Blanchard's (1977) situational model. Behaviors along the consideration dimension provided social support while behaviors within the initiating structure dimension led to task accomplishment and goal attainment. Chelladurai and Saleh (1978) noted differences in organizational demands might result in leader behaviors other than consideration and initiating structure, if in fact the sport context is unique. The six dimensions of leader behavior found in the Revised Leadership Scale for Sport (Zhang, Jensen, & Mann, 1997) address the variety of

coaching leadership behaviors. The dimensions consist of autocratic, democratic, positive feedback, situational consideration, social support, and training and instruction leader behaviors. The type of actual behaviors coaches display in leadership roles is influenced by leader characteristics, situational characteristics, and member's preferred behavior.

Chelladurai (1990) posited the idea that leader characteristics such as personality, ability, and experience would influence actual leader behavior. Studies have shown relationships between personality traits and actual behavior in leaders with autocratic orientation (Ogilvie & Tutko, 1966), authoritarianism (Hendry, 1974), and a need for achievement (Chelladurai, 1980). In these studies, leader personality traits that influenced actual behavior were situation specific. Ogilvie and Tutko (1966) and Hendry (1974) identified specific personality traits required to be successful in stressful game situations such as a 15-30 second timeout during competition. A coach must make quick decisions regarding personnel and game strategy in a short time period. Chelladurai (1980) suggested that the leader's need for achievement might reflect the purpose of competitive athletics, the pursuit of excellence. A coach might drive student-athletes towards greater achievement in levels of physical performance. Murray (1986) suggested leader personality traits might only be present in the sport setting and absent in other situations.

Leader ability, relative to the ability of members, influences actual behavior. Leader ability consists of group-task and process knowledge, problem solving capacity, and interpersonal skills. Leader experience influences actual behavior through confidence and self-esteem development in the leader and student-athlete, perhaps making less preferred behaviors more acceptable for the student-athlete. Vast technique and tactical knowledge held by the coach and shared among student-athletes may result in student-

athletes' acceptance of autocratic leader behaviors. John Wooden, former UCLA basketball coach, is an example of this leader influence as his teams won 10 NCAA national championships in 12 years. Situational characteristics and members' preferred behaviors also influence actual leader behavior.

Situational characteristics that may influence actual leader behavior include various individual, team, and entire organization rules, regulations, and goals. Differences in rules and regulations between NCAA intercollegiate and interscholastic high school teams may require different leadership behaviors. Chelladurai (1980) proposed that student-athletes in these two settings might prefer different leadership behaviors, and these preferences could influence actual leader behavior because of the interpersonal nature of leadership.

Required Leader Behavior

In the multidimensional model, required leader behavior describes behavior prescribed by the situation. Situational characteristics place specific demands and constraints on the organization, the environment, and the leader's behavior (Chelladurai, 1990). Situational characteristics vary depending on the level of the organization, but may include organizational rules, regulations, policies, goals, social and cultural norms, formal structure, and group task. Differences in required behaviors are evident in performance goals and task expectations between professional and intercollegiate sports. The professional organization operates as a business with revenue generating norms and structure. Most intercollegiate programs operate within an educational and physical development structure.

Chelladurai (1990) suggested that the degree of task dependence and task variability might influence required leader behavior. Student-athletes performing in an interdependent and varied task such as soccer might prefer a highly structured regime from their coach (House, 1971). In such a case, required leader behavior would provide clarification of goals and coordination of the student-athletes' activities to reach the goals. Student-athletes engaged in an independent and routine task such as golf might consider the same required leader behavior unnecessary and redundant.

Differences in social and cultural norms in the setting may influence required leader behavior. Situational requirements in military intercollegiate programs that stress highly regulated norms may differ from state or publicly funded intercollegiate programs. Teams consisting of student-athletes from one cultural group or race may possess different norms than teams of mixed cultures or races. Required leader behavior is not only influenced by situational characteristics, but also characteristics of members.

In refinement of his model, Chelladurai (1990) demonstrated the relationship between member characteristics and required leader behavior. In the original development of the model, Chelladurai (1979) proposed that member characteristics of intelligence, ability, experience, or personality dispositions influenced leadership through preferred behavior. Members' behavior preferences reflected personal needs and desires, and judgments concerning what leader behavior would be appropriate in their situation. However, Chelladurai (1990) stated when members lacked the intelligence, ability, experience, or personality dispositions, the student-athlete could not make valid judgments about situational requirements. The leader would then be required to decide

for the members. The relationship between member characteristics and required behavior emerged from situational leadership and path-goal theories.

The situational leadership theory suggested that leaders should vary their behaviors according to the maturity of the members (Hersey & Blanchard, 1977). Maturity was defined as a combination of members' education, experience, achievement motivation, and willingness to take responsibility (Chelladurai, 1990; Hersey & Blanchard, 1977). The path-goal theory (House, 1971) suggested leader behaviors should be appropriate to members' needs and characteristics of the task. Members lacking maturity or experience to recognize their needs would require assistance from the leader to provide social support and structure in their task efforts. A baseball athlete with limited experience may lack the ability to execute a hit-and-run or squeeze play during a game. This dilemma may require specific behavior, concerning situational requirements, from the coach for successful performance.

Preferred Leader Behavior

Preferred leader behavior describes the type of behavior student-athletes would like from their coaches. As previously mentioned, preferred behavior influences actual leader behavior, perhaps as a result of situational requirements such as organizational rules, regulations, and goals. Differences in organizational rules, regulations, and goals between intercollegiate and interscholastic environments place situational requirements on behaviors. Student-athletes' preferred leadership behavior in each setting may differ because of the varying situational characteristics. In turn, the differing student-athlete preferences may influence actual leader behavior.

Preferred behavior is mainly influenced by member characteristics of personality, ability, attitude toward authority, attitude towards individualism, self-esteem, and need for independence (Chelladurai, 1980). Student-athletes with a high need for achievement may prefer different leader behaviors than student-athletes with a high need for approval. Performance ability of the student-athlete may also influence preferences for training and instruction, social support, and positive feedback behaviors. The path-goal theory (House, 1971) focused upon preferred behavior as leaders attempted to match their behavior to the members' preferences. Chelladurai (1980) suggested that under certain conditions, the student-athlete might not prefer structuring and/or consideration from the leader. Structuring and/or consideration might be ineffective when working with the student-athlete who is indifferent to organizational goals and rewards. Structuring and/or consideration might be redundant to the student-athlete who has the ability to perform and is intrinsically rewarded by the task, or for the student-athlete who receives structuring and consideration by others in the organization. Situational characteristics also influence members' preferences.

Situational characteristics, including the demands and constraints in the organization, may influence member preferences. Organizational expectations for leader behavior may be held jointly by leaders and members. Chelladurai (1990) suggested that both the leaders and members were socialized into the same behavior expectations and/or preferences in a given context. Expectations of leader behavior during team travel or contact with formal authority figures may influence leader behavior and student-athlete preferences for such behaviors. If, as the multidimensional model of leadership suggested, coaches should attempt to match their actual behavior to the types of behavior

desired by student-athletes, then preferred coaching behavior becomes an important, yet largely unexplored variable (Terry, 1984).

Performance and Satisfaction

The multidimensional model of leadership stresses that performance of the group and satisfaction of the student-athletes are functions of the degree of congruence among the three states of leader behavior: actual leader behavior, required leader behavior, and leader behavior preferred by the student-athletes. Performance requires carrying out the assigned tasks according to organizational expectations and specifications and includes performances of individual student-athletes and the team as a whole. Satisfaction refers to student-athletes' individual attitudes and feelings regarding satisfaction with leadership (Chelladurai, 1980). Performance and satisfaction are jointly linked as direct results of leader behavior (Chelladurai, 1990). As the student-athletes orient toward task accomplishment and as the coach meets student-athletes' preferences, both performance and satisfaction may be enhanced.

The model presents limiting factors to performance and satisfaction. Chelladurai (1980) proposed that the three states of leader behavior might serve as limiting factors to performance and satisfaction. Leader behavior incongruent with situational requirements or student-athletes' preferences might affect performance and satisfaction. Coaches' recruiting or team practice behaviors incongruent with NCAA regulations may result in sanctions or penalties, placing restrictions on future teams. Leader behavior not matching student-athlete preferences might result in ineffective or redundant attempts to improve student-athlete performance and satisfaction. Student-athlete preferences for positive

feedback met with leader behaviors absent of encouragement and reward may retard performance and satisfaction.

The multidimensional model of leadership (Chelladurai, 1980) proposes three sets of antecedents: situational, leader, and member characteristics. Each antecedent influences the three leader behaviors: actual, required, and leader behavior preferred by the student-athlete. The hypothesis is that performance and satisfaction of student-athletes are functions of the congruence among the three states of leader behavior. Chelladurai (1980) proposed three general conclusions from the model in the application of leadership. The leader's functions, consideration and structure, were provided when and/or if needed by the member (House, 1971). Chelladurai (1980) suggested that situations might exist where, because of member characteristics, consideration or structure were not required from the leader or when other factors served these functions. The leaders' functions might be redundant and/or ineffective when such needs were fulfilled by other factors (Kerr & Jermier, 1978). The leader's activities were constrained and controlled by situational factors related to the wider organizational system (Osborne & Hunt, 1975).

Student-Athlete Attributes

Various attributes in the sport setting can be used to classify student-athletes. This discussion covers the attributes of gender, competition level, task dependence, and task variability. This section presents a summary of studies that examined the differences among female and male student-athletes' personality and developmental traits. It also presents investigations of student-athletes' preferences for different leadership behaviors based on gender. The discussion of intercollegiate sport presents the unique

characteristics of sport and research findings based on student-athletes' participation outcomes, preferred leadership behavior, and differences in preferred behavior among various competition levels. Discussion of task dependence and task variability and a summary of investigations that examined the relationship of the variables with student-athletes' preferences of leadership behavior conclude this section.

Gender

Gender studies among student-athletes have produced various findings. Past research efforts have examined student-athletes' personality and developmental traits. Other investigations have examined student-athletes' preferences for leadership behavior and decision styles. These studies found differences between genders in a variety of settings, but overall results suggested male and female student-athletes' behavior preferences were more similar than dissimilar. With increases in female participation rates and global exposure of female athletic teams, investigations of gender differences and preferences of leadership behavior may reveal important issues.

Personality and Developmental Traits

Various researchers have demonstrated conflicting findings concerning male and female student-athletes' personality and developmental traits. Researchers examining personality types among individual and team sport athletes have shown significant relationships between female competitors and a greater tendency toward introversion, greater autonomy needs, and a combination of other qualities suggesting more creativity than males (Ogilvie & Tutko, 1971). In contrast, Kane (1968) described a sportswoman personality type in which females participating in international sports were more extroverted and less stable than males. The contradictory findings regarding female

athletes' tendencies towards introversion and extroversion may suggest personality type differences based on sport selection. The physical nature of play in soccer may result in tendencies towards extroversion, as females outwardly express emotions and actions. The reserved and calculating nature of distance running may suggest a personality type with more introversion. Kane (1968) and Ogilvie and Tutko (1971) found women athletes in general had far less trait variation from one sport to another than did males.

Researchers have demonstrated significant differences between individual and team sport male and female athletes with females possessing lower perceptions of physical competence (Horn & Harris, 1996), using more evaluative feedback from coaches, parents, and peers (Horn, Glenn, & Wentzell, 1993), and having higher measures of self-actualization (Gundersheim, 1982). Although not identical, low perceptions of physical competence and high levels of self-actualization among females appeared as contradictory findings.

Studies between developmental traits and performance have shown differences between male and female student-athletes. Male and female student-athletes might respond differently to comparable stressful events, which could prove an obstacle to performance. Rainey and Cunningham (1988) found fear of failure significantly predicted competitive trait anxiety in female university athletes and fear of failure and evaluation significantly related to competitive trait anxiety in male university athletes. Competitive trait anxiety was defined as the disposition of a student-athlete to perceive threat in competitive situations (Martens, 1977). Various predictors appeared to influence female and male athletes, but the predictors resulted in similar symptoms of anxiety. Del Ray (1977), Harris (1979), Ogilvie (1979), and Silva (1982) suggested fear of success in

female athletes might be an obstacle which leads to an avoidance of achievement and achievement-oriented activities.

Although not examined in this study, competitive trait anxiety and avoidance of achievement and achievement-oriented activities among student-athletes may influence their preferred leadership behavior. Congruence between student-athletes' preferences for positive feedback and social support behaviors and actual leader behaviors of these types may decrease anxiety and fear. The multidimensional model of leadership (Chelladurai, 1980) proposes that coaches should attempt to match their actual behavior to the preferred behavior of the student-athlete. The congruence of student-athletes' preferred behavior, coaches' actual behavior, and coaches' required behavior in turn may increase student-athletes' performance and satisfaction.

Preferences of Leadership Behavior

Examinations of student-athletes' preferred leadership behavior based on gender have demonstrated inconsistent findings. Chelladurai and Saleh (1978) administered an early version of the LSS to university physical education majors. The results demonstrated that male physical education majors had a significantly greater preference for autocratic and social support leader behaviors than did female majors. Terry (1984) administered the preference version of the LSS to elite athletes and found that male athletes had a significantly stronger preference for autocratic leader behavior than did their female peers. Elite status was defined as international athletes ranging from 17-28 years of age. Erle (1981) investigated university and intramural athletes' leadership preferences and revealed that male athletes gave higher ratings to training and instruction leader behaviors.

Chelladurai and Saleh (1978) found a significant relationship between female gender and preferences for democratic leader behaviors among university physical education majors. They also found differences between males and females in preferences for leadership behaviors. Females preferred a democratic leader and males preferred an autocratic leader. From the results, Chelladurai and Saleh (1978) suggested different behaviors for a coach based on the gender composition of the team. In contrast to these findings, Massimo (1980), in a study of gymnasts, and Terry and Howe (1984), in a study of university and club sport athletes, revealed no overall significant differences in coaching behavior preferences for university and club sport athletes attributable to gender. Investigations of student-athletes' preferred decision style for their coaches produced similar findings.

Researchers have shown that female university student-athletes and female physical education majors have significantly greater preferences for participating in decision-making than do their male counterparts (Chelladurai & Arnott, 1985; Chelladurai & Saleh, 1978). Chelladurai and Arnott (1985) found a significant relationship between female university basketball athletes and the influence of situational differences in decision-making. The findings suggested a participatory decision style approach by coaches of female teams with consideration for situational characteristics, such as information and interpersonal relations among the team. Chelladurai, Haggerty, and Baxter (1989) examined decision style preferences among university basketball athletes and found a lack of significant differences between males and females.

Investigations of student-athletes' preferences for coaching leader behavior based on gender have demonstrated various and at times contradictory findings. Researchers

have demonstrated significant differences among preferences for leader behavior and decision styles attributable to gender (Chelladurai & Saleh, 1978; Erle, 1981; Terry, 1984). Others have demonstrated that male and female athletes' overall preference for leadership behaviors appeared similar in club, university, and elite levels (Chelladurai, Haggerty, & Baxter, 1989; Massimo, 1980; Terry & Howe, 1984). The results of these investigations supported the notion of Helmreich and Spence (1976) that male and female athletes appeared more alike than different. The differences in the findings among male and female athletes suggest the need for additional research.

Intercollegiate Sport

United States intercollegiate athletic programs are recognized as an integral part of the overall organized sport system. Intercollegiate sport teams possess many unique characteristics which may influence the most appropriate leadership behaviors for coaches. Identification of coaching leadership behaviors, which consider these unique characteristics and investigations of intercollegiate student-athletes' preferences for specific leadership behavior and decision styles have received limited attention within the current literature.

Intercollegiate programs are divided into three competition level categories by the NCAA, each with different standards and goals. The three levels are classified as Division I, Division II, and Division III. The differences among these three divisions and the related standards and goals suggest that there may also be differences in the most appropriate coaching behaviors for each division. However, the literature to date has not examined this possibility.

Unique Characteristics of Sport

The sport setting has many characteristics which differ from business and industry. These characteristics emphasize the importance of sport specific theory and measurement in the investigation of leadership and leadership styles. Chelladurai and Saleh (1978) discussed training hours, organizational rewards, and duration of sport teams as some of the defining characteristics of sport.

Student-athletes spend a disproportionate number of hours in training for competitions which last from seconds to 1-2 hours. Formal assessment of student-athletes' performance occurs only during competition. Tasks in business require shorter training periods with continuous assessment of performance. Organizational reward in sport is usually denied to one member or team, representing a zero-sum situation (Chelladurai & Saleh, 1978). The reward, normally winning, is the goal of all of the competing individuals or teams, but will be denied to all but one due to the outstanding play of opponents or chance. In contrast, reward in business may be shared among many members or organizations with varying amounts of recognition or profit.

The life span of a team normally lasts from several months to a year. Student-athletes begin preparation for a season several weeks prior to the first competition. At the completion of the season, many teams disband until the following training period while some teams remain together for off-season training. Each year, most team rosters undergo significant change as a result of student-athlete graduation, voluntary leave, or dismissal for rule violation. The life span of most businesses and industries continue for a much longer period of time, with occasional personnel changes.

Characteristics of the leader and members also reflect the uniqueness of the sport setting. Within intercollegiate athletics, the desire and intensity with which members share and pursue organizational goals is unmatched. The coach has almost complete control over praise for and punishment of teams (Chelladurai, 1980). Team members may be required to room together, eat together, share common recreational facilities, observe curfews, and spend large blocks of time together in their particular sport (Hirt, Hoffman, & Sedlacek, 1983). Many believe the unique characteristics of sport may result in greater expectations of and demands on student-athletes.

The characteristics of sport may affect student-athletes as they participate at the intercollegiate level. Renick (1974) has described student-athletes as performers with very few rights, who must conform to the organization's system to continue participation. Blann (1985) proposed that as the level of intercollegiate competition increased, greater emphasis was placed on winning and greater expectations were placed on student-athletes to train and excel in their sport. Coaches reacted with excessive demands on athletes' time at and away from the court or field. Baldizan and Frey (1995) and Renick (1974) suggested intercollegiate athletics have evolved into big business for universities and the pursuit of wins over losses and profits over deficits might encourage deviant and unethical behavior.

Outcomes of Participation

Investigations of intercollegiate student-athletes have documented career, social, and personal development outcomes that can be attributed to participation in sport. In these studies, researchers have compared groups of student-athletes and non-athletes on different outcome measures. Blann (1985), Lanning (1982), Sack and Thiel (1979), and

Sowa and Gressard (1983) found significant relationships between university athletic participation and lower measures of personal development in educational skills, educational and career planning, development of mature peer relationships, and career mobility.

Student-athletes have shown consistently less preparation for college and have scored lower on measures of educational attainment than have non-athletes. Purdy, Eitzen, and Hufnagel (1982) investigated athletes at a large western United States university over a 10 year period and found significant differences between scholarship, non-scholarship, and partial-scholarship athletes, with scholarship athletes performing worse on measures of academic achievement. Full-scholarship athletes in a sense became employees of the university, believing that they owed their coaches their full attention. A role conflict developed for the student-athlete with the student role being neglected. Because full-scholarship athletes were most likely the best athletes, they most likely derived their social status from athletic endeavors.

Researchers have found that the athletes who seemed to be most negatively affected by athletic participation were intercollegiate, male, scholarship athletes in revenue-producing sports, regardless of the size of the institution (Gundersheim, 1982; McElroy, 1981; Silva, 1982). Football and basketball are commonly referred to as the revenue producing sports at the intercollegiate level. Although only 1 to 3.3% of intercollegiate athletes will play professional sports (Eitzen, 1997; Remer, Tongate, & Watson, 1978), the goal of reaching the professional level has received mention as a key factor responsible for the lack of educational and career development in athletes (Picou, 1978; Purdy, Eitzen, & Hufnagel, 1982).

Nelson (1983) revealed that athletes might prematurely foreclose on their identities as a result of athletic participation. Foreclosure occurred when individuals prematurely made a firm commitment to an occupation or an ideology without exploration of internal needs and values (Marcia, 1966). Marcia (1966) and Petitpas (1978) also found significant relationships with athletes being authoritarian, vulnerable to stress and self-esteem manipulation, stereotyped in their interpersonal relationships, immature in levels of moral and ego development, low in autonomy, and external in their locus of control.

Preferences of Leadership Behavior

The multidimensional model of leadership (Chelladurai, 1980) suggests the importance of matching actual coaching behavior to the behavior preferred by the student-athletes and to the behavior prescribed by the task. Terry (1984) suggested that the variables within the setting might influence student-athletes' preferences and be important in determining the actual coaching behavior most conducive to high performance and athlete satisfaction. Suggestions for appropriate leadership styles at various levels of competitive athletics provided a framework for examining intercollegiate student-athletes' behavior preferences.

Member and situational characteristics appeared to influence student-athletes' preferences for leadership behavior at various levels of competition. As the maturity, personality, and need levels of the members change, the orientation of the leader's behavior should also change to meet members' preferences and needs. Chelladurai (1980) suggested a leadership style high in structuring behavior was appropriate in competitive athletics. Chelladurai (1980) used structuring behavior to refer to attempts by the coach to

guide and coordinate student-athletes towards greater effort to raise their performance level.

At the university level, a high structuring and high consideration leadership style seemed appropriate (Chelladurai, 1980). The style allows the coach to provide constant motivation in an environment where practice sessions can be long, strenuous, and sometimes monotonous. The coach must also guide and instruct athletes towards mastery of tactics and skills of the sport to raise their performance level at the same time that they are coordinating team activities. Athletes' social interaction, often restricted to the team, requires the coach to offer social support and friendship which results in further motivation of the athletes. The congruence of coach and athlete goals and the control of the coach imply any task-oriented behavior of the coach is acceptable to the athletes. Chelladurai (1980) proposed that the student-athletes' maturity levels should determine the degree of structuring and consideration leader behavior.

Intercollegiate athletic teams consist of student-athletes who range in age and maturity levels. Hersey and Blanchard (1977) defined maturity as the willingness of members to take responsibility for directing their own behavior in relation to a specific task. Chelladurai and Carron (1983) defined athletic maturity as the mastery of skill and knowledge in sport, the development of sport attitudes, and the experience to set high but attainable goals. Researchers assumed that athletic maturity increased as the athlete progressed from the elementary level to the professional level (Chelladurai & Carron, 1983). This assumption reflects the selective nature of sport by which only those athletes with the required abilities, attitudes, knowledge, and experience progressed through each level of competition.

Chelladurai (1980) and Chelladurai and Carron (1983) proposed the idea that at the elementary level, low structuring and high consideration leader behaviors might provide social support and positive feedback to the less athletically mature members. At professional levels, the coach might provide low structuring and low consideration leader behaviors to members who have attained tactic and skill knowledge, performance skills, and training and teamwork values. Members would tend to view the coach's structuring behavior as redundant.

Investigations of student-athletes' preferences of leadership behaviors based on competition level and participation experience have utilized the LSS. Chelladurai (1979) and Terry (1984) found a significant relationship between longer tenure in sport and university and elite athletes' preferences for social support leader behaviors. Chelladurai and Carron (1983) administered the preference version of the LSS to high school midget, high school junior, high school senior, and university basketball athletes and revealed a significant relationship between longer tenure in sport and preferences for social support leader behaviors. Chelladurai (1979) suggested longer tenure in a sport might indicate more involvement and neglect of social interactions outside of sport. The athlete would then look to the coach and team to provide social needs. Chelladurai (1979) and Chelladurai and Carron (1983) found a significant relationship between longer tenure and university individual and team sport student-athletes' preferences for training and instruction leader behaviors. The preference might indicate the student-athletes' need for the coach's direct control for skill and technique improvement.

Researchers found a significant relationship between longer tenure and preferences for democratic leader behaviors (Terry, 1984) and positive feedback leader

behaviors (Erle, 1981) among elite, university, and intramural student-athletes. These researchers suggested that preferences for democratic leader behaviors might indicate the student-athletes' desire to retain a degree of influence over their physical activities. The researchers also suggested that preferences for positive feedback leader behaviors might indicate the student-athletes' need for recognition and praise.

Researchers have also found tenure in sport related to student-athletes' preferences for decision styles. Chelladurai and Carron (1983) and Chelladurai and Saleh (1978) found a significant relationship between increasing sport experience and university student-athletes' and physical education majors' preferences for an authoritarian approach by coaches.

Student-athletes' preferred leadership behaviors for their coaches appeared to be influenced by competition level and experience. The preferences of intercollegiate student-athletes appeared to be congruent with the proposed coaching leadership styles presented by Chelladurai (1980), high structuring and high consideration. Researchers found intercollegiate student-athletes preferred social support and training and instruction leader behaviors, which suggested support for the proposed high structuring and high consideration style. However, student-athletes' preferences of high structuring and high consideration leader behavior appeared in contrast to postulates of Hersey and Blanchard's (1977) situational leadership theory.

Researchers have suggested that leader behavior should vary according to the maturity and need levels of the members. Chelladurai and Carron (1983) assumed athletic maturity increased as the student-athlete progressed through higher competition levels. The intercollegiate student-athlete would then possess a high level of athletic maturity,

resulting in preferences for high structuring and high consideration leader behaviors. Hersey and Blanchard (1977) proposed a leadership style of low task/low relationship with high maturity levels of members. Leaders would delegate responsibilities to members and allow members freedom to complete tasks. These contradicting styles of leader behavior recommended at the intercollegiate level may be based upon athletic maturity.

Chelladurai and Carron (1983) proposed the length and development of athletic maturity as explanations for the inconsistent findings. The development of athletic maturity may take up to 25 years, beginning at the age of 8-10. If this is true, researchers would need to study athletes over this span of time to completely understand the role of athletic maturity in determining preferences of leadership behavior. Sport, as a social system, may not allow for full maturity development of members. Sport represents an autocratic environment with athletes becoming socialized into preferring less self-responsibility, with the coach assuming greater responsibility for the team. The findings suggested that both student-athletes and coaches at different levels of competition might have varying behavior preferences and goals.

Competition Level

NCAA Division I and Division II intercollegiate athletic programs differ in numerous areas. Differences between the divisions in sports sponsorship, minimum contests and participation rates, scheduling, and financial aid result from NCAA standards. Division I programs sponsor a minimum of 14 sports, consisting of seven male or mixed teams and seven female teams; or six male or mixed teams and eight female

teams. Division II programs sponsor a minimum of eight sports, with four male or mixed teams and four female teams.

Examining the 10 sports in this study, NCAA standards required Division I programs to participate in three more intercollegiate contests than Division II during a competitive season. Division I programs schedule and play 100 percent of these minimum contests against other Division I programs. Division II programs schedule and play 50 percent of the minimum contests against either Division I or Division II programs.

Division I programs meet financial aid minimum and maximum requirements as permitted by the NCAA. Minimum requirements include equitable shares of dollars for male and female teams regardless of revenue production from individual sports. Division II programs have financial aid limitations that do not include minimum distribution of dollars for each gender or sport. Although both divisions represent intercollegiate athletic programs, the various NCAA requirements create two distinct sport environments.

Differences between Division I and Division II programs may affect student-athletes' preferences for coaching leadership behavior. The Division I programs must have a larger number of teams and student-athletes, participation opportunities, available scholarship dollars, and support personnel than Division II. The Division I setting represents the highest level of intercollegiate competition and a philosophy of winning-at-all-costs may exist in a business-like environment aimed at revenue generation. Competition may remain at a higher level in Division I because of the greater minimum contest requirement and the requirement to schedule Division I opponents. Division I student-athletes participate in more practices and contests, which results in longer in-

season and off-season preparation periods. Social interaction is often restricted to the team because of the time demands and expectations placed on student-athletes.

Differences in the time involved in a sport may result in differences between Division I and Division II student-athletes' preferences for social support leader behavior. Division I student-athletes may prefer more social support leader behavior to meet interpersonal needs. A limited number of investigations have examined student-athletes' preferences for leadership behavior based on competition level.

The increased amount of available scholarship dollars allows Division I programs to recruit and sign the most talented student-athletes. Those schools that can recruit players of the highest quality have the best chance of winning, that is, achieving their goal (Trail & Chelladurai, 2000). Once on campus, support services within Division I athletic departments assist student-athletes with academic, career, and personal development issues. The pressure to win may lead student-athletes to a daily preoccupation with practice and competition. Successful athletic outcomes may in turn lead to a desire to play professionally. These aspects may result in differences between Division I and Division II student-athletes' preferences for training and instruction leader behaviors. Division I student-athletes may prefer more training and instruction leader behavior, hoping to reach the professional level. Training and instruction behaviors may provide the skill, technique, and tactics as well as emphasize the physical training required for professional sports. These possible relationships between student-athletes' preferred leadership behavior and competition levels have undergone limited investigations.

Academic goals of Division I and II student-athletes may be secondary to their athletic performance, which may influence the development of educational skills, career plans, and the development of mature relationships with peers (Blann, 1985; Lanning, 1982; Purdy, Eitzen, & Hufnagel, 1982; Sowa & Gressard, 1983). The conflict for the student-athlete between athletics and education may result when sport becomes a commercial entertainment activity organized within an educational environment (Eitzen, 1997). The emphasis on athletic development and success may also influence coaching behavior.

Wins and losses may influence the demands of a coach, resulting in various leadership behaviors. Team success may cause the coach to display democratic, positive feedback, and social support behaviors. The lack of team success may lead a coach to change her or his behavior because of the pressure to win and job security. Weiss and Friedrichs (1986) suggested that the amount of success might depend upon coaches' training and instruction and social support behaviors with the team. The differences in the findings among NCAA intercollegiate student-athletes suggest the need for additional research.

Task Dependence

Student-athletes' preferences for leadership behavior may also be dependent on the type of sport, not just the competition level. Chelladurai (1979) proposed a distinction between individual sports and team sports based on task dependence. Task dependence referred to the degree of interaction an athlete has with others during the execution of the task and was divided into independent or interdependent. Chelladurai (1979) termed an individual sport, in which successful completion of the task does not require interaction

among teammates, as independent. Independent sports include golf, gymnastics, swimming, tennis, and track/cross country. The classification of golf is obvious, but tennis and track/cross country require further explanation.

Student-athletes in tennis may be required to participate in singles and/or doubles matches. The independent nature of singles matches is clearly evident. Doubles matches require interaction among teammates for successful completion of the task, but the relative degree of interdependence is less than baseball or soccer (Chelladurai & Saleh, 1978). The rules of tennis also prohibit exchange or passing of the ball between teammates during play. The individual sports of track and cross country do not require interaction among teammates for successful completion of the tasks. The exception is a relay race with passing of the baton between team members.

Chelladurai (1979) termed a team sport, in which successful completion of the task relies upon efficient interaction among teammates, as interdependent. Interdependent sports include basketball, baseball, football, hockey, soccer, and volleyball.

Individual and Team Sports

Student-athletes' preferences for leadership behavior might be influenced by differences between individual and team sports. Rakestraw and Weiss (1981) suggested individual sport student-athletes developed their own specific performance goals based on prior success or failure, on expectations for themselves in a given task situation, and on actual performance of others. The goal setting process was internal to the student-athlete and the influence of a coach was peripheral.

Team sport student-athletes develop goals for the team as a whole, made jointly by team members and the coach. The coach has considerable influence in both setting the

goals and activities to attain the goals. Research on teams in business has demonstrated that teams, when compared to groups, had a stronger sense of identification among members and a higher degree of consensus about goals among members. Task interdependence was fundamental in teamwork (Hughes, Ginnet, & Curphy, 1993).

Researchers have demonstrated significant differences between individual and team sport student-athletes. Ogilvie and Tutko (1971) found that individual sport student-athletes possessed a higher level of healthy introversion and more creativity. Purdy, Eitzen, and Hufnagel (1982) found that these athletes obtained better college grades, and were more likely to graduate than team sport student-athletes.

Preferences of Leadership Behavior

Researchers investigating student-athletes' preferred leadership behavior based on task dependence have provided support for the multidimensional model of leadership (Chelladurai, 1980). Examining club, elite, and university student-athletes and physical education majors, Chelladurai and Carron (1983), Chelladurai and Saleh (1978), and Terry (1984) found significant relationships between team sports and preferences for training and instruction leader behaviors. Investigating club, university, and elite athletes, Terry (1984) and Terry and Howe (1984) found significant relationships between team sports and preferences for autocratic and positive feedback leader behaviors utilizing the preference version of the LSS. Preferences for training and instruction and autocratic leader behaviors of interdependent sport student-athletes appeared to support postulates of the path-goal theory (House, 1971; House & Dessler, 1974).

The path-goal theory proposed that with ambiguous, varied, and interdependent tasks, student-athletes would prefer greater structure and closer supervision. Team sports,

characterized by numerous plays and strategies, result in ambiguous tasks for student-athletes. Preferences for training and instruction and autocratic leader behaviors might reduce the ambiguity through the creation of a well-structured environment for team members. Success of the team depends on each member, strenuous training, instruction, and the uniformity provided by the coach. Student-athletes choose to concede decision-making and personal authority to the coach. Terry (1984) suggested such a structured environment might prove conducive to team success and, therefore, preferred by team members.

Terry (1984) proposed that interdependent sport student-athletes' preferences for positive feedback might have functioned as within group competition. Team members, functioning as individuals, might seek status or control within the team by earning praise from the coach. Terry (1984) suggested that the preferences might represent fulfillment of the individual student-athlete's need for recognition and reward in a group environment where interpersonal needs might go unfulfilled. Individual sport student-athletes might share a closer relationship with their coach making it less necessary for outward recognition and rewards for good performance.

Researchers have examined preferences for leadership behaviors of student-athletes engaged in independent sports with the LSS. Researchers found significant relationships between individual sports and preferences for democratic and social support leader behaviors in elite athletes (Terry, 1984) and club and university student-athletes (Terry & Howe, 1984). These findings were in contrast to those of Chelladurai and Saleh (1978) in which they found no significant differences in university physical education

majors' preferences for democratic and autocratic leader behaviors based on task dependence.

Independent sport student-athletes' preferences for democratic leader behaviors also appeared to support postulates of the path-goal theory (House, 1971; House & Dessler, 1974). Individual sport student-athletes may prefer a less structured training environment which meets their individual requirements. Performance in isolation from teammates encourages individual student-athlete participation and control over training methods and strategies. The path-goal theory (House, 1971; House & Dessler, 1974) proposed that with varied and interdependent tasks, student-athletes would form preferences for greater structure and closer supervision. Conversely, with clear-cut tasks student-athletes may consider the same structure and supervision unnecessary.

Preferences for social support of individual sport student-athletes may reflect the interpersonal relationship with the coach. Individual sport athletes appeared to share close relationships with their coaches. Terry (1984) proposed that the closeness of the relationships enabled the coach to play the role of confidant among the athletes, making social support leader behavior more appropriate. Other team members might provide social support for team sport student-athletes, which lessened the need for the coach to display the behavior. The differences in the findings among interdependent and independent sport student-athletes suggest the need for additional research.

Task Variability

Chelladurai (1979) classified sports into the categories of open or closed based on task variability. Task variability referred to the degree the environment changes and the extent to which the student-athlete responds to these changes. An open sport,

characterized by high variability, requires the student-athlete to respond to objects that move in space and requires spatial/temporal adjustment. Open sports include baseball, basketball, football, soccer, tennis, and volleyball. A closed sport, characterized by low variability, requires the student-athlete to perform in an environment with relatively stable, static and unchanging stimuli. Closed sports include golf, swimming, gymnastics, and track/cross country.

The distinction between open and closed sports is explained by examining the skills of student-athletes participating in golf and tennis. The golf student-athlete performs in an environment which is stable and unchanging. The task, hitting a stationary ball, begins by movement of the student-athlete, a closed form of behavior. The tennis student-athletes' task also includes hitting of a ball, but the environment is constantly changing requiring an open form of behavior. The tennis student-athletes' movements are in response to the opponents' play, velocity and position of the ball, and environmental variables such as wind. Research examining student-athletes' preferences of leadership behavior based on open and closed tasks have demonstrated inconsistent findings.

Preferences of Leadership Behavior

Researchers have found relationships between task variability and student-athletes' preferred leadership behavior. Utilizing an early version of the LSS, Chelladurai and Saleh (1978) found that closed task university physical education majors had a significantly greater preference for training and instruction leader behaviors than did their open sport peers. Male physical education majors engaged in closed task sports showed preferences for social support leader behaviors (Chelladurai & Saleh, 1978). Terry and Howe (1984) failed to identify any significant differences in club and university student-

athletes' preferences attributed to the variability of the task. These findings demonstrated mixed support for the path-goal theory (House, 1971; House & Dessler, 1974) which proposed variability of the task might influence preferred behavior of the student-athletes.

The findings that closed sport students preferred more training and instruction leader behaviors than open sport students appeared contrary to the path-goal theory. The path-goal theory stated that in a closed sport with a routine task, structuring behavior would be unnecessary and redundant to the student-athlete (House, 1971; House & Dessler, 1974). Chelladurai and Saleh (1978) suggested that the explanation for the contradictory findings related to physical and psychological effects of closed sports on student-athletes.

Closed sports, characterized by minimal variety in the task and practice session, might cause the task to become physically tiring and psychologically boring to student-athletes. A lack of training and instruction behavior from a coach in a closed sport environment might have negative effects on student-athletes. The low variability with a closed task might cause student-athletes to perform below their physical level, resulting in a failure to reach their maximum potential. Student-athletes' preferences for training and instruction leader behaviors might increase their drive to compete and to reach their maximum potential. With such routine tasks, the coaches' influence of training and instruction actual behavior might have a motivating effect on the student-athlete.

The finding that male students in closed sports preferred more social support leader behaviors than open sport male students suggested support for the path-goal theory. Chelladurai and Saleh (1978) stated the difference between males in closed sports and males in open sports related to House's (1971) observation that "for unsatisfying

tasks, consideration will tend to offset dissatisfaction” (p. 324). House (1971) suggested student-athletes’ performance and satisfaction was highly influenced by leader behaviors appropriate to student-athletes’ needs and desires, and characteristics of the task.

Clarification of path-goal relationships appeared to provide a source of satisfaction for the student-athletes’ and was related to student-athletes’ performance. The preferences of social support leader behaviors of a male golfer in a routine task may provide goal clarification and an increase in satisfaction.

Sports utilized for investigations of student-athletes’ preferred leadership behavior based on task variability have differed, causing difficulty in comparing results.

Researchers have demonstrated significant differences between open and closed sport student-athletes’ preferences within a single sport. Riemer and Chelladurai (1995) proposed that differences might exist on task variability and situational attributes such as institutional size, number of teams and student-athletes, and pressure to win. The sport of football provided open and closed tasks on a single team while controlling for other situational attributes such as size of the team (Riemer & Chelladurai, 1995).

The organization of a football team consisted of two separate groups or units, offense and defense. The offense represented a closed task because of the pre-structured design and decisions within each play. The defense represented an open task because of the reaction to environmental stimuli during each play. Riemer and Chelladurai (1995) found significant relationships between university defensive players and preferences for democratic and social support leader behaviors. These preferences appeared consistent with the path-goal theory (House, 1971) in which coaching, guidance and personal support would be provided if lacking in the environment. Movements of opponents

during play dictated defensive players' actions and quick responses. The coach could not determine student-athletes' tasks prior to the play, which required the coach to display democratic behaviors. The differences in the findings among open and closed sport student-athletes suggest the need for additional research.

Sport Leadership Measurement

Assessment of leadership began in business and industry and appeared in the sport setting during the 1970s. Early measurement instruments focused on sport leadership behaviors without consideration of situational characteristics. Sport leadership assessment instruments emerged from the Ohio State Leadership Studies (Hemphill & Coons, 1957; Stogdill, 1948, 1963). Researchers at Ohio State based these studies on the assumption that leadership styles consisted of two dimensions, consideration and initiating structure. Behaviors within the consideration dimension provide social support while behaviors within the initiating structure dimension lead to task accomplishment and goal attainment. Researchers emphasized the development of leadership questionnaires suitable for a variety of settings.

Several instruments developed from the Ohio State Leadership Studies focused on the measurement of sport leadership behaviors. The Coach Behavior Description Questionnaire (Danielson, Zelhart, & Drake, 1975), the Coaching Behavior Assessment System (Smith, Smoll, & Hunt, 1977), and the Coach Evaluation Questionnaire (Rushall & Wiznuk, 1985) measured leader behaviors without considering situational characteristics. The questionnaires required student-athletes to identify behaviors of their coaches within selected leadership dimensions. The Assessment System relied on a trained individual to observe and code coaches' behavior within selected behavioral

categories. Although these instruments measured leadership behaviors, relevance to and use with NCAA intercollegiate student-athletes appeared limited. Researchers suggested that the development of a sport specific assessment instrument with consideration of situational characteristics might be required for investigations of sport leadership.

Leadership Scale for Sport

Using the multidimensional model of leadership (Chelladurai, 1980), Chelladurai and Saleh (1980) developed the Leadership Scale for Sport. The scale contained five dimensions of leader behavior in three versions. These versions measured (1) student-athletes' preferences, (2) student-athletes' perceptions, and (3) coaches' self-evaluation of leader behavior. Researchers have conducted studies to examine and improve the effectiveness of the scale in the sport environment. These research efforts resulted in the development of the Revised Leadership Scale for Sport (Zhang, Jensen, & Mann, 1997).

The Leadership Scale for Sport (LSS) (Chelladurai & Saleh, 1980) suggested a multiple description of leader behavior in the athletic environment. Using the multidimensional model of leadership (Chelladurai, 1980) as a framework, the LSS was able to examine the basic tenet of the model which suggested student-athlete performance and satisfaction were functions of the congruence between the three types of leader behavior: actual, preferred, and required. Development of the LSS occurred in response to the lack of leadership instruments relevant to sport and to the need for an instrument that was based on the multidimensional model of leadership (Chelladurai, 1980). Chelladurai and Saleh (1980) suggested the development of the multidimensional model of leadership required measurement of its underlying constructs, providing empirical advances in sport leadership research.

Chelladurai and Saleh (1980) used several stages in developing the Leadership Scale for Sport, including field testing with university students and student-athletes. They began by modifying leadership items from existing leader behavior scales (Halprin & Winer, 1957; Stogdill, 1963) to fit the sport environment. In the initial stage of LSS development, 160 Canadian physical education majors responded to a 99-item leadership questionnaire with the preceding phrase “The coach should...” and response categories of always, often, occasionally, seldom, and never. Using factor analysis, Chelladurai and Saleh (1980) reduced the questionnaire to 50 leadership items.

The reduced leadership questionnaire was administered to a different sample of 102 Canadian physical education majors and 223 Canadian intercollegiate student-athletes. Preferences for leader behavior were obtained from the physical education majors and student-athletes with the preceding phrase, “I prefer my coach to...” and perceptions of actual leader behavior were obtained from the student-athletes with the preceding phrase, “My coach...” (Chelladurai & Saleh, 1980). Results of factor analyses yielded a five dimensional description of leader behavior using 40 items.

Dimensions of Leader Behavior

The five leader behavior dimensions on the LSS consisted of (a) one direct task factor, training and instruction behavior, (b) two decision-style factors, democratic and autocratic behaviors, and (c) two motivational factors, social support and positive feedback behaviors (Chelladurai, 1990; Chelladurai & Saleh, 1980). Of these, training and instruction leader behavior dimension was perhaps the most important function of a coach, that of improving the performance level of student-athletes. Leader behaviors center on physical improvement of student-athletes through hard and strenuous training.

Coaches instruct student-athletes in skills, techniques, and tactics of the particular sport. Coaches plan, structure, and direct activities while clarifying goals and relationships among student-athletes. Coaches evaluate student-athletes' performance at various periods.

Democratic leader behavior referred to the amount of participation a coach permits student-athletes in decision-making. Decisions may pertain to group goals, practice methods, and game tactics and strategies. Democratic coaches encourage involvement of student-athletes in selection of personnel and evaluation of performance. Democratic leader behaviors involve respecting and accepting the rights of student-athletes while admitting mistakes and confronting problems.

Autocratic leader behavior referred to the extent a coach stresses her or his authority and limits involvement of student-athletes in decisions. Autocratic coaches make independent decisions, without considering the feelings and opinions of student-athletes, and expect strict compliance with decisions that are made. Autocratic coaches use commands and punishments while prescribing plans and methods for student-athletes' activities.

Social support leader behavior referred to the extent coaches involve themselves in satisfying the interpersonal needs of student-athletes. The psychological supports are independent of student-athletes' physical training or competition. Coaches assist student-athletes with personal problems and establish friendships, positive group atmosphere, and interpersonal relationships with student-athletes. Coaches provide for the welfare of student-athletes, making sport enjoyable for the student-athletes.

Positive feedback leader behavior reflected the extent a coach expresses appreciation and compliments student-athletes for their performance and contribution. Coaches reinforce proper performance through encouraging, recognizing, correcting, and rewarding student-athletes. Behaviors relate to maintaining the motivational level of student-athletes since sports are zero-sum in nature and individual contributions on a team may go unrecognized. These behaviors are dependent on student-athletes' performance and are only motivational in the context of physical training or competition.

The Leadership Scale for Sport (Chelladurai & Saleh, 1980) provided a sport specific assessment instrument for investigation of coaching leadership behavior. The three versions of the LSS measured student-athletes' preferences of their coaches' behavior with the preceding phrase "I prefer my coach to..." student-athletes' perceptions of their coaches' behavior with the preceding phrase "My coach..." and coaches' self-evaluation of their own behavior with the preceding phrase "In coaching, I..." (Chelladurai & Saleh, 1980). The LSS contained 40 leadership items in five leader behavior dimensions with response categories of always, often, occasionally, seldom, and never. The scale also provided frequency-related phrases of 75% of the time, 50% of the time, and 25% of the time which matched with often, occasionally, and seldom, respectively.

Chelladurai and Saleh (1980) suggested the five leader behavior dimensions appeared consistent with postulates of the path-goal theory of leadership (House, 1971), appeared as conceptually distinct categories of coaching behavior, and remained relatively stable. Chelladurai and Saleh (1980) reported test-retest reliability estimates from repeat responses over a four week interval for the behavior dimensions as .72

(training and instruction), .82 (democratic), .76 (autocratic), .71 (social support), and .79 (positive feedback). Internal consistency estimates using Cronbach's alpha were adequate, but low for autocratic behavior. The estimates for the behavior dimensions were reported as .76-.93 (training and instruction), .75-.87 (democratic), .45-.79 (autocratic), .70-.86 (social support), and .79-.92 (positive feedback). Chelladurai and Saleh (1980) recommended caution in using the findings from the autocratic behavior dimension. Validity was demonstrated by the stability of the dimensions over three different sets of subjects and focus of the dimensions on the task, motivational aspects, and decision styles.

Application of the LSS

A number of different researchers have used the three versions of the LSS in examining sport leadership behaviors. These researchers have used the LSS to measure student-athletes' preferences of their coaches' leader behavior (Chelladurai, 1984; Chelladurai & Carron, 1983; Chelladurai, Imamura, Yamaguchi, Oinuma, & Miyauchi, 1988; Chelladurai & Saleh, 1978; Terry, 1984; Schliesman, 1987), student-athletes' perceptions of their coaches' leader behavior (Chelladurai, 1984; Robinson & Carron, 1982; Summers, 1983; Weiss & Friedrichs, 1986), and coaches' perceptions of their own behavior (Gordon, 1988; Horne & Carron, 1985; Shields, Gardner, Bredemeier, & Bostro, 1997). Although the LSS has shown stable psychometric properties when utilized in past research, efforts to revise the instrument led to improvements.

Researchers examining the findings and reviews of studies revealed several issues and concerns with the Leadership Scale for Sport. Summers (1983), in his study of perceived ability and perceived team cohesion, suggested the coaching behaviors might

be highly related to one another. Chelladurai (1990) expressed concerns regarding the leadership items in the LSS. These concerns were that the 40 LSS items might refer to the frequencies of leader behavior rather than the context of leadership behavior and that the items came from scales in business and industry rather than from the sport setting. Zhang, Jensen, and Mann (1997) expressed additional concerns in regards to the population used for LSS development. Designed for use with Canadian university student-athletes resulted in several of the leadership items not being culturally relevant in the United States. These items conflicted with NCAA regulations (NCAA Division I Manual, 1999), which member institutions must follow in the United States. Zhang, Jensen, and Mann (1997) examined the development process and quality of the LSS with an assessment of the suitability of content validity and construct validity. The revision of the Leadership Scale for Sport proceeded to produce a more effective measurement tool for the sport setting.

Revised Leadership Scale for Sport

Revision of the Leadership Scale for Sport (Zhang, Jensen, & Mann, 1997) proceeded through several stages. The revision process enhanced the measurement properties and applicability of the scale to NCAA intercollegiate student-athletes. Recommendations concerning the use of the RLSS provided guidelines for additional investigations of coaching leadership behavior with various intercollegiate populations.

Revision Process

Revision of the Leadership Scale for Sport (Zhang, Jensen, & Mann, 1997) involved five stages with NCAA Division I, II, III coaches and student-athletes and leadership experts. The researchers used both interviews and test administrations in the

revision process. The stages included addition of new leadership items to the behavior dimensions and two new leadership dimensions, evaluation of item linguistics, examination of item representativeness and adequacy, factor analysis and testing for internal consistency, and completion of the final form of the instrument. Several characteristics of the original LSS format were maintained in the revision. These included maintaining the same three versions of the instrument, similar introductory words for each version, and the same five-point Likert scale.

Stage one of the revision concentrated on the addition of two proposed leader behavior dimensions and the addition of items to each of the other behavior dimensions. Zhang, Jensen, and Mann (1997) proposed the leader behavior dimensions of group maintenance and situational consideration for inclusion to the RLSS. Group maintenance referred to the amount of clarifying, structuring, and coordinating a coach performs with the team. Coaches who demonstrate these behaviors clarify relationships among team members, structure and coordinate student-athletes' activities, and improve team cohesion. Situational consideration referred to the degree to which a coach reflected situational factors in her or his behavior. Coaches who demonstrate these behaviors consider factors such as the time, environment, and individual student-athletes in setting goals and methods to reach the goals. These coaches use different behaviors depending on student-athletes' maturity and skill levels and select appropriate student-athletes to perform tasks in game situations.

Zhang, Jensen, and Mann (1997) proposed the two leader behavior dimensions based on several constructs. Leadership behavior has been described as consisting of two dimensions, consideration and initiating structure (Fiedler, 1967; Halprin & Winer, 1957;

Hersey & Blanchard, 1977). Initiating structure was task-oriented and appeared to be measured by the LSS behavior dimension of training and instruction. Consideration was interpersonal-oriented. The LSS did not appear to measure this interpersonal-oriented behavior dimension. Researchers also proposed the addition of these two behavior dimensions to strengthen the relationship between the LSS and the leadership theories underlying the multidimensional model of leadership (Chelladurai, 1980). With these two new dimensions, there were seven leader behavior dimensions included in the revision of the LSS. These dimensions of leadership behavior consisted of autocratic, democratic, group maintenance, positive feedback, situational consideration, social support, and training and instruction leader behaviors.

Using the seven revised leader behavior dimensions, Zhang, Jensen, and Mann (1997) conducted interviews with intercollegiate coaches. They asked each coach to provide additional leadership items for each behavior dimension. The coaches' interviews resulted in 240 new items, which were added to the 40 original LSS items.

Linguistic experts evaluated the original leadership items from the Leadership Scale for Sport and the leadership items obtained from coaches' interviews during stage two. Coaching leadership experts evaluated the item pool during stage three of the revision process. The linguistic evaluation corrected linguistic problems and provided consistency among the items. Coaching leadership experts examined content validity and evaluated the representativeness, clarity, and adequacy of the proposed responses and behavior dimensions. The standard for item acceptance was set at 70% agreement among the evaluators. Following these procedures, the RLSS had 120 leadership items under the seven proposed leader behavior dimensions.

Stage four involved administration of the 120-item leadership questionnaire to coaches and student-athletes. The questionnaire was constructed in three versions, student-athlete preference, student-athlete perception, and coach self-evaluation. Two hundred and six NCAA Division I, II, III intercollegiate coaches were asked to complete the coach self-evaluation version of the RLSS. Six hundred and ninety-six NCAA Division I, II, III student-athletes were asked to complete the preferred and perceived leader behavior versions of the RLSS. The administration of the three RLSS versions to coaches and student-athletes allowed for statistical analyses.

The final stage of the revision process consisted of compiling the leadership items and behavior dimensions based on the statistical analyses performed. Zhang, Jensen, and Mann (1997) found the leadership items included with group maintenance dimension were not significant, resulting in the exclusion of this dimension from the RLSS. The researchers suggested that group maintenance leader behavior might be similar to the leader behavior dimension of social support.

The final version of the Revised Leadership Scale for Sport contained six dimensions of leader behavior with a total of 60 leadership items. The six dimensions of leader behavior included autocratic, democratic, positive feedback, situational consideration, social support, and training and instruction leader behaviors. The original LSS had not included the situational consideration leader behavior dimension. Among the 60 leadership items in the RLSS, 23 came from the LSS. The leadership items within the three versions of the RLSS were randomly arranged within the questionnaires. The RLSS also included a manual for individuals using the instruments. Revision of the Leadership Scale for Sport helped to improve validity and reliability of the instrument. The results of

factor analysis and internal consistency procedures of the RLSS are discussed in Chapter Three.

Use of the RLSS

Revision of the Leadership Scale for Sport resulted in the improvement of several measurement characteristics. Zhang, Jensen, and Mann (1997) suggested that the RLSS provided a more sport and culturally specific instrument for examining the NCAA intercollegiate population. Researchers constructed the dimensions of leader behavior and leadership items through interviewing intercollegiate coaches with consideration given to NCAA standards and guidelines. The generalizability and application of the RLSS improved with the involvement of intercollegiate student-athletes from a variety of sports.

Zhang, Jensen, and Mann (1997) provided recommendations for use of the Revised Leadership Scale for Sport in the investigation of coaching leadership behavior. Since the revision process involved student-athletes from the college and university level, generalization of results from the RLSS revision and future use of this instrument should only occur within this population. The three versions of the RLSS-student-athlete preference, student-athlete perception, and coach self-evaluation-can be used separately or together for examinations of coaching leadership behavior.

The Leadership Scale for Sport (Chelladurai & Saleh, 1980), based upon the multidimensional model of leadership (Chelladurai, 1980), provides an instrument for investigating coaching leadership behavior. Researchers have utilized the LSS in various leadership studies and the scale has demonstrated acceptable psychometric properties. Revision of the scale (Zhang, Jensen, & Mann, 1997) resulted in improvements in

measurement properties and applicability and generalizability to NCAA intercollegiate student-athletes in the United States. Beyond the revision process, few researchers have tested the use of the RLSS with various populations (Jambor, 1997). The development of the Revised Leadership Scale for Sport, as were the multidimensional model of leadership and Leadership Scale for Sport, was based upon contingency and situational leadership theories and sports specific data. The literature suggests the use of the RLSS to examine the preferred leadership behavior of NCAA intercollegiate student-athletes.

Summary

Early research efforts in sport leadership behavior focused on the coach. Researchers attempting to determine personality traits and specific behaviors of effective coaching leadership failed to identify universal traits or behaviors. Investigations of situational leadership, which focused on both behavioral and situational factors, have examined how these factors might influence leader effectiveness.

Based upon contingency and situational leadership theories, Chelladurai (1980) proposed the multidimensional model of leadership. The multidimensional framework of the model has applications in the sport environment. It takes into consideration the interaction of the coach, student-athlete, and situation. The model focuses upon three states of leader behavior: actual leader behavior, required leader behavior, and leader behavior preferred by the student-athlete. Antecedents of situational, leader, and student-athlete characteristics may affect these coaching leadership behaviors. The multidimensional model of leadership suggests student-athlete performance and satisfaction are functions of the congruence between the three types of leader behavior.

The multidimensional model of leadership provided the conceptual framework for this study.

Using the multidimensional model of leadership (Chelladurai, 1980), Chelladurai and Saleh (1980) developed the Leadership Scale for Sport. Many researchers have used the scale for investigations of coaching leadership behaviors. Revision of the scale (Zhang, Jensen, & Mann, 1997) involved intercollegiate coaches and student-athletes which resulted in improved generalizability and application to the NCAA intercollegiate population. The Revised Leadership Scale for Sport (Zhang, Jensen, & Mann, 1997) measures student-athletes' preferred leadership behavior of their coaches through 60 leadership items within six dimensions of leader behavior.

Researchers have examined student-athletes' preferences for leadership behavior of their coaches based on gender, competition level, task dependence, and task variability. Preferences of leadership behavior among male and female student-athletes have resulted in conflicting findings which suggested that males and females appeared more similar than dissimilar. Student-athletes' preferred leadership behavior at various competition levels suggested both student-athletes and coaches at different levels of competition might have differing behavior preferences and goals. Researchers investigating student-athletes' preferred leadership behavior based on task dependence and task variability have also demonstrated support for the multidimensional model of leadership.

Chapter Three presents the research design and the procedures used in this study. The participants of the study and the research instrument utilized in the study are discussed. The methods utilized to collect and analyze the data are also presented.

Chapter Four presents the findings of the statistical analyses used in this study. Chapter Five presents a discussion of the results with conclusions and recommendations regarding student-athletes' preferred leadership behavior of their coaches.

CHAPTER 3

METHODS AND PROCEDURES

This study examined differences in National Collegiate Athletic Association Division I and II intercollegiate student-athletes' preferred leadership styles for their coaches. The study examined the differences based on the student-athletes' gender, competition level, and the task dependence and task variability of the student-athletes' chosen sport. The University of North Florida Institutional Review Board gave approval for the study. The student-athletes expressed their preferences using the Revised Leadership Scale for Sport (Zhang, Jensen, & Mann, 1997). This instrument contains 60 items covering six dimensions of leader behavior. The dimensions consisted of autocratic, democratic, positive feedback, situational consideration, social support, and training and instruction leader behaviors.

Four hundred and eight male and female student-athletes from four NCAA Division I universities and six NCAA Division II universities in the southeastern United States participated in the study. Male respondents were chosen from athletic rosters in baseball, basketball, tennis, track/cross country, and golf. Female respondents were chosen from athletic rosters in basketball, track/cross country, tennis, volleyball, and soccer. A split-plot analysis of variance was performed to investigate gender, competition level, task dependence, and task variability differences among student-athletes' preferred leadership behavior of their coaches.

This chapter describes the research design of the study. A description of the Revised Leadership Scale for Sport (Zhang, Jensen, & Mann, 1997) presents the assessment of student-athletes' preferred leadership behavior of their coaches.

Description of the study participants, data collection, and data analysis concludes the review.

Research Design

This study utilized a causal comparative design. Causal comparative designs investigate whether one or more preexisting conditions may have caused subsequent differences in groups of subjects (McMillan & Schumacher, 1997). Causal comparative designs usually involve two or more groups that are compared with no manipulation of conditions, because the presumed cause has already occurred prior to the study.

For this study, the pre-defined groups consisted of the NCAA intercollegiate student-athletes at the participating universities. The independent variables for the study were gender, competition level, task dependence, and task variability.

Competition level referred to the NCAA classification of member institutions for certain legislative and competitive purposes. The study examined Division I and Division II student-athletes. Task dependence referred to the degree of interaction a student-athlete has with others during execution of the task (Chelladurai, 1979). An independent sport does not require interaction among teammates for successful completion of the task. Independent sports in the study included golf, tennis, and track/cross country. An interdependent sport requires efficient interaction among teammates for successful completion of the task. Interdependent sports in the study included baseball, basketball, soccer, and volleyball.

Task variability referred to the degree the environment changes and the extent to which the student-athlete responds to these changes (Chelladurai, 1979). An open sport requires the student-athlete to respond to objects that move in space. Open sports in the

study included baseball, basketball, tennis, soccer, and volleyball. A closed sport requires the student-athlete to perform in an environment with relatively unchanging stimuli. Closed sports in the study included golf and track/cross country.

Research Instrument

The Revised Leadership Scale for Sport (Zhang, Jensen, & Mann, 1997) was utilized to measure student-athletes' preferred leadership behavior of their coaches (see Appendix B). Permission to copy and use the Revised Leadership Scale for Sport in this study was obtained from the authors (P. Chelladurai, personal communication, August 24, 1999; J. Zhang, personal communication, September 13, 1999). The RLSS as used in this study consisted of directions, 60 leadership behavior preference items, and five demographic items.

The Revised Leadership Scale for Sport directions were self-explanatory and indicated that responses to the 60 leadership items were to be made on a five-point Likert scale. There were quantifications and frequency-related wordings for each choice on the scale. The scale consisted of: A = always (100% of the time), B = often (75% of the time), C = occasionally (50% of the time), D = seldom (25% of the time), and E = never (0% of the time). Participants were directed to answer all items, even if unsure of a response.

Participants indicated coaching leadership behavior preferences by marking the appropriate letter on a Scantron scoring sheet. The 60 leadership items contained in the RLSS were distributed among the six dimensions of coaching leadership behaviors as follows: democratic behavior- 12 items; positive feedback behavior- 12 items; training and instruction behavior- 10 items; situational consideration behavior- 10 items; social

support behavior- 8 items; and autocratic behavior- 8 items (Table 1). Questions on demographic variables followed the 60 leadership preference items. The questions ask the participant to identify her or his gender, sport, and competition level, and whether she or he was attending school on a scholarship. Scholarship referred to whether the student-athlete was currently receiving financial assistance from her or his institution.

Table 1

Distribution of Items Among the Six Dimensions of Leadership Behavior in the Revised Leadership Scale for Sport

Leadership Dimension	Carrier Phrase Item
	I prefer my coach to:
Democratic	Put the suggestions made by the team members into operation Ask for the opinion of the athletes on strategies for specific competition Encourage the athletes to make suggestions for ways to conduct practices Let the athletes try their own way even if they make mistakes See the merits of athletes' ideas when different from the coach's Let the athletes set their own goals Get approval from the athletes on important matters before going ahead Let the athletes decide on plays to be used in a competition Give the athletes freedom to determine the details of conducting a drill Get input from the athletes at daily team meetings Ask for the opinion of the athletes on important coaching matters Let the athletes share in decision-making and policy formation
	I prefer my coach to:
Positive Feedback	Show "OK" or "Thumbs Up" gesture to the athletes Pat an athlete after a good performance Congratulate an athlete after a good play Tell an athlete when the athlete does a particularly good job Express appreciation when an athlete performs well

Table 1

Distribution of Items Among the Six Dimensions of Leadership Behavior in the Revised

Leadership Scale for Sport

Leadership Dimension	Carrier Phrase Item
Positive Feedback	Encourage an athlete when the athlete makes mistakes in performance
	Praise the athletes' good performance after losing a competition
	Recognize individual contributions to the success of each competition
	Compliment an athlete for good performance in front of others
	Clap hands when an athlete does well
	Give credit when it is due
	Reward an athlete as long as the athlete tries hard
Training and Instruction	I prefer my coach to:
	Make complex things easier to understand and learn
	Pay special attention to correcting athletes' mistakes
	Explain to each athlete the techniques and tactics of the sport
	Use a variety of drills for a practice
	Stress the mastery of greater skills
	Use objective measurements for evaluation
	Conduct proper progressions in teaching fundamentals
	Supervise athletes' drills closely
	Clarify training priorities and work on them
Possess good knowledge of the sport	
Situational Consideration	I prefer my coach to:
	Coach to the level of the athletes
	Set goals that are compatible with the athletes' ability
	Clarify goals and the paths to reach goals for the athletes
	Adapt coaching style to suit the situation
	Use alternative methods when the efforts of the athletes are not working well in practice or in competition

Table 1

Distribution of Items Among the Six Dimensions of Leadership Behavior in the Revised Leadership Scale for Sport

Leadership Dimension	Carrier Phrase Item
Situational	Alter plans due to unforeseen events
Consideration	Put the appropriate athletes in the lineup
	Put an athlete into different positions depending on the needs of the situation
	Assign tasks according to each individual's ability and needs
	Increase complexity and demands if the athletes find the demands are too easy
Social Support	I prefer my coach to:
	Encourage close and informal relationships with the athletes
	Remain sensitive to the needs of the athletes
	Stay interested in the personal well being of the athletes
	Look out for the personal welfare of the athletes
	Encourage the athletes to confide in the coach
	Perform personal favors for the athletes
	Help the athletes with their personal problems
Visit with the parents/guardians of the athletes	
Autocratic	I prefer my coach to:
	Disregard athletes' fears and dissatisfactions
	Refuse to compromise on a point
	Plan for the team relatively independent of the athletes
	Prescribe the methods to be followed
	Dislike suggestions and opinions from the athletes
	Fail to explain his/her actions
	Present ideas forcefully
Keep aloof from the athletes	

In developing the Revised Leadership Scale for Sport, Zhang, Jensen, and Mann (1997) reported acceptable levels of reliability and validity for the instrument. The researchers tested construct validity with a factor analysis for each version of the scale: student-athlete preference, student-athlete perception, and coach self-evaluation. A composite score was calculated for each of the behavior dimensions by summing the scores of the related items. Intercorrelations among the composite scores of the dimensions were reported to be below .30 indicating that the RLSS was close to being a multidimensional scale (Zhang, Jensen & Mann, 1997).

Analysis of the leader behavior dimensions over the three versions (student-athlete preference, student-athlete perception, and coach self-evaluation) revealed that the internal consistency measures for five dimensions were significant ($p < .05$). The ranges of alpha coefficients for the three versions across five of the dimensions were reported as .93-.96 (democratic), .85-.93 (positive feedback), .81-.88 (situation consideration), .83-.91 (training and instruction), and .81-.89 (social support behaviors). Autocratic behavior had an internal consistency of .35-.59. Zhang, Jensen, and Mann (1997) concluded that the internal consistency of the factors was acceptable. Because of the low reliability for the autocratic behavior dimension, the authors suggested caution in using the findings from this dimension. Although content validity and construct validity of autocratic behavior was enhanced from the original scale, weak internal consistencies of this behavior dimension were consistent with the findings from the previous edition of the instrument (Chelladurai & Saleh, 1980; Dwyer and Fischer, 1988).

Because the development of the RLSS focused on coaches and student-athletes from the college and university level, Zhang, Jensen, and Mann (1997) recommended

that future studies utilizing the instrument should occur within this population. Usage of the three versions of the RLSS can occur alone or together for investigations in the area of sport leadership.

Data Collection

Athletic trainers at 16 southeastern United States institutions demonstrated initial interest in this study. Following these initial contacts with athletic trainers, the athletic directors at all 16 schools were contacted and asked to consent to their institutions participation in the study. The letter to the athletic director contained the name and information about the researcher, the purpose and intention of this study, the importance of this study and institutional participation, and a brief description of the RLSS and administration procedures. The letter concluded with information on ethical and confidentiality issues, an offer to share the results, a request for cooperation, and thanks to the athletic director and institution (see Appendix C). An enclosed addressed envelope provided for return of the form. Follow-up correspondence through telephone or electronic mail followed after three weeks, if there was no response.

Four of the Division I schools gave permission for the study. The NCAA Division I institutions in this study included Jacksonville University, the University of Miami, Western Carolina University, and Wofford College (Table 2). Athletic directors at six of the Division II schools consented to the study. The NCAA Division II institutions in this study included Clayton College and State University, Kennesaw State University, Lander University, the University of North Florida, the University of South Carolina-Aiken, and the University of South Carolina-Spartanburg (Table 3).

Table 2

Division I Study Institutions

Division	Institution	Male Sports	Female Sports
Division I	Jacksonville University	Golf	Basketball
		Tennis	Tennis
		Track/CC	Track/CC
			Volleyball
Division I	University of Miami	Baseball	Basketball
		Track/CC	
Division I	Western Carolina University	Baseball	Basketball
		Basketball	Tennis
		Track/CC	Track/CC
			Volleyball
Division I	Wofford College	Baseball	Soccer
		Golf	Tennis
		Tennis	Volleyball

Upon receiving written consent of the athletic directors, correspondence was sent to each respective team head coach. The correspondence included a request for consent and questions about on-campus administration dates, times, and locations (see Appendix D). An enclosed addressed envelope provided for return of the forms. Follow-up correspondence occurred after a 2-week non-response interval.

Table 3

Division II Study Institutions

Division	Institution	Male Sports	Female Sports
Division II	Clayton College and State University	Basketball Track/CC	Soccer Track/CC
Division II	Kennesaw State University	Basketball	Basketball Tennis
Division II	Lander University	Baseball	Basketball Soccer Track/CC
Division II	University of North Florida	Baseball Basketball Golf Tennis Track/CC	Basketball Soccer Tennis Track/CC Volleyball
Division II	University of South Carolina Aiken	Golf	Soccer Volleyball
Division II	University of South Carolina Spartanburg	Baseball Basketball Tennis	Basketball Soccer Tennis Volleyball

After receiving the head coach's written consent, the website of the participating institution provided current team rosters. Using these rosters, each student-athlete, from each particular team was assigned a random number. A random number table was used for selection of the sample from each team. The sample for this study included alternates from each team to be used if the originally selected participants could not complete or chose not to complete the RLSS.

The researcher and institutional athletic trainers collected the data for the study. Administration packets for each institution were organized by team. The packets contained the names of the participants, administration instructions, consent forms, copies of the RLSS, and Scantron scoring sheets and pencils.

The correspondence with each head coach determined the on-campus administration dates and times for the two schools visited by the researcher. Athletic trainers at the remaining participating universities scheduled administration dates and times with each head coach. Times were chosen to allow each student-athlete sufficient time to complete the RLSS without scheduling conflicts. Conflicts such as class, study hall, and team practice, conditioning, and weight lifting sessions were considered in the scheduling. At some institutions, the RLSS was administered on a team-by-team basis. At others, several teams completed the instrument together in a classroom or teamroom provided by the institution. Team coaches were not required to or prohibited from being present during data collection.

Introductions included explanations of this study, the Revised Leadership Scale for Sport, data collection, data analysis, and risks and consequences of participation (see Appendix E). The administrators of the RLSS discussed the voluntary nature of

participation and confidentiality of the responses with the participants. Participants received several opportunities to ask questions regarding any aspect of this study. Informed consent forms were given to each participant (see Appendix F). This study collected one copy of the form and gave one copy to the participant. Upon completion of the consent forms, each participant received the RLSS, a Scantron sheet, and pencil.

The individual administering the RLSS read the directions for the RLSS to the participants while the participants followed in their booklets. The directions asked each participant to answer the items with an honest and spontaneous response. Respondents who participated in more than one sport were to express their behavior preferences for the sport in which they were randomly chosen. If necessary, questions were answered at this time. Student-athletes had as much time as needed to complete the RLSS. Completion of the RLSS took approximately 15-20 minutes per student-athlete. Collection of the consent form, RLSS, Scantron scoring sheet, and pencil followed student-athlete completion of the instrument. Following collection, debriefing consisted of a brief description of the implications of the findings, a question and answer period, and thank you for the cooperation and participation.

The Revised Leadership Scale for Sport measured preferred leadership behavior based on student-athletes' personal preferences. Implications of student-athletes who had completed the RLSS discussing the instrument and administration procedures with other student-athletes selected to participate were minimal and should not have affected this study.

Administration packets were mailed to the athletic trainers who administered the RLSS. Contact through telephone or electronic mail was made to explain the

administration guidelines. Financial compensation was given to the head athletic trainers for their assistance. An enclosed overnight delivery envelope was provided for the return of consent forms, RLSS, and Scantron scoring sheets to the researcher.

Study Participants

The participants in this study consisted of NCAA Division I and Division II intercollegiate student-athletes listed on active rosters obtained from each participating university. Five hundred and nine student-athletes from four NCAA Division I universities and six NCAA Division II universities in the southeastern United States were asked to complete the Revised Leadership Scale for Sport (Zhang, Jensen, & Mann, 1997). Male respondents were randomly chosen from athletic rosters in baseball, basketball, tennis, track/cross country, and golf. Female respondents were randomly selected from athletic rosters in basketball, track/cross country, tennis, volleyball, and soccer. A total of 408 student-athletes completed the RLSS for a completion rate of 80 %. The rate was affected by changes in team rosters as a result of student-athlete graduation or voluntary leave. Random selection of the sample and RLSS administration was completed over the span of two academic semesters.

Of the student-athletes sampled, 179 were males and 229 were females. One hundred and seventy-one participated in their sport at Division I universities and 237 participated in their sport at Division II universities. Of the sports sampled, 293 participated in open variability sports and 115 participated in closed variability sports. One hundred and seventy-two participated in independent sports and 236 participated in interdependent sports. Table 4 presents the number of study participants by sport, competition level, and gender.

Table 4

Numbers of Study Participants by Sport, Division, and Gender

Sport	Division	Gender	N
Baseball	Division I	Male	27
	Division II	Male	28
Basketball	Division I	Male	8
	Division I	Female	27
	Division II	Male	35
	Division II	Female	33
Golf	Division I	Male	18
	Division II	Male	5
Soccer	Division I	Female	8
	Division II	Female	42
Tennis	Division I	Male	11
	Division I	Female	16
	Division II	Male	13
	Division II	Female	17
Track/CC	Division I	Male	21
	Division I	Female	7
	Division II	Male	13
	Division II	Female	21
Volleyball	Division I	Female	28
	Division II	Female	30

Data Analysis

Scoring of the RLSS occurred in two stages. First, the Scantron scoring sheets underwent a manual scan in the University of North Florida Computer Center with OMR procedures. An ASCII file containing the data was created and then transferred to SPSS 10.0 for statistical analyses.

Individual student-athlete preference scores for the six dimensions of coaching behavior were calculated. The scores were derived by summing the scores for all of the items in a particular dimension and then dividing by the number of items in that sub-scale (Chelladurai & Saleh, 1980). The scores were computed and analyzed based on the four research questions that guided this study. An alpha level of $p < .05$ was used in each of the analyses.

To examine the first research question, which asks whether the coach leadership behavior preferences of student-athletes differ based on gender, a split-plot analysis of variance (ANOVA) was used to compare the mean individual RLSS dimension scores among male and female student-athletes. The ANOVA also computed a gender by level interaction. Fisher's LSD was performed for the significant interactions.

To examine the second research question, which looks at whether the coach leadership behavior preferences of student-athletes differ based on competition levels, a split-plot ANOVA was used to compare the mean individual RLSS dimension scores among Division I and Division II student-athletes.

To examine the third research question, which asks whether the coach leadership behavior preferences of student-athletes who participate in interdependent sports differ from those who participate in independent sports, a split-plot ANOVA was used to

compare the mean individual RLSS dimension scores among interdependent and independent sport student-athletes. The ANOVA also computed a task dependence by level interaction. Fisher's LSD was performed for the significant interactions.

To examine the fourth research question, which examines whether or not the coach leadership behavior preferences of student-athletes who participate in open sports differ from those who participate in closed sports, a split-plot ANOVA was used to compare the mean individual RLSS dimension scores among open and closed sport student-athletes. The ANOVA also computed a task variability by level interaction. Fisher's LSD was performed for the significant interactions.

Summary

A causal comparative design was utilized in the study to investigate student-athletes' preferred leadership styles for their coaches. The independent variables were gender, competition level, task dependence, and task variability. The dependent variables were the preference scores of each student-athlete on the six coaching leadership behavior dimensions, as measured by the Revised Leadership Scale for Sport (Zhang, Jensen, & Mann, 1997). The dimensions included autocratic, democratic, positive feedback, situational consideration, social support, and training and instruction leader behaviors.

Sixteen NCAA Division I and Division II institutions were initially contacted with requests for consent. Four of the Division I schools and six of the Division II schools gave permission for the study. The websites of the participating schools provided current team rosters. Male respondents were randomly selected from rosters in baseball, basketball, golf, tennis, and track/cross country. Female respondents were randomly

selected from rosters in basketball, soccer, tennis, track/cross country, and volleyball. A total of 408 student-athletes completed the RLSS.

Chapter Four presents the findings of the statistical analyses utilized in the study. Research questions of the study are explored to investigate differences in student-athletes' preferred leadership behavior of their coaches.

Chapter Five presents a summary of the study, conclusions about the findings, and recommendations for future practice and research related to student-athletes' preferred leadership behavior of their coaches.

CHAPTER 4

RESULTS

The purpose of the study was to examine the differences in student-athletes' preferred leadership behavior of their coaches based on gender, competition level, and the task dependence and task variability of the student-athletes' chosen sport. If differences occurred, data analyses determined which groups of student-athletes preferred which type of leadership behavior. Six dimensions of preferred leadership behavior were compared: autocratic, democratic, positive feedback, situational consideration, social support, and training and instruction behaviors.

Four research questions guided the study. The first question explored whether or not there were differences between female and male student-athletes' preferences for leadership behavior. The second question analyzed whether or not there were differences between NCAA Division I and Division II student-athletes' preferences for leadership behavior. The third question analyzed whether or not there were differences between interdependent sport and independent sport student-athletes' preferences for leadership behavior. The fourth question explored whether or not there were differences between open sport and closed sport student-athletes' preferences for leadership behavior.

To determine whether there were differences among the variables of gender, competition level, task dependence, and task variability, a split-plot analysis of variance (ANOVA) was computed. The split-plot ANOVA examined the variables of gender, competition level, task dependence, and task variability. The ANOVA also computed gender by level, task dependence by level, and task variability by level interactions. A Fisher's LSD was performed for all significant interactions. The following six

dimensions of leadership behavior from the Revised Leadership Scale for Sport (Zhang, Jensen, & Mann, 1997) are listed in the order they will be discussed in Chapter Four: autocratic, democratic, positive feedback, situational consideration, social support, and training and instruction behaviors. The descriptive statistics are presented first followed by the ANOVA findings. A summary of the findings concludes the chapter. The findings for each behavior dimension are discussed in order of the research questions of the study.

Findings

Autocratic Leader Behavior

Student-athletes recorded their preferred leadership behavior of their coaches using the Revised Leadership Scale for Sport (Zhang, Jensen, & Mann, 1997). On the RLSS, preferences for leadership behavior were derived by summing the scores for all of the items in a particular behavior dimension and then dividing by the number of items in that subscale. Responses on each behavior subscale were made on a five-point Likert scale. The scale consisted of: A = always (100% of the time), B = often (75% of the time), C = occasionally (50% of the time), D = seldom (25% of the time), and E = never (0% of the time). Responses were coded as follows: A = 5, B = 4, C = 3, D = 2, and E = 1. Student-athletes' responses indicated how often they would prefer their coach to exhibit the behavior.

Of the study participants, 179 were males and 229 were females. One hundred and seventy-one participated in their sport at Division I universities and 237 participated in their sport at Division II universities. Of the sports sampled, 236 participated in interdependent sports and 172 participated in independent sports. Two hundred and ninety-three participated in open variability sports and 115 participated in closed

variability sports. Table 5 presents the descriptive statistics for male and female, Division I and Division II, interdependent and independent sport, and open and closed sport student-athletes as related to their recorded preferences on the autocratic leader behavior subscale.

Table 5

Descriptive Statistics for Gender, Competition Level, Task Dependence, and Task

Variability for Autocratic Leader Behavior

Behavioral Dimension	Group	<i>n</i>	<i>M</i>	<i>SD</i>
Autocratic	Gender			
	Males	179	2.970	.548
	Females	229	2.767	.533
Autocratic	Level			
	Division I	171	2.918	.624
	Division II	237	2.811	.483
Autocratic	Task Dependence			
	Interdependent	236	2.864	.503
	Independent	172	2.845	.606
Autocratic	Task Variability			
	Open	293	2.845	.568
	Closed	115	2.860	.541

In the presentation of the ANOVA findings, interactions will be discussed first followed by the variables of gender, competition level, task dependence, and task variability. Table 6 presents the findings of the ANOVA.

Table 6

Analysis of Variance for Autocratic Leadership Behavior Among Gender, Competition Level, Task Dependence, and Task Variability

Source of Variation	Dependent Variable	<i>df</i>	<i>MS</i>	<i>F</i>
Gender	Autocratic	1	4.508	5.187
Level	Autocratic	1	.170	.195
Task Dependence	Autocratic	1	.003	.014
Task Variability	Autocratic	1	.067	.235
Gender X Level	Autocratic	1	.869	3.039
Task Dependence X Level	Autocratic	1	2.056	7.189*
Task Variability X Level	Autocratic	1	1.536	5.369*
Error	Autocratic	400	.286	

* $p < .05$.

Gender by Level

The first interaction examined the effects of gender and level on behavior preferences. The ANOVA revealed no significant gender by level interaction for autocratic behavior [$F(1, 400) = 3.039, p = .082$].

Task Dependence by Level

The next interaction examined the effects of task dependence and level on behavior preferences. The ANOVA demonstrated a significant task dependence by level interaction for autocratic behavior [$F(1, 400) = 7.189, p = .008$].

A series of Fisher's LSDs demonstrated where the significant interactions were. Fisher's LSD revealed no significant differences between Division I interdependent and

Division I independent sport student-athletes $t(400) = 1.95, p > 0.05$. Fisher's LSD revealed significant differences between Division II interdependent and Division II independent sport student-athletes $t(400) = 2.28, p < 0.05$. Fisher's LSD revealed no significant differences between Division I interdependent and Division II interdependent sport student-athletes $t(400) = 1.45, p > 0.05$. Fisher's LSD revealed significant differences between Division I independent and Division II independent sport student-athletes $t(400) = 2.71, p < 0.05$. Figure 2 presents the findings of the interaction.

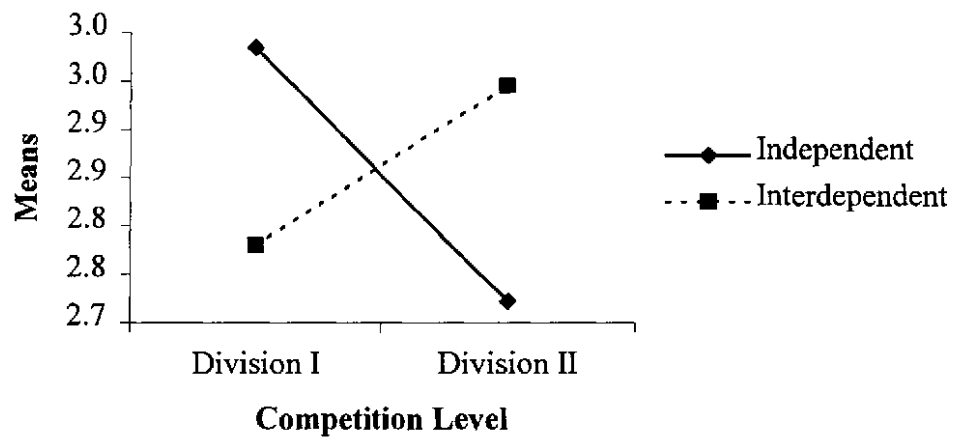


Figure 2. Task Dependence X Level Interaction for Autocratic Leader Behavior.

Task Variability by Level

The second interaction studied the effects of task variability and level on behavior preferences. The ANOVA revealed a significant task variability by level interaction for autocratic behavior [$F(1, 400) = 5.369, p = .021$].

A series of Fisher's LSDs demonstrated where the significant interactions were. Fisher's LSD revealed significant differences between Division I open and Division I closed sport student-athletes $t(400) = 2.28, p < 0.05$. Fisher's LSD revealed no significant differences between Division II open and Division II closed sport student-athletes $t(400)$

= 1.49, $p > 0.05$. Fisher's LSD revealed significant differences between Division I open and Division II open sport student-athletes $t(400) = 3.12, p < 0.05$. Fisher's LSD revealed no significant differences between Division I closed and Division II closed sport student-athletes $t(400) = 1.19, p > 0.05$. Figure 3 presents the findings of the interaction.

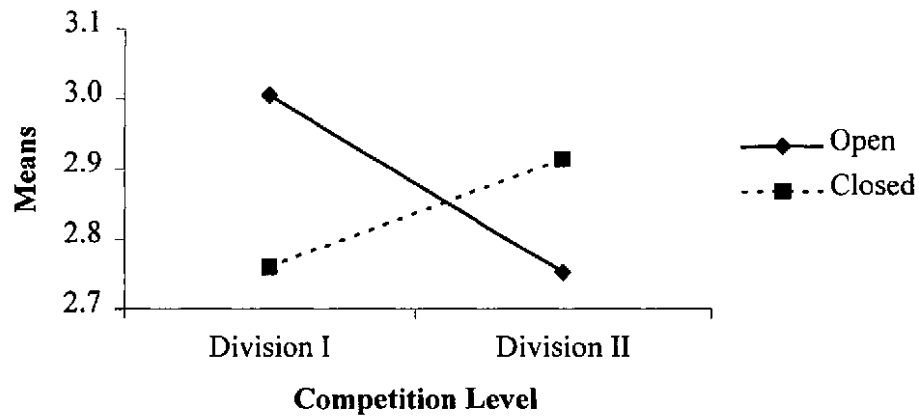


Figure 3. Task Variability X Level Interaction for Autocratic Leader Behavior.

Gender

The first analysis shown on Table 6 examined the differences in behavior preferences based on gender. The ANOVA revealed no significant differences between male and female student-athletes' preferences for autocratic leader behavior [$F(1, 1) = 5.187, p > 0.05$].

Competition Level

The next analysis examined the differences in behavior preferences based on competition level. The ANOVA showed no significant differences between Division I and Division II student-athletes' preferences for autocratic leader behavior [$F(1, 1) = .195, p > 0.05$].

Task Dependence

The third analysis shown on Table 6 looked at differences in behavior preferences based on task dependence. The results revealed no significant differences between interdependent and independent sport student-athletes' preferences for autocratic leader behavior [$F(1, 400) = .014, p = .907$].

Task Variability

The last analysis shown on Table 6 examined the differences in behavior preferences based on task variability. The ANOVA showed no significant differences between open and closed sport student-athletes' preferences for autocratic leader behavior [$F(1, 400) = .235, p = .628$].

Democratic Leader Behavior

When student-athletes recorded their preferred leadership behavior of their coaches using the RLSS (Zhang, Jensen, & Mann, 1997), a high score indicated a preference for democratic leader behavior and a low score indicated less preference for democratic leader behaviors on the part of the coach. Table 7 presents the descriptive statistics for male and female, Division I and Division II, interdependent and independent sport, and open and closed sport student-athletes as related to their recorded preferences on the democratic leader behavior subscale.

Table 8 presents the findings of the ANOVA for the variables of gender, competition level, task dependence, and task variability and the related interactions.

Table 7

Descriptive Statistics for Gender, Competition Level, Task Dependence, and TaskVariability for Democratic Leader Behavior

Behavioral Dimension	Group	<i>n</i>	<i>M</i>	<i>SD</i>
Democratic	Gender			
	Males	179	3.445	.640
	Females	229	3.437	.591
Democratic	Level			
	Division I	171	3.470	.628
	Division II	237	3.418	.600
Democratic	Task Dependence			
	Interdependent	236	3.295	.581
	Independent	172	3.639	.599
Democratic	Task Variability			
	Open	293	3.546	.635
	Closed	115	3.399	.599

Gender by Level

The first interaction examined the effects of gender and level on behavior preferences. The ANOVA demonstrated a significant gender by level interaction for democratic behavior [$F(1, 400) = 4.391, p = .037$]. Despite the significant interaction, post hoc Fisher's LSD failed to point to causes of the significant interactions.

Fisher's LSDs revealed no significant differences between Division I male and Division I female student-athletes' preferences for democratic leader behavior $t(400) = 1.53, p > 0.05$, nor any significant differences between Division II male and Division II female student-athletes' preferences for democratic leader behavior $t(400) = 1.20, p > 0.05$. Likewise, Fisher's LSDs showed no significant differences between Division I

Table 8

Analysis of Variance for Democratic Leadership Behavior Among Gender, Competition Level, Task Dependence, and Task Variability

Source of Variation	Dependent Variable	<i>df</i>	<i>MS</i>	<i>F</i>
Gender	Democratic	1	.032	.021
Level	Democratic	1	.077	.052
Task Dependence	Democratic	1	14.165	42.038***
Task Variability	Democratic	1	3.502	10.392**
Gender X Level	Democratic	1	1.480	4.391*
Task Dependence X Level	Democratic	1	1.633	4.847*
Task Variability X Level	Democratic	1	.641	1.903
Error	Democratic	400	.337	

* $p < .05$. ** $p < .001$. *** $p < .000$.

male and Division II male student-athletes' preferences for democratic leader behavior $t(400) = .978, p > 0.05$ or between Division I female and Division II female student-athletes' preferences for democratic leader behavior $t(400) = 1.80, p > 0.05$. Figure 4 presents the findings of the interaction.

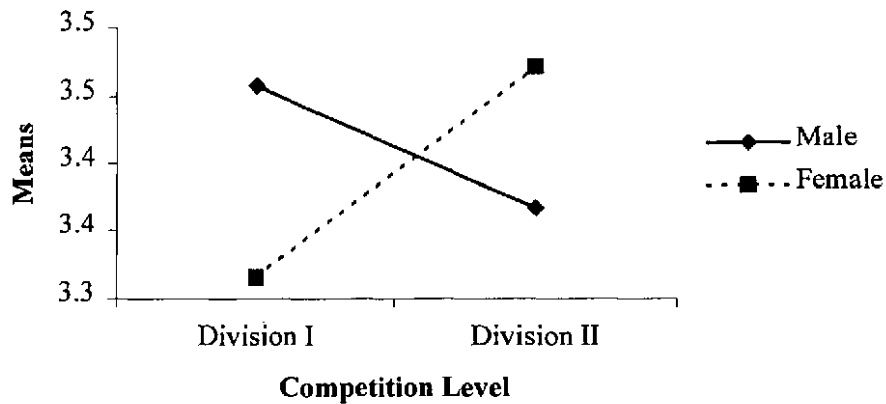


Figure 4. Gender X Level Interaction for Democratic Leader Behavior.

Task Dependence by Level

The next interaction examined the effects of task dependence and level on behavior preferences. The ANOVA revealed a significant task dependence by level interaction for democratic behavior [$F(1, 400) = 4.847, p = .028$].

A series of Fisher's LSDs demonstrated where the significant interactions were. Fisher's LSD revealed significant differences between Division I interdependent and Division I independent sport student-athletes $t(400) = 6.62, p < 0.05$. Fisher's LSD also revealed significant differences between Division II interdependent and Division II independent sport student-athletes $t(400) = 3.51, p < 0.05$. Fisher's LSD revealed no significant differences between Division I interdependent and Division II interdependent sport student-athletes $t(400) = 1.806, p > 0.05$. Fisher's LSD revealed no significant differences between Division I independent and Division II independent sport student-athletes $t(400) = 1.68, p > 0.05$. Figure 5 presents the findings of the interaction.

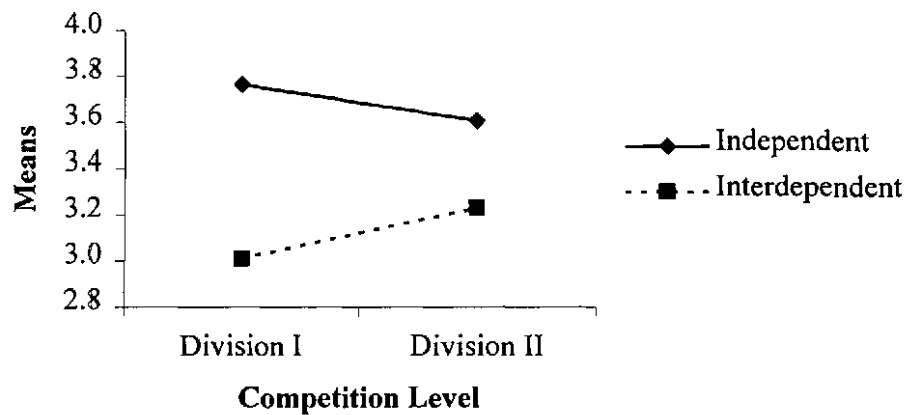


Figure 5. Task Dependence X Level Interaction for Democratic Leader Behavior.

Task Variability by Level

The last interaction examined the effects of task variability and level on this behavior dimension. The ANOVA demonstrated no significant task variability by level interaction for democratic behavior [$F(1, 400) = 1.903, p = .169$].

Gender

The first analysis shown on Table 8 examined the differences in behavior preferences based on the gender of the student-athletes. The ANOVA showed no significant differences between male and female student-athletes' preferences for democratic leader behavior [$F(1, 1) = .021, p > 0.05$].

Competition Level

The next analysis looked at the differences in behavior preferences based on competition level. These results revealed no significant differences between Division I and Division II student-athletes' preferences for democratic leader behavior [$F(1, 1) = .052, p > 0.05$].

Task Dependence

The third analysis on Table 8 examined the differences in behavior preferences based on task dependence. Here the ANOVA demonstrated significant differences between interdependent and independent sport student-athletes on their preferences for democratic leader behavior [$F(1, 400) = 42.038, p = .000$]. Independent sport student-athletes gave higher ratings to democratic leader behavior than did interdependent sport student-athletes ($m = 3.639$ and 3.295 , respectively).

Task Variability

The last analysis examined the differences in behavior preferences based on task variability. The ANOVA revealed significant differences between open and closed sport student-athletes on their preferences for democratic leader behavior [$F(1, 400) = 10.392, p = .001$]. Open sport student-athletes gave higher ratings to democratic leader behavior than did closed sport student-athletes ($m = 3.546$ and 3.399 , respectively).

Positive Feedback Leader Behavior

Student-athlete preferences for leadership behavior were measured utilizing the RLSS. A score of five indicated a strong preference for positive feedback leader behavior. A low score of one indicated no preference for positive feedback leader behavior. Table 9 presents the descriptive statistics for male and female, Division I and Division II, interdependent and independent sport, and open and closed sport student-athletes as related to their recorded preferences on the positive feedback leader behavior subscale.

Table 10 presents the findings of the ANOVA for the variables of gender, competition level, task dependence, and task variability and the related interactions.

Table 9

Descriptive Statistics for Gender, Competition Level, Task Dependence, and TaskVariability for Positive Feedback Leader Behavior

Behavioral Dimension	Group	<i>n</i>	<i>M</i>	<i>SD</i>
Positive Feedback	Gender			
	Males	179	4.123	.552
	Females	229	4.069	.548
Positive Feedback	Level			
	Division I	171	4.118	.500
	Division II	237	4.075	.584
Positive Feedback	Task Dependence			
	Interdependent	236	4.011	.553
	Independent	172	4.206	.526
Positive Feedback	Task Variability			
	Open	293	4.140	.565
	Closed	115	4.075	.544

Gender by Level

The first interaction seen on Table 10 examined the effects of gender and level. These results demonstrated no significant gender by level interaction for positive feedback behavior [$F(1, 400) = .175, p = .676$].

Task Dependence by Level

The next interaction examined the effects of task dependence and level on student-athletes' behavior preferences for positive feedback. The ANOVA showed no significant task dependence by level interaction for this behavior dimension [$F(1, 400) = 3.139, p = .077$].

Table 10

Analysis of Variance for Positive Feedback Leadership Behavior Among Gender,
Competition Level, Task Dependence, and Task Variability

Source of Variation	Dependent Variable	<i>df</i>	<i>MS</i>	<i>F</i>
Gender	Positive Feedback	1	.283	5.549
Level	Positive Feedback	1	.030	.588
Task Dependence	Positive Feedback	1	5.381	18.432**
Task Variability	Positive Feedback	1	1.717	5.881*
Gender X Level	Positive Feedback	1	.051	.175
Task Dependence X Level	Positive Feedback	1	.916	3.139
Task Variability X Level	Positive Feedback	1	.398	1.363
Error	Positive Feedback	400	.292	

* $p < .05$. ** $p < .000$.

Task Variability by Level

The final interaction examined the effects of task variability and level on behavior preferences. Again, the ANOVA showed no significant task variability by level interaction for positive feedback behavior [$F(1, 400) = 1.363, p = .244$].

Gender

As displayed on Table 10, the first analysis examined the differences in behavior preferences based on gender. The ANOVA demonstrated no significant differences between male and female student-athletes' preferences for positive feedback leader behavior [$F(1, 1) = 5.549, p > 0.05$].

Competition Level

The next analysis examined the differences in behavior preferences based on competition level. There were no significant differences between Division I and Division II student-athletes' preferences for positive feedback leader behavior [$F(1, 1) = .588, p > 0.05$].

Task Dependence

The third analysis examined the differences in behavior preferences based on task dependence. These results revealed significant differences between interdependent and independent sport student-athletes on their preferences for positive feedback leader behavior [$F(1, 400) = 18.432, p = .000$]. Independent sport student-athletes gave higher ratings to positive feedback leader behavior than did interdependent sport student-athletes ($m = 4.206$ and 4.011 , respectively).

Task Variability

The last analysis examined the differences in behavior preferences based on task variability. The ANOVA demonstrated significant differences between open and closed sport student-athletes on their preferences for positive feedback leader behavior [$F(1, 400) = 5.881, p = .016$]. Open sport student-athletes gave higher ratings to positive feedback leader behavior than did closed sport student-athletes ($m = 4.140$ and 4.075 , respectively).

Situational Consideration Leader Behavior

As is true with the other behavior dimensions mentioned above, a high score on the RLSS indicated a preference for situational consideration leader behavior while a low score indicated less preference for situational consideration behavior on the part of the

coach. Table 11 presents the descriptive statistics for male and female, Division I and Division II, interdependent and independent sport, and open and closed sport student-athletes as related to their preferences on the situational consideration leader behavior subscale.

Table 11

Descriptive Statistics for Gender, Competition Level, Task Dependence, and Task Variability for Situational Consideration Leader Behavior

Behavioral Dimension	Group	<i>n</i>	<i>M</i>	<i>SD</i>
Situational Consideration	Gender			
	Males	179	4.221	.418
	Females	229	4.333	.377
Situational Consideration	Level			
	Division I	171	4.250	.428
	Division II	237	4.308	.375
Situational Consideration	Task Dependence			
	Interdependent	236	4.242	.399
	Independent	172	4.341	.392
Situational Consideration	Task Variability			
	Open	293	4.305	.413
	Closed	115	4.276	.394

Table 12 presents the findings of the ANOVA for the variables of gender, competition level, task dependence, and task variability, and for the interactions among the variables.

Table 12

Analysis of Variance for Situational Consideration Leadership Behavior Among Gender, Competition Level, Task Dependence, and Task Variability

Source of Variation	Dependent Variable	<i>df</i>	<i>MS</i>	<i>F</i>
Gender	Situational Consideration	1	1.020	8.095
Level	Situational Consideration	1	.471	3.738
Task Dependence	Situational Consideration	1	1.686	11.001**
Task Variability	Situational Consideration	1	.394	2.572
Gender X Level	Situational Consideration	1	.126	.825
Task Dependence X Level	Situational Consideration	1	.222	1.451
Task Variability X Level	Situational Consideration	1	.110	.715
Error	Situational Consideration	400	.153	

* $p < .05$. ** $p < .001$.

Gender by Level

The first interaction examined the effects of gender and level. The ANOVA showed no significant gender by level interaction for situational consideration behavior [$F(1, 400) = .825, p = .364$].

Task Dependence by Level

The next interaction examined the effects of task dependence and level on behavior preferences. The ANOVA demonstrated no significant task dependence by level interaction for situational consideration behavior [$F(1, 400) = 1.451, p = .229$].

Task Variability by Level

The final interaction shown on Table 12 examined the effects of task variability and level on behavior preferences. The ANOVA revealed no significant task variability by level interaction for situational consideration behavior [$F(1, 400) = .715, p = .398$].

Gender

As shown on Table 12, the first analysis examined the differences in behavior preferences based on gender. This ANOVA showed no significant differences between male and female student-athletes' preferences for situational consideration leader behavior [$F(1, 1) = 8.095, p > 0.05$].

Competition Level

The next analysis examined the differences in behavior preferences for situational consideration based on competition level. The ANOVA showed no significant differences between Division I and Division II student-athletes' preferences for this behavioral dimension [$F(1, 1) = 3.738, p > 0.05$].

Task Dependence

The results for task dependence and situational consideration showed significant differences between interdependent and independent sport student-athletes' ratings on this behavior dimension [$F(1, 400) = 11.001, p = .001$]. Independent sport student-

athletes gave higher ratings to situational consideration leader behavior than did interdependent sport student-athletes ($m = 4.341$ and 4.242 , respectively).

Task Variability

The final analysis for situational consideration examined the differences in behavior preferences based on task variability. The ANOVA revealed no significant differences between open and closed sport student-athletes' preferences for this behavior dimension [$F(1, 400) = 2.572, p = .110$].

Social Support Leader Behavior

On the RLSS, a score of five indicated a strong preference for social support leader behavior. A score of one indicated low preference for this type of behavior. Table 13 presents the descriptive statistics for male and female, Division I and Division II, interdependent and independent sport, and open and closed sport student-athletes as related to their recorded preferences on the social support leader behavior subscale.

Table 14 presents the findings of the ANOVA for the variables of gender, competition level, task dependence, and task variability and for the associated interactions.

Gender by Level

The first interaction looked at the effects of gender and level on student-athletes' preferences for social support leader behavior. The ANOVA revealed no significant gender by level interaction for social support behavior [$F(1, 400) = .532, p = .466$].

Table 13

Descriptive Statistics for Gender, Competition Level, Task Dependence, and TaskVariability for Social Support Leader Behavior

Behavioral Dimension	Group	<i>n</i>	<i>M</i>	<i>SD</i>
Social Support	Gender			
	Males	179	3.862	.562
	Females	229	3.787	.509
Social Support	Level			
	Division I	171	3.859	.526
	Division II	237	3.792	.539
Social Support	Task Dependence			
	Interdependent	236	3.756	.519
	Independent	172	3.908	.543
Social Support	Task Variability			
	Open	293	3.847	.576
	Closed	115	3.809	.517

Task Dependence by Level

The next interaction examined the effects of task dependence and level on this behavior dimension. The ANOVA showed no significant task dependence by level interaction for social support behavior [$F(1, 400) = 3.268, p = .071$].

Task Variability by Level

The final interaction looked at the effects of task variability and level on student-athletes' preferences for social support behaviors. The ANOVA showed no significant task variability by level interaction for social support behavior [$F(1, 400) = .513, p = .474$].

Table 14

Analysis of Variance for Social Support Leadership Behavior Among Gender,
Competition Level, Task Dependence, and Task Variability

Source of Variation	Dependent Variable	<i>df</i>	<i>MS</i>	<i>F</i>
Gender	Social Support	1	.376	2.557
Level	Social Support	1	.038	.258
Task Dependence	Social Support	1	3.684	13.318**
Task Variability	Social Support	1	1.465	5.296*
Gender X Level	Social Support	1	.147	.532
Task Dependence X Level	Social Support	1	.904	3.268
Task Variability X Level	Social Support	1	.142	.513
Error	Social Support	400	.277	

* $p < .05$. ** $p < .000$.

Gender

The first analysis shown on Table 14 looked at the differences in preferences for social support behaviors based on gender. The results demonstrated no significant differences between male and female student-athletes' preferences for social support leader behavior [$F(1, 1) = 2.557, p > 0.05$].

Competition Level

The second analysis shown on Table 14 examined the differences in behavior preferences based on competition level. The results revealed no significant differences between Division I and Division II student-athletes' preferences for social support leader behavior [$F(1, 1) = .258, p > 0.05$].

Task Dependence

The next analysis looked at differences in preferences for social support behavior based on task dependence. Here, the results revealed significant differences between interdependent and independent sport student-athletes on their preferences for social support leader behavior [$F(1, 400) = 13.318, p = .000$]. Independent sport student-athletes gave higher ratings to social support leader behavior than did interdependent sport student-athletes ($m = 3.908$ and 3.756 , respectively).

Task Variability

The last analysis for social support leader behavior looked for significant differences based on task variability. These results showed significant differences between open and closed sport student-athletes' preferences on this behavior dimension [$F(1, 400) = 5.296, p = .022$]. Open sport student-athletes gave higher ratings to social support leader behavior than did closed sport student-athletes ($m = 3.847$ and 3.809 , respectively).

Training and Instruction Leader Behavior

On the RLSS, a high score indicated a student-athletes' preference for training and instruction leader behaviors, while a low score indicated less preference for these types of leader behaviors. Table 15 presents the descriptive statistics for male and female, Division I and Division II, interdependent and independent sport, and open and closed sport student-athletes as related to their recorded preferences on the training and instruction leader behavior subscale.

Table 15

Descriptive Statistics for Gender, Competition Level, Task Dependence, and TaskVariability for Training and Instruction Leader Behavior

Behavioral Dimension	Group	<i>n</i>	<i>M</i>	<i>SD</i>
Training and Instruction	Gender			
	Males	179	4.330	.443
	Females	229	4.395	.377
Training and Instruction	Level			
	Division I	171	4.346	.431
	Division II	237	4.381	.391
Training and Instruction	Task Dependence			
	Interdependent	236	4.341	.386
	Independent	172	4.402	.435
Training and Instruction	Task Variability			
	Open	293	4.399	.469
	Closed	115	4.354	.382

Table 16 presents the findings of the ANOVA for the variables of gender, competition level, task dependence, and task variability. The table also shows the interactions between competition level and each of the other variables.

Gender by Level

This first interaction shown in Table 16 examined the effects of gender and level on preferences for training and instruction behaviors. The ANOVA demonstrated no significant gender by level interaction for training and instruction behaviors [$F(1, 400) = .184, p = .668$].

Table 16

Analysis of Variance for Training and Instruction Leadership Behavior Among Gender,
Competition Level, Task Dependence, and Task Variability

Source of Variation	Dependent Variable	<i>df</i>	<i>MS</i>	<i>F</i>
Gender	Training and Instruction	1	.408	13.600
Level	Training and Instruction	1	.340	11.330
Task Dependence	Training and Instruction	1	.278	1.669
Task Variability	Training and Instruction	1	.000	.001
Gender X Level	Training and Instruction	1	.030	.184
Task Dependence X Level	Training and Instruction	1	.169	1.014
Task Variability X Level	Training and Instruction	1	.187	1.123
Error	Training and Instruction	400	.167	

* $p < .05$.

Task Dependence by Level

The second interaction shown on Table 16 examined the effects of task dependence and level on student-athletes' preferences for training and instruction behaviors. The ANOVA revealed no significant task dependence by level interaction for this behavior dimension [$F(1, 400) = 1.014, p = .315$].

Task Variability by Level

The final interaction shown on Table 16 looked at the effects of task variability and level on student-athletes' preferences for training and instruction behaviors. The results of this analysis showed no significant task variability by level interaction for training and instruction behavior [$F(1, 400) = 1.123, p = .290$].

Gender

The first analysis displayed on Table 16 are for differences in behavior preferences based on gender. These results revealed no significant differences between male and female student-athletes' preferences for training and instruction leader behaviors [$F(1, 1) = 13.600, p > 0.05$].

Competition Level

The next analysis shown on Table 16 examined the differences in behavior preferences based on competition level. These results showed no significant differences between Division I and Division II student-athletes' preferences for training and instruction leader behavior [$F(1, 1) = 11.330, p > 0.05$].

Task Dependence

The third analysis shown on Table 16 looked at the differences in behavior preferences based on task dependence. The ANOVA showed no significant differences between interdependent and independent sport student-athletes' preferences for training and instruction leader behavior [$F(1, 400) = 1.669, p = .197$].

Task Variability

The last analysis seen on Table 16 examined the differences in behavior preferences based on task variability. The ANOVA showed no significant differences

between open and closed sport student-athletes' preferences for training and instruction leader behavior [$F(1, 400) = .001, p = .977$].

Summary

This chapter first reviewed the research questions of the study. Next, the findings of the study were presented, including the results of the split-plot ANOVA and interactions. A summary of the findings in relation to the research questions concludes this chapter.

Gender

The split-plot ANOVA was computed to determine whether there were significant differences between male and female student-athletes and preferences for coaching leadership behavior. Results showed a significant gender by level interaction for democratic behavior. Despite the interaction, the post-hoc Fisher's LSD failed to point to specific differences.

Competition Level

ANOVAs were calculated to determine whether there were significant differences between Division I and Division II student-athletes' preferences for the different dimensions of coaching leadership behavior. Results demonstrated two significant interactions for autocratic leader behavior.

Results revealed a significant task dependence by level interaction for autocratic behavior. The post-hoc Fisher's LSD showed significant differences between Division I independent sport and Division II independent sport student-athletes. Division I independent sport student-athletes gave higher ratings to autocratic behavior than did Division II independent sport student-athletes.

The results also showed a significant task variability by level interaction for autocratic behavior. Post-hoc Fisher's LSD demonstrated significant differences between Division I open sport and Division II open sport student-athletes. Division I open sport student-athletes gave higher ratings to autocratic behavior than did Division II open sport student-athletes.

Task Dependence

ANOVAs were computed to determine whether there were significant differences between interdependent sport and independent sport student-athletes' preferences for each of the six different coaching leadership behavior dimensions. A number of differences were found for student-athletes engaged in interdependent and independent sports.

Results revealed a significant task dependence by level interaction existed for autocratic behavior. The post-hoc Fisher's LSD results showed significant differences between Division II interdependent and Division II independent sport student-athletes. Division II interdependent sport student-athletes gave higher ratings to autocratic behavior than did Division II independent sport student-athletes.

The results showed a significant difference between interdependent sport and independent sport student-athletes and preferences for democratic behavior. Independent sport student-athletes showed greater preferences for democratic behaviors than did interdependent sport student-athletes.

The results also demonstrated a significant task dependence by level interaction for democratic behavior. The post-hoc Fisher's LSD revealed significant differences between Division I interdependent and Division I independent sport student-athletes.

Division I independent sport student-athletes gave higher ratings to democratic behavior than did Division I interdependent sport student-athletes. The post-hoc Fisher's LSD also demonstrated significant differences between Division II interdependent and Division II independent sport student-athletes. Division II independent sport student-athletes gave higher ratings to democratic behavior than did Division II interdependent sport student-athletes.

Results revealed a significant difference between interdependent sport and independent sport student-athletes and their preferences for positive feedback behavior. Independent sport student-athletes indicated greater preference for positive feedback than did interdependent sport student-athletes.

The results of the study also demonstrated a significant difference between interdependent sport and independent sport student-athletes and their preferences for situational consideration behaviors as well as their preferences for social support behaviors. Independent sport student-athletes gave higher ratings to situational consideration behaviors than did interdependent sport student-athletes. Independent sport student-athletes also gave higher ratings for social support behaviors than did interdependent sport-students.

Task Variability

ANOVAs were calculated to determine whether there were significant differences between open sport and closed sport student-athletes on each of the coaching leadership behavior dimensions. There were significant differences for four behavior dimensions based on the open versus closed sport variable.

Results demonstrated a significant task variability by level interaction for autocratic behavior. Post-hoc Fisher's LSD showed significant differences between Division I open sport and Division I closed sport student-athletes. Division I open sport student-athletes showed greater preferences for autocratic behaviors than did Division I closed sport student-athletes.

The results revealed a significant difference between open and closed sport student-athletes and their preferences for democratic behavior. Open sport student-athletes gave higher ratings to these behaviors than did closed sport student-athletes.

The results of the study showed a significant difference between open and closed sport student-athletes and their preferences for positive feedback behavior. Open sport student-athletes gave higher ratings to positive feedback behaviors than did closed sport student-athletes.

Finally, the findings demonstrated a significant difference between open and closed sport student-athletes and their preferences for social support behavior. Open sport student-athletes showed greater preferences for these behaviors than did closed sport student-athletes.

Chapter Five presents a summary of the study, conclusions about the findings, and recommendations for future practice and research regarding student-athletes' preferences for coaching leadership behavior.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Chapter Five serves several purposes. First, the chapter presents a brief summary of the problem and research design of the study. Next, the study's findings are discussed. Finally, the chapter presents conclusions and recommendations for future practice and research.

Summary

Sport leadership behavior has had limited investigations and attention in the literature. To date, research efforts have focused on coaches in determining personality traits and individual behaviors, and assessment of behavior styles. These past efforts have ignored the student-athlete, an important member of the sport leadership dyad. Addressing the need for sport leadership investigations, Chelladurai (1980) proposed the multidimensional model of leadership. Based upon contingency and situational leadership theories, the model reflects characteristics of the leader, needs and desires of the members, and demands of the organization. The model focuses upon three states of coaching leadership behavior: actual leader behavior, required leader behavior, and leader behavior preferred by the student-athlete. Antecedents of these behaviors, which may influence the behaviors, include situational, leader, and member characteristics. The basic tenet of the model states student-athlete performance and satisfaction are functions of the congruence between actual and required leader behaviors and leader behavior preferred by the student-athlete.

Investigations utilizing the multidimensional model of leadership in the sport setting have not produced conclusive support for the underlying theories. However, the

model appears to provide a more robust explanation of sport leadership behavior than one dimensional trait or behavioral theories. If, as the multidimensional model of leadership suggests, coaches should attempt to match their actual behavior to the types of behavior desired by the student-athletes, then preferred coaching behavior becomes an important, yet largely unexplored variable (Terry, 1984).

Because of the limited research efforts on sport leadership behavior involving student-athletes, this study attempted to extend previous research findings related to the multidimensional model of leadership. In particular, the purpose of this study was to investigate differences among student-athletes' preferred leadership behavior of their coaches based on gender (male/female) of the student-athletes, and the competition levels (Division I/Division II), task dependence (interdependent/independent), task variability (open/closed) of the sports in which they are engaged along with the interactions among these variables. Four research questions framed the study:

Research Question 1: Do the coach leadership behavior preferences of student-athletes differ based on gender?

Research Question 2: Do the coach leadership behavior preferences of student-athletes differ based on competition levels?

Research Question 3: Do the coach leadership behavior preferences of student-athletes who participate in interdependent sports differ from those who participate in independent sports?

Research Question 4: Do the coach leadership behavior preferences of student-athletes who participate in open sports differ from those who participate in closed sports?

Four hundred and eight male and female student-athletes from four NCAA Division I universities and six NCAA Division II universities in the southeastern United States participated in the study. The participants included male respondents chosen from athletic rosters in baseball, basketball, golf, tennis, and track/cross country. Female respondents were chosen from athletic rosters in basketball, soccer, tennis, track/cross country, and volleyball.

Discussion

This discussion draws conclusions from the findings presented in Chapter Four and relates the conclusions to past research and the theoretical bases for the study previously presented in the review of literature in Chapter Two. The discussion is organized according to the differences between male and female student-athletes' preferences for coaching leadership behavior, the differences between NCAA Division I and NCAA Division II student-athletes' preferences for coaching leadership behavior, the differences between interdependent sport and independent sport student-athletes' preferences for coaching leadership behavior, and the differences between open sport and closed sport student-athletes' preferences for coaching leadership behavior. Following this discussion are the study's conclusions and recommendations, the last section of this chapter.

Research Question 1

The first research question asked the following: Do the coach leadership behavior preferences of student-athletes differ based on gender? This study suggests that male and female NCAA intercollegiate student-athletes' preferences for coaching leadership behavior are similar on all but one of the six behavior dimensions. The findings revealed

only one significant difference among Division I and Division II male and female student-athletes, a significant gender by level interaction.

There was a significant gender by level interaction found within the democratic leader behavior dimension. However, post-hoc testing failed to find significant differences between the groups analyzed. The analysis failed to show significant differences between Division I male and Division I female student-athletes, between Division II male and Division II female student-athletes, between Division I male and Division II male student-athletes, or between Division I female and Division II female student-athletes on their preferences for democratic behavior. Further explanation of the interaction is difficult because of the lack of significant findings among the competition levels or genders of the study participants. The low power of Fisher's LSD may account for the lack of identified differences among the groups.

Chelladurai, Haggerty, and Baxter (1989), Massimo (1980), and Terry and Howe (1984) demonstrated no significant differences in male and female behavior preferences among club, university, and elite level athletes. In contrast, Chelladurai and Arnott (1985), Chelladurai and Saleh (1978), Erle (1981), and Terry (1984) did identify significant differences among male and female physical education majors, university, intramural, and elite athletes' preferences for leader behavior and decision styles. These researchers suggested that female athletes preferred a democratic leader and male athletes preferred an autocratic leader. Based upon differences found among male and female physical education majors' preferences, Chelladurai and Saleh (1978) suggested different behaviors for a coach based on the gender composition of the team. This implies a coach

of a female tennis team would demonstrate different leader behaviors than a coach of a male tennis team.

The significant gender by level interaction from this study may support differences found in past investigations of student-athletes' preferences for coaching leadership behavior based on gender at specific competition levels. However, the failure of post-hoc analyses to demonstrate specific significant differences between the genders or competition levels of the study participants leaves the results inconclusive.

Research Question 2

The second research question asked the following: Do the coach leadership behavior preferences of student-athletes differ based on competition levels? This study suggests that NCAA Division I and Division II student-athletes' preferences for coaching leadership behavior are similar on all but one of the six behavior dimensions. The findings revealed two significant differences among NCAA Division I and Division II student-athletes' preferences for autocratic leader behavior, a significant task dependence by level interaction as well as a significant task variability by level interaction.

While there were no main effects for task dependence or competition level, there was a significant task dependence by level interaction found for the autocratic leader behavior dimension. Division I independent sport student-athletes gave higher ratings to autocratic behavior than did Division II independent sport student-athletes. Since the variable of task dependence was identical for both groups, it may be possible that competition level affected student-athletes' behavior preferences.

There was also a significant task variability by level interaction found for the autocratic leader behavior dimension. Division I open sport student-athletes gave higher

ratings to autocratic behavior than did Division II open sport student-athletes. Again there were no main effects for task variability or competition level. Because of the identical task variability among the groups, it may be possible that competition level had an effect on student-athletes' behavior preferences.

There are several possible reasons why Division I student-athletes gave higher ratings to autocratic leader behavior. The Division I setting represents the highest level of intercollegiate competition in the NCAA. Characteristics of this setting may influence Division I student-athletes' preferences for autocratic leader behavior. Renick (1974) described student-athletes as performers with very few rights, who must conform to the organization's system to continue participation. Similarly, Blann (1985) noted that coaches place excessive demands on athletes' time, at and away from the court or field. It is possible the Division I student-athletes' preferences for autocratic leader behavior result from these coaching behaviors. It may be that the Division I student-athletes in this study prefer the coach to have total control over training methods and decisions on and off the field or court in order to continue participation within the organization's prescribed rules and regulations.

Division I student-athletes participate in more practices and contests than Division II student-athletes. NCAA standards also require Division I programs to schedule Division I opponents. It is possible the influence of higher competition is reflected in the higher ratings of Division I student-athletes for autocratic leader behavior. It may be that high levels of competition lead to a greater emphasis on winning. Blann (1985) suggested that as the level of intercollegiate competition increased, greater emphasis was placed on winning and greater expectations were placed on student-athletes to train and excel in

their sport. The Division I student-athletes in this study may prefer autocratic leader behavior to provide structure and closer supervision from coaches so they can realize the organizational reward, winning.

At times length of tenure in sport has been used as a surrogate marker for competition level. An athlete participating at the intercollegiate level would possess longer tenure in sport than an athlete participating at the junior high school level. Investigations of student-athletes' preferences of leadership behaviors based on tenure have demonstrated significant differences. However, longer tenure in sport and NCAA competition levels of Division I and Division II do not appear as identical measures in determining their influence on student-athletes' preferred leader behavior. The possible influence of longer tenure in sport on student-athletes' preferences for coaching leadership behavior has been examined in the literature. The differences in behavior preferences between NCAA competition levels of Division I and Division II in this study suggest the need for additional research.

While significant differences were found within the autocratic behavior dimension, the researcher expected to see differences among student-athlete preferences in other behavior dimensions. The expectation of even more differences between Division I and Division II student-athletes' preferences for leadership behavior arose from the fact that there are significant differences in NCAA standards. These differences in standards may very well lead to different types of student-athletes enrolling at Division I versus Division II institutions.

The NCAA (NCAA Division I and II Manual, 1999) requires each division to adhere to different standards in regards to sports sponsorship, scheduling, and financial

aid. These requirements result in longer in-season and off-season preparation periods for Division I student-athletes. Social interaction is often restricted to the team because of time demands placed on the student-athlete which may cause student-athletes' interpersonal needs to go unfulfilled outside of sport. The researcher believed that there would be differences between Division I and Division II student-athletes' preferences for social support leader behavior. Division I student-athletes were expected to give higher ratings to social support leader behavior to meet their interpersonal needs. The lack of significant findings failed to substantiate this belief.

The Division I setting represents the highest level of intercollegiate competition. The increased amount of available scholarship dollars allows Division I programs to recruit and sign the most talented student-athletes. The pressure to win may lead Division I student-athletes to a daily preoccupation with practice and competition. Successful outcomes such as physical skill improvements and winning may in turn lead to a desire to play professionally. The researcher believed that there would be differences between Division I and Division II student-athletes' preferences for training and instruction leader behavior. Division I student-athletes were expected to give higher ratings to training and instruction leader behaviors to provide the skill, technique, and tactics as well as physical training required for professional sports. The lack of significant findings failed to support this belief.

There are several reasons why other differences may not have been found. For example, it is possible that there are differences among athletic programs within the NCAA Division I setting. Increased visibility of particular sports and programs follows successful athletic performances on the field or court. A program that receives more

visibility will obtain more financial resources for recruiting, facilities, and further media attention. Teams with national reputations in major sports maintain high visibility through television contracts which benefit the entire athletic program. Division I programs that receive this high visibility are much different than other Division I programs with low visibility with respect to media attention and financial resources.

Examining the Division I institutions in this study, three of the four appear to represent low visibility athletic programs. Low visibility programs do not benefit from television contracts or large alumni support to provide additional revenue. These programs also do not regularly compete for national championships with their sponsored sports. It is possible these Division I programs are more similar to the Division II institutions in this study than to the high visibility Division I programs described. Division I programs with high visibility stress winning for the opportunity to increase financial resources and media attention. Division I programs with low visibility and Division II programs stress physical development and academic achievement among the student-athletes. Similar goals of the Division I and Division II programs in the institutions sampled may have affected the findings of this study.

Research Question 3

The third research question asked the following: Do the coach leadership behavior preferences of student-athletes who participate in interdependent sports differ from those who participate in independent sports? This study provides conflicting findings among student-athletes' preferences for coaching leadership behavior based on task dependence. Findings for several of the leader behavior dimensions demonstrate support for past

studies and the multidimensional model of leadership. Some of the other behavior dimension findings contradict past investigations of preferred leader behavior.

Autocratic Leader Behavior

The results of this study demonstrate a significant difference between Division II interdependent sport and Division II independent sport student-athletes on their preferences for autocratic leader behavior. The significant task dependence by level interaction for autocratic behavior confirms past investigations.

The higher ratings among Division II interdependent sport student-athletes on their preferences for autocratic leader behavior appear to support the path-goal theory and the results of past investigations based on task dependence. The path-goal theory (House, 1971; House & Dessler, 1974) proposed that where tasks were ambiguous, varied, and interdependent, group members preferred a highly structured regime. Team or interdependent sports, characterized by multiple plays and strategies, may result in ambiguous tasks for student-athletes. Terry (1984) and Terry and Howe (1984) demonstrated that interdependent sport athletes had a significantly higher preference for autocratic leader behavior. The preferences for autocratic leader behavior may help clarify student-athletes' path-goal relationship and reduce ambiguity through the creation of a well-structured environment for team members. The findings of this study suggest Division II interdependent sport student-athletes may concede decision-making and authority to the coach to provide this structured environment. Terry (1984) stated that such an environment might prove conducive to team success.

Democratic Leader Behavior

The data from this study indicate significant differences between interdependent and independent sport student-athletes on their preferences for democratic leader behavior. There is also a significant task dependence by level interaction. Overall, these findings support the underlying theories of the multidimensional model of leadership.

This study demonstrates a significantly higher preference for democratic leader behavior among independent sport student-athletes. The task dependence by level interaction confirms this relationship with significant differences between Division I interdependent sport and Division I independent sport student-athletes and between Division II interdependent sport and Division II independent sport student-athletes on their preferences for democratic leader behavior. The higher ratings among Division I and Division II independent sport student-athletes on their preferences for democratic leader behavior support postulates of the path-goal theory. House (1971) and House and Dessler (1974) proposed that with interdependent tasks, student-athletes would form preferences for greater structure and closer supervision. With independent tasks, student-athletes may prefer a less structured training environment which meets their individual requirements. Independent sport student-athletes perform in isolation from other teammates. This individual participation suggests that student-athletes prefer control over training methods and strategies.

The significant findings for the democratic behavior dimension support past investigations of preferred leader behavior based on task dependence. Terry (1984) and Terry and Howe (1984) found that elite, club, and university independent sport athletes had a significantly higher preference for democratic leader behavior. However, the results

are in contrast to those of Chelladurai and Saleh (1978) in which they found no significant differences in university physical education majors' preferences for democratic leader behavior based on task dependence.

Rakestraw and Weiss (1981) suggested individual sport student-athletes developed their own specific performance goals and the goal setting process was internal to the student-athlete. In this process, the influence of a coach was peripheral. It appears that the Division I and Division II independent sport student-athletes in this study prefer to develop and execute their own training and performance goals with limited involvement of the coach.

Positive Feedback Leader Behavior

The significantly higher preferences for positive feedback leader behavior among independent sport student-athletes in this study contradict past studies. Investigating club, university, and elite athletes, Terry (1984) and Terry and Howe (1984) found that interdependent sport athletes had a significantly higher preference for positive feedback leader behavior. Terry (1984) suggested that interdependent sport student-athlete preferences for positive feedback might represent fulfillment of individual student-athlete needs. In a group environment such as a team, individual student-athletes' interpersonal needs might go unfulfilled. The preference for positive feedback might fulfill the student-athletes' need for recognition and reward by earning praise from the coach. Terry (1984) proposed that independent sport student-athletes might share a closer relationship with their coach, making outward recognition and rewards for performance less necessary.

Chelladurai (1990) and Chelladurai and Saleh (1980) stated that positive feedback behaviors reflected the extent a coach expresses appreciation for the student-athletes'

performance and contribution. These coaching behaviors maintain the motivational level of student-athletes. The finding that independent sport student-athletes had a stronger preference for positive feedback leader behavior suggests a desire on their part for greater feedback from the coach in practice and/or competition. This would imply that independent sport student-athletes in this study sought positive feedback to reinforce their performance and to maintain their motivational level. In contrast, Rakestraw and Weiss (1981) suggested the influence of a coach was peripheral among independent sport student-athletes. However, it appears preferences for positive feedback leader behavior among independent sport student-athletes in this study demonstrate the influence of a coach is not peripheral. Although the independent sport study participants prefer democratic leader behavior, the participants also prefer direct influence from a coach in the form of positive feedback leader behavior.

Situational Consideration Leader Behavior

The data from this study demonstrate a significantly higher preference for situational consideration leader behavior among independent sport student-athletes. Because few researchers have utilized the Revised Leadership Scale for Sport (Zhang, Jensen, & Mann, 1997) beyond the revision process, a comparison of findings with past investigations is difficult.

Zhang, Jensen, and Mann (1997) stated that situational consideration leader behavior referred to the degree to which a coach reflected situational factors in her or his behavior. Coaches who demonstrate these behaviors consider the environment and individual student-athletes in setting goals and methods to reach the goals. For example, it is possible the independent sport student-athletes in this study prefer situational

consideration leader behavior because the coach considers individual student-athletes' maturity and skill levels in selecting goals and methods to achieve the goals.

Fielder (1967), Halprin and Winer (1957), and Hersey and Blanchard (1977) have described leadership behavior as consisting of two dimensions, consideration and initiating structure. Behaviors along the consideration dimension were interpersonal-oriented while behaviors within the initiating structure dimension were task-oriented. It is possible the independent sport student-athletes in the study prefer situational consideration leader behavior to fulfill their interpersonal needs while participating in the individual sports of golf, tennis, and track/cross country.

Social Support Leader Behavior

The results of this study indicate significantly higher preferences for social support leader behaviors among independent sport student-athletes. The findings confirm the results of past investigations based on task dependence. Terry (1984) and Terry and Howe (1984) demonstrated that independent sport athletes had a significantly higher preference for social support behavior. Terry (1984) suggested that the closeness of the student-athlete and coach relationship enabled the coach to play the role of confidant among the athletes. This role might make preferences for social support behavior more appropriate for the independent sport student-athlete. The behavior preferences of the independent sport student-athletes in this study may reflect the interpersonal relationship with their coach and the interpersonal nature of leadership.

Chelladurai (1990) and Chelladurai and Saleh (1980) suggested social support leader behavior referred to the extent coaches involve themselves in satisfying the interpersonal needs of student-athletes. The psychological supports are independent of

student-athletes' physical training or competition. Chelladurai (1980) proposed that at the university level, a high structuring and high consideration leader behavior style seemed appropriate. The findings from this study support the proposed high consideration style. It is possible the independent sport student-athletes in this study prefer social support leader behavior because they need their coach's motivational influence. Motivation may result in greater physical and mental efforts during long, monotonous practice sessions. It is possible the time commitments required of the independent sport student-athletes in the study restrict social support outside of the court or field. Student-athletes' preferences for social support behavior from their coaches may satisfy their interpersonal needs and help establish friendships with coaches.

Research Question 4

The fourth research question asked the following: Do the coach leadership behavior preferences of student-athletes who participate in open sports differ from those who participate in closed sports? The data from this study demonstrate inconsistent findings concerning open and closed sport student-athlete preferences for coaching leadership behavior. Results from several of the behavior dimensions contradict past investigations and the multidimensional model of leadership. Other findings appear to support past studies and the underlying theories of the multidimensional model.

Autocratic Leader Behavior

The significant level by task variability interaction for the autocratic leader behavior dimension supports the underlying theories of the multidimensional model of leadership. The results of this study reveal significant differences between Division I

open sport and Division I closed sport student-athletes on their preferences for autocratic leader behavior.

The findings that Division I open sport student-athletes in this study gave higher ratings to autocratic leader behavior support the path-goal theory. House (1971) and House and Dessler (1974) suggested that with ambiguous and varied tasks, student-athletes would prefer greater structure and closer supervision. Open sports are characterized by high variability, resulting in ambiguous tasks for student-athletes. Autocratic coaches use commands while prescribing plans and methods for student-athletes' activities (Chelladurai, 1990; Chelladurai & Saleh, 1980). It is possible the Division I open sport student-athletes in this study prefer autocratic leader behavior to reduce the ambiguity of the task through the creation of a well-structured environment for team members. From the results, the Division I open sport student-athletes appear to concede decision-making and personal authority to the coach. Terry (1984) proposed such a structured environment might prove conducive to team success. The success may in turn increase student-athletes' preferences for autocratic leader behavior.

Democratic Leader Behavior

This study demonstrates a significantly higher preference for democratic leader behavior among open sport student-athletes. These results confirm the findings of past studies. Riemer and Chelladurai (1995) found that open sport student-athletes had a significantly higher preference for democratic behaviors. Riemer and Chelladurai (1995) suggested that movements of opponents during play dictated open sport student-athletes' tasks, which required the coach to display democratic leader behavior. The open sports in this study, baseball, basketball, soccer, tennis, and volleyball require student-athletes to

respond to objects and opponents that move in space. In support of the suggestions of Riemer and Chelladurai (1995), the open sport student-athletes in this study appear to prefer democratic leader behavior to allow for participation in selecting game tactics, strategies, and reactions to objects and opponents. The higher preferences for democratic behavior among open sport student-athletes are incongruent with other findings in which Division I open sport student-athletes gave higher ratings to autocratic behavior.

Positive Feedback Leader Behavior

The significantly higher preferences for positive feedback leader behavior among open sport student-athletes appear to support the path-goal theory. The path-goal theory (House, 1971) suggests that coaching and guidance would be provided by the coach if lacking in the environment.

Terry (1984) suggested that preferences for positive feedback behavior might represent fulfillment of the individual student-athletes' need for recognition and reward in a group environment where interpersonal needs might go unfulfilled. The higher preferences among open sport student-athletes in this study appear to support this suggestion. The majority of open sports in this study represent team sports, a group environment in which individual interpersonal needs may go unfulfilled. However, this study also examined differences based upon task dependence and demonstrated higher ratings for positive feedback behavior among independent, or individual sport student-athletes.

An open sport, characterized by high variability, requires the student-athlete to respond to objects that move in space and requires spatial/temporal adjustment. Chelladurai (1990) and Chelladurai and Saleh (1980) suggested positive feedback

behavior reflected coaches reinforcing proper performance through encouraging, recognizing, and correcting student-athletes. It is possible the open sport student-athletes in this study prefer positive feedback behavior to reinforce the various adjustments required in response to movements of the ball or opponents during practice or competition. The incongruence of the results of this study on preferences for positive feedback behavior between independent sport and open sport student-athletes suggests the need for additional research.

Social Support Leader Behavior

The results of this study indicate a significantly stronger preference for social support leader behavior among open sport student-athletes. These findings conflict with a study by Chelladurai and Saleh (1978), in which closed sport students had a significantly higher preference for social support behaviors. Chelladurai and Saleh (1978) suggested that their findings among closed sport students indicated support of the path-goal theory. However, the findings of this study confirm the results of Riemer and Chelladurai (1995), in which open sport student-athletes had a significantly higher preference for social support behavior. Riemer and Chelladurai (1995) proposed that these preferences also were consistent with the path-goal theory.

The path-goal theory (House, 1971) suggested student-athlete performance and satisfaction was highly influenced by a coach's behavior. The coach's behaviors should be appropriate to student-athletes' needs and desires, and characteristics of the task. The functions of a coach were to provide coaching, guidance and personal support to student-athletes if these were lacking in the environment. Chelladurai and Saleh (1978) proposed that closed sport students' preferences for social support behavior indicated the athletes'

need for clarification of path-goal relationships and for a sense of satisfaction. Riemer and Chelladurai (1995) suggested that open sport student-athletes' preferences for social support behavior appeared to be based on a need for interpersonal support provided by the coach.

Social support leader behavior referred to the extent coaches involve themselves in satisfying the interpersonal needs of student-athletes (Chelladurai, 1990; Chelladurai & Saleh, 1980). The psychological supports are independent of student-athletes' physical activities. The findings from this study support the path-goal theory and suggestions from past investigations. It is possible the open sport student-athletes in this study prefer social support behavior to satisfy their interpersonal needs. The need for friendship and assistance with personal problems may be fulfilled by the coach when lacking in the environment. It is possible the preferences for social support behaviors indicate the need for structure and the creation of a positive group atmosphere. Structure and the fulfillment of needs may help to clarify the path-goal relationship and increase satisfaction and performance of the student-athlete.

Conclusions and Recommendations

The findings of this study lead to conclusions, recommendations for practice, and questions worthy of future study in the area of preferred leadership behavior of NCAA Division I and Division II intercollegiate student-athletes. Each of these is important to consider given the emphasis placed upon intercollegiate sports in society and the limited amount of empirical research that has been conducted in the area of sport leadership behavior.

The results of this study are examined within the conceptual framework of the multidimensional model of leadership (Chelladurai, 1979). The model focuses upon three states of leadership behavior: actual leader behavior, required leader behavior, and leader behavior preferred by the student-athlete. Antecedents of the three behaviors, which may influence the behaviors, include situational, leader, and member characteristics. The basic tenet of the model states student-athlete performance and satisfaction are functions of the congruence between actual and required leader behaviors and leader behavior preferred by the student-athlete.

Preferred leader behavior describes the type of behavior student-athletes would like from their coaches. Chelladurai (1990) suggested that student-athletes' preferences for specific leader behaviors were influenced by member characteristics of personality, ability, and needs, as well as by situational requirements of the organization. Chelladurai (1980) proposed that student-athletes' preferred behavior could vary based on situational requirements such as organizational rules, regulations, and goals. The specific student-athlete characteristics examined in this study were gender, competition level, and the types of sports in which the student-athletes were engaged.

The results of this study and the related literature suggest that differences may exist among student-athletes' preferred leadership of their coaches based on competition level, as well as the task dependence and task variability of the student-athletes' chosen sport. The results of the gender by level interaction suggest that there may be differences between female and male student-athletes' preferences for democratic leader behavior, but that these differences may be linked to the competition level. Because post hoc

Fisher's LSDs failed to pinpoint where the differences lie, the results are difficult to interpret.

The results of the task dependence by level interaction demonstrated significant differences between Division I and Division II student-athletes' preferences for autocratic leader behavior. Division I independent sport student-athletes gave higher ratings to autocratic leader behavior than did Division II independent sport student-athletes.

The results of the task variability by level interaction showed significant differences between Division I and Division II student-athletes' preferences for autocratic leader behavior. Division I open sport student-athletes gave higher ratings to autocratic leader behavior than did Division II open sport student-athletes.

The task dependence by level interaction also demonstrated significant differences in interdependent sport and independent sport student-athletes' preferences for autocratic and democratic leader behaviors. Division II interdependent sport student-athletes gave higher ratings to autocratic leader behavior than did their Division II independent sport counterparts. Division I independent sport student-athletes gave higher ratings to democratic leader behavior than did Division I interdependent sport student-athletes and Division II independent sport student-athletes gave higher ratings to democratic leader behavior than did their Division II interdependent sport counterparts. Independent sport student-athletes, regardless of division, showed greater preferences for democratic, positive feedback, situational consideration, and social support leader behaviors on the part of their coaches than did student-athletes engaged in interdependent sports.

The task variability by level interaction demonstrated a significant difference in preferences for autocratic leader behavior. Division I open sport student-athletes gave higher ratings to autocratic leader behavior than did Division I closed sport student-athletes. Examining open sport versus closed sport student-athletes, regardless of division, the study revealed that student-athletes engaged in open sports gave higher ratings to democratic, positive feedback, and social support leader behaviors than did their counterparts in closed sports.

These results provide support for a portion of the multidimensional model of leadership, namely the existence of differences based on student-athlete characteristics such as competition level, and the task dependence and task variability of the sport. The model also suggests the importance of matching actual coaching behavior to the preferred behavior of the student-athlete (Chelladurai, 1980, 1990). Although the purpose of this study was not to test the basic tenet of the theory, the results do provide coaches with some direction in pursuing this principle.

The results of this study present indicators of preferred leadership behavior among the study participants. According to these results, NCAA Division I and Division II independent sport student-athletes prefer democratic, positive feedback, situational consideration, and social support leader behaviors from their coaches. NCAA Division I and Division II open sport student-athletes prefer democratic, positive feedback, and social support leader behaviors from their coaches. Coaches may wish to use these results to modify their coaching behaviors and to build greater congruence between actual and preferred behaviors. According to the multidimensional model, greater congruence should lead to improve student-athletes' performance and satisfaction. Of course, the

results from this study apply only to the sample population in this study and may not represent behavior preferences for all intercollegiate settings.

The findings of this study suggest that student-athlete preferences for leadership behavior are influenced by member and situational characteristics. Chelladurai (1980) suggested leader behaviors which deviate from member preferences and/or organizational requirements will be detrimental to performance and satisfaction. From the study's findings, it appears coaches should consider student-athletes' needs, desires, and abilities as well as organization rules, regulations, and goals in determining actual behavior.

The intercollegiate sport setting has many characteristics which differ from secondary and professional levels. Many of these characteristics are reflected in NCAA standards and goals among the competition levels of Division I and Division II. It may be that NCAA standards and goals affect student-athlete behavior preferences, a consideration for actual coaching behavior. Chelladurai (1980) suggested at the university level, a high structuring and high consideration leadership style seemed appropriate. Terry (1984) suggested that coaching behavior should be modified according to the type of sport being coached. Zhang, Jensen, and Mann (1997) recommended further research on competition levels during the revision of the RLSS. The differences in the findings of this study based upon competition levels and the recommendations from past investigations suggest the need for additional research.

The multidimensional model of leadership and the findings from this study may aid in the evaluation of coaching leadership behavior. Coaching method and training preparation programs may utilize this study and similar research to examine current curriculum topics, content, and instruction. The significant differences in behavior

preferences based on competition level, task dependence, and task variability of this study as well as the possible differences based on gender and competition level combined may stimulate curriculum changes to assist coaches by enhancing the congruence between student-athlete behavior preferences and actual coaching behavior.

This study's significant results appear to extend previous research findings and the generalizability of the multidimensional model of leadership to the sport environment. Past applications of the model have generated positive findings, but with limited generalizations to NCAA intercollegiate student-athletes. This study and the literature suggest the use of the multidimensional model of leadership and the related instruments in future investigations to improve the understanding of coaching behaviors and to enhance student-athlete performance and satisfaction.

As is the case with most research, this study leaves unanswered and new questions for further study. The questions fit within the larger research agenda on sport leadership behavior, specifically student-athletes' preferred leadership behavior of their coaches. The following extensions to this study would provide needed information to the field of sport leadership behavior.

The first possibly is a replication of this study with a broader sample size to increase the generalizability of the findings. The sample could include universities representing the NCAA competition level categories of Division I, Division II, and Division III. Additional universities could allow for more student-athletes and sports in the sample, representing each sport classification based on task dependence and task variability.

In the replication of this study, it may be necessary to use different distinctions in defining competition level. This study utilized NCAA standards to define the competition level categories. Additional distinctions could be measured by team success at the conference or national level, the amounts of scholarship funds given to student-athletes, or the average attendance at competitions.

Another possibility for further study is to determine whether individual student-athlete characteristics other than gender could be used to predict behavior preferences. Does age, physical ability, attitude, or length of time on a team influence preferred leadership behavior? Which student-athlete characteristic can best predict behavior preferences?

Another area worth investigating is to examine the basic tenet of the multidimensional model of leadership. Does congruence between actual and required leader behaviors and leader behavior preferred by the student-athlete enhance student-athlete performance and satisfaction?

A review of the literature suggests that there is a considerable gap between the importance assigned to sport leadership behavior and efforts to understand it (Riemer & Chelladurai, 1995). Fiedler (1967), Halprin and Winer (1957), and Hersey and Blanchard (1977) described leader behaviors as consisting of two dimensions, consideration and initiating structure. The unique aspects of the sport environment may demand leader behaviors other than consideration and initiating structure. If in fact the sport context is unique, it becomes necessary to identify the dimensions of leader behavior that are relevant to sport. Utilizing the multidimensional model of leadership, investigations of student-athletes' preferences of leadership behavior of their coaches appear to be an

important variable in the understanding of sport leadership behavior. Further research is necessary to provide a full understanding of sport leadership to enhance the relationship between the coach and student-athlete.

APPENDICES

Appendix A
Competition Level Requirements

Division I.

20.9.3 Sports Sponsorship

A member of Division I shall sponsor in Division I a minimum of (NCAA Division I Manual, 1999):

- (a) Seven varsity intercollegiate sports, including at least two team sports, based on the minimum requirements of 20.9.3.3 and involving all-male teams or mixed teams of males and females, and seven varsity intercollegiate sports (of which a maximum of two emerging sports may be utilized), including at least two team sports, based on the minimum requirements of 20.9.3.3 and involving all-female teams; or
- (b) Six varsity intercollegiate sports, including at least two team sports, based on the minimum requirements of 20.9.3.3 and involving all-male teams or mixed teams of males and females, and eight varsity intercollegiate sports (of which a maximum of two emerging sports may be utilized), including at least two team sports, based on the minimum requirements of 20.9.3.3 and involving all-female teams.

20.02.5 Emerging Sports for women

Emerging sports for women and countable for purposes of revenue distribution (sports sponsorship and grants-in-aid):

Team sports: ice hockey, team handball, water polo and synchronized swimming

Individual sports: archery, badminton, bowling, equestrian and squash

20.9.3.3 Minimum Contests and Participants Requirements for Sports Sponsorship

In each sport, the institution's team shall engage in at least a minimum number of intercollegiate contests (against four-year, degree-granting collegiate institutions) each year. In the individual sports, the institution's team shall include a minimum number of participants in each contest that is counted toward meeting the minimum-contests requirement. The following minimums are applicable:

Team Sports	Minimum Contests	
Baseball	27	
Basketball	25	
Soccer	11	
Volleyball	19	
Individual Sports	Minimum Contests	Minimum Participants
Cross Country	6	5
Golf	8	5
Tennis	12	5
Track and Field, Indoor	6	14
Track and Field, Outdoor	6	14

20.9.4 Scheduling-Sports other than Football and Basketball

20.9.4.1 In sports other than football and basketball that it uses to meet the Division I sports sponsorship criteria, a member of Division I shall schedule and play 100 percent of its contests against Division I opponents to meet the minimum number of contests specified in 20.9.3.3. The institution shall schedule and play at least 50 percent of its contests beyond the number specified in 20.9.3.3 against Division I opponents.

20.9.5 Basketball Scheduling

20.9.5.1 Men's Basketball Four-Game Limit A member of Division I may schedule and play not more than four men's basketball games in an academic year against institutions that are not members of Division I.

20.9.5.3 Women's Basketball Four-Game Limit A member of Division I may schedule and play not more than four women's basketball games in an academic year against institutions that are not members of Division I.

20.9.1 Financial Aid Requirements

20.9.1.1 Maximum Limitations A member of Division I shall not make an award of financial aid (for which the recipient's athletics ability is considered in any degree) in excess of the number permitted by the provisions of the bylaws governing Division I financial aid awards limitations.

20.9.1.2 Minimum Awards A member of Division I shall provide institutional financial assistance that equals one of the following:

- (a) A minimum of 50 percent of the maximum allowable grants in 14 sports, at least seven of which must be women's sports.
- (b) Financial aid representing a minimum aggregate expenditure of \$7,000,000 (with at least \$350,000 in women's sports) in 1999-00, exclusive of grants in football and men's and women's basketball, provided the aggregate grant value is not less than the equivalent of 38 full grants, with at least 19 full grants for women.
- (c) A minimum of the equivalent of 50 full grants (at least 25 full grants in women's sports), exclusive of grants awarded in football and men's and women's basketball.
- (d) A minimum of one-half of the required grants or aggregate expenditures cited in (a), (b), or (c) above, for institutions that depend on exceptional amounts of federal assistance to meet students' financial needs.

Division II.

20.10.3 Sports Sponsorships

A member of Division II shall sponsor in Division II a minimum of (NCAA Division II Manual, 1999):

- (a) Four varsity intercollegiate sports, including at least two team sports, based on the minimum requirements of 20.10.3.5 and involving all-male teams or mixed teams of males and females, and
- (b) Four varsity intercollegiate sports, including at least two team sports, based on the minimum requirements of 20.10.3.5 and involving all-female teams.

20.10.3.5 Minimum Contests and Participants Requirements for Sport Sponsorship

In each sport, the institution’s team shall engage in at least a minimum number of intercollegiate contests (against four-year, degree-granting collegiate institutions) each year. In the individual sports, the institution’s team shall include a minimum number of participants in each contest that is countable toward meeting the minimum-contest requirement. The following minimums are applicable:

Team Sports	Minimum Contests	
Baseball	24	
Basketball	22	
Soccer	10	
Volleyball	9	
Individual Sports	Minimum Contests	Minimum Participants
Cross Country	5	5
Golf	7	5
Tennis	10	5
Track and Field, Indoor	5	14
Track and Field, Outdoor	5	14

Scheduling-Sports other than Football and Basketball

No requirements

20.10.4.2 Basketball Scheduling A member of Division II shall schedule and play at least 50 percent of its men's basketball games and 50 percent of its women's basketball games in an academic year against members of Division II or Division I.

20.10.1 Financial Aid Limitations A member of Division II shall not make an award of financial aid (for which the recipient's athletics ability is considered in any degree) in excess of the number permitted by the bylaws governing Division II financial aid awards limitations. There are no requirements.

Appendix B

Revised Leadership Scale for Sport
Athlete's Preference Version
(Chelladurai & Saleh, 1980; Zhang, 1992)

Survey instrument deleted, paper copy is available upon request.

Survey instrument deleted, paper copy is available upon request.

Demographic Information

Gender (mark one)

61. A. Male B. Female

Sport (sport currently participating in, males answer #62 and females answer # 63)

62. Male

- A. Baseball D. Track/Cross Country
B. Basketball E. Golf
C. Tennis

63. Female

- A. Basketball D. Track/Cross Country
B. Volleyball E. Soccer
C. Tennis

Level (mark one)

64. A. Division I B. Division II

Scholarship (mark one)

65. A. Scholarship B. Non Scholarship

Appendix C

Athletic Director Consent Request

Athletic Director,

I am conducting research to use in my doctoral dissertation at the University of North Florida that concerns intercollegiate student-athletes and coaching leadership behaviors. The (school name) and (sports) student-athletes are of particular interest to this study.

This study will examine student-athletes' preferences of coaching leadership behavior among Division I and II intercollegiate athletic programs in the Southeastern United States. Males and females from a variety of both team and individual sports will be randomly selected to participate. Random selection will be conducted from team rosters provided by the compliance office.

The data from this study will be reported only by gender, Division level, and type of sport. Student-athletes' responses will not be reported for any specific university or specific sport at a university.

Leadership behavior in the athletic setting has undergone limited analysis to date. The setting and coach/student-athlete relationship are unique in many ways. Examination of the area may lead to evaluation and improvement of coaching techniques, student-athlete learning, diagnosis of problem areas, and enhance coaching preparation programs and organizations.

Student-athletes' behavior preferences will be gathered through the Revised Leadership Scale for Sports. This instrument contains 60 questions which are answered by selecting an appropriate choice on a scale. On-campus administration time is approximately 15-20 minutes and will be conducted during the non-competitive semester by the researcher, following contact with the respective sport coach.

Consent forms will be provided for the student-athletes to sign. They will not sign the instrument and are assured their responses will remain anonymous and confidential. Participation in the study is, of course, voluntary.

Approval for this study has been granted by the University of North Florida Institutional Review Board within the requirements for the Doctorate in Educational Leadership. Approval for participation for (school name) is being requested at this time.

If you or your coaches would wish a summary of this study, please notify me in your correspondence.

Thank you for your cooperation and I look forward to hearing from you. Enclosed is an envelope for your convenience.

Sincerely,

Joel W. Beam

As Athletic Director of (school name) I give my permission to have Joel W. Beam administer the Revised Leadership Scale for Sports to our student-athletes with our head coaches' permission.

Appendix D

Sport Coach Consent Request

Head Coach,

I am conducting research to use in my doctoral dissertation at the University of North Florida that concerns intercollegiate student-athletes and coaching leadership behaviors. The (school name and sport) student-athletes are of particular interest to this study.

Approval for this study has been granted by the University of North Florida Institutional Review Board and by (school name). Permission has been secured from (Athletic Director's name) to request your participation.

This study will examine student-athletes' preferences of coaching leadership behavior among Division I and II intercollegiate athletic programs in the Southeastern United States. Males and females from a variety of both team and individual sports will be randomly selected from team rosters to participate.

The data from this study will be reported only by gender, Division level, and type of sport. Student-athletes' responses will not be reported for any specific university or specific sport at a university.

Student-athletes' behavior preferences will be gathered through the Revised Leadership Scale for Sports. This instrument contains 60 questions which are answered by selecting an appropriate choice on a scale. Administration time is approximately 15-20 minutes.

At this time, I am requesting your permission and assistance in planning an on-campus administration date with your team. Administration will be conducted during the non-competitive semester to allow for sufficient completion time without scheduling conflicts. Administration can be conducted in a classroom, teamroom, or lockerroom. Your student-athletes will not be required to bring any materials to the site.

Consent forms will be provided for the student-athletes to sign. They will not sign the instrument and are assured their responses will remain anonymous and confidential. Participation in the study is, of course, voluntary.

With 19 years of intercollegiate experience, I believe the coach-student-athlete relationship is paramount to a successful program. However, leadership behavior in the athletic setting has undergone limited analysis to date. Examination of the area may lead to improved student-athlete learning, diagnosis of problem areas, and enhance student-athlete performance and satisfaction.

Following the data analysis, I will provide you and your coaches with a summary of the results. Thank you for your cooperation and I look forward to hearing from you. Best of luck for the upcoming season.

Sincerely,

Joel W. Beam

As Head Coach of (sport) at the (school name), I give my permission to Joel W. Beam to administer the Revised Leadership Scale for Sports to our student-athletes. Consent forms will be provided for the student-athletes to sign. They will not sign the Revised Leadership Scale for Sport and are assured their responses will remain anonymous and confidential. Participation in this study is, of course, voluntary.

Name

Date

Administration Date

Administration Time

Administration Location (On-campus)

Appendix E

Preferred Leadership of NCAA Division I and II Intercollegiate Student-Athletes Administration Guidelines

Head Athletic Trainer,

The packet you received contains a roster of student-athletes, Revised Leadership Scale for Sport (RLSS), Scantron scoring sheets, Informed Consent Forms, pencils, and FedEx envelope. Please follow the guidelines below for administration.

1. Have the student-athletes on the roster complete the RLSS within the next two weeks.
2. Administer the RLSS in a teamroom, lockerroom, or classroom with each team, several teams together, or individually.
3. Administration should conduct with you and the student-athletes. However, team coaches are not required or prohibited to be present.
4. To explain the RLSS to the student-athletes, simply say:

“The purpose of this study is to examine student-athlete preferences of leadership behavior. You have been randomly selected to participate from a sample of ten Division I and II intercollegiate programs in the Southeastern United States. The Revised Leadership Scale for Sport will be used to gather your leadership preferences. The sixty-five item Scale will require approximately 15-20 minutes to complete. Following each item, you will be asked to mark your appropriate response on the Scantron sheet provided. The data from the study will be analyzed to determine if there are preferred leadership differences between gender, level of

division, and your chosen sport. If you participate in more than one sport, please express your behavior preferences for the sport in which you were randomly chosen.”

5. To explain the risks and consequences of the study, simply say:

“Your participation in this study is, of course, voluntary. Possible risk factors from your participation are no greater than normal daily activities. There will be no compensation for your participation. Data obtained from your participation will be kept in strict confidence at all times. Your individual identity will not be listed on the scale or scoring sheet and records of the randomly selected sample will remain confidential.”

6. To have the student-athletes sign the Informed Consent Forms, simply say:

“I am now handing each of you Informed Consent Forms. Please read the entire form.” (Allow time for reading) “If you have decided to participate in the study, please sign the form. You may keep a copy of the form. If you have decided not to participate, you may leave at this time. Thank you.”

7. For Administration of the RLSS, simply say:

“I am now handing each of you a Revised Leadership Scale for Sport, Scantron scoring sheet, and pencil. Please mark the appropriate response in the sport, gender, and level sections at the conclusion of the Scale. Please read the directions carefully. (Allow time for reading) “Are there any questions at this time? I will collect the Consent Forms, scales, scoring sheets and pencils upon your completion. When you finish, please remain seated until all have finished. You may have as much time to complete the Scale as necessary. You may begin.”

8. Debriefing

Collection of Consent Form, Scales, Scantron and pencil from each participant.

“The data you have provided will add to the existing knowledge in the area of sport leadership. Findings may lead to evaluation and improvement of coaching techniques, student-athlete learning, diagnosis of problem areas, and enhance coaching preparation programs and organizations. I want to thank you for your participation and wish each one of you healthy success this year.”

9. If you or the student-athletes have questions concerning the study, you may contact me at jbeam@unf.edu or

10. Please place the RLSS, Scantrons, Informed Consent Forms in the folders provided.

11. Mailing Instructions: Use the pre-addressed/pre-paid FedEx envelope to return the materials. Place the folders and pencils in the envelope also. Please return within one week of administration completion. The FedEx envelope can be taken to Mail Boxes ETC, or you can call FedEx at 800-463-3339 for pick-up (press 0 for operator), or give to FedEx if you have a regular schedule at your school.

Your assistance in the study is greatly appreciated. Please accept the gift as a thank you for your time and effort.

Sincerely,

Joel W. Beam

Appendix F

Preferred Leadership of NCAA Division I and II Intercollegiate Student-Athletes

Informed Consent Form

You are invited to participate in a study in which student-athlete preferences for leadership behavior is examined. You are being asked to participate in this study because you have been randomly selected from a sample of student-athletes from ten Division I and Division II intercollegiate athletic programs. If you choose to participate in this study, it will require approximately 15-20 minutes to complete the testing instrument.

The instrument, Revised Leadership Scale for Sports, requires you to respond with your own personal preference to sixty statements regarding leadership behaviors. The data from the scale will be examined to compare by gender, competition level (division), and chosen sport the preferred leadership of student-athletes.

Data obtained from your participation will be kept in strict confidence at all times. Your individual identity will not be listed on the scale and records of the randomly selected sample will remain confidential.

Possible risk factors from your participation are no greater than normal daily activity. However, you cannot expect to be compensated for your participation or discomfort as a result of your participation in the study described here.

The investigator in this study is Joel W. Beam and the research is being conducted to fulfill the dissertation requirement for the Doctor of Education degree at the University of North Florida. The supervising professor is Dr. Tom Serwatka. If you have any questions that I have not answered in person, you may contact me at jbeam@unf.edu or (904) 273-7873, and Dr. Serwatka at (904) 620-2700.

Your signature below indicates that you have decided to participate in this study and that you have read and understood the information in this consent form. If you decide to participate, you are free to withdraw consent and discontinue participation at any time. You may keep a copy of this form. Thank you for your time.

Participant's signature _____	Date _____
Investigator's signature _____	Date _____
Witness' signature _____	Date _____

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Curriculum Vitae

JOEL WHITT BEAM

Career Goals

Utilize my professional knowledge and skills to obtain a faculty position in an educational program for the advancement of athletic training at the university level. Research and publication in the field of athletic training.

Education

University of North Florida, Jacksonville, Florida, Ed.D., in Educational Leadership, graduated August, 2001.

Clemson University, Clemson, South Carolina, M.Ed., in Counseling and Guidance Services, graduated May, 1990.

East Carolina University, Greenville, North Carolina, B.S., in Physical Education with an emphasis in Sports Medicine, graduated December, 1986.

Professional Experience

Assistant Professor

University of North Florida, Jacksonville, FL
CAAHEP/JRC-AT Sports Medicine-Athletic Training Education Program

Clinical Coordinator

Responsibilities: Coordinating all aspects of student athletic trainer clinical experience, primary contact with clinical instructors, maintaining student records, visitation of affiliated clinical sites.

Courses Taught

"Therapeutic Exercise", PET 4630C, College of Health, Sports Medicine-Athletic Training.

"Athletic Training Administration", PET 3660, College of Health, Sports Medicine-Athletic Training.

"Athletic Training Clinical Instruction I", PET 4940, College of Health, Sports Medicine-Athletic Training.

"Rehabilitation of Athletic Injuries", PET 4623, College of Health, Sports Medicine-Athletic Training.

"Seminar in Athletic Training", PET 4933, College of Health, Sports Medicine-Athletic Training.

"Athletic Training Clinical Instruction II", PET 4947C, College of Health, Sports Medicine-Athletic Training.

August 2001-present.

Visiting Assistant Professor
University of North Florida, Jacksonville, FL
CAAHEP/JRC-AT Sports Medicine-Athletic Training Education Program

Clinical Coordinator

Responsibilities: Coordinating all aspects of student athletic trainer clinical experience, primary contact with clinical instructors, maintaining student records, visitation of affiliated clinical sites.

Courses Taught

"Rehabilitation of Athletic Injuries", PET 4623, College of Health, Sports Medicine-Athletic Training.

"Seminar in Athletic Training", PET 4933, College of Health, Sports Medicine-Athletic Training.

"Athletic Training Clinical Instruction II", PET 4947C, College of Health, Sports Medicine-Athletic Training.

December 2000-August 2001.

Head Athletic Trainer
University of North Florida, Jacksonville, FL

Coordinator of athletic training services for 15 sport teams competing on NCAA Division I and Division II level.

Clinical supervisor for CAAHEP/JRC-AT Sports Medicine-Athletic Training Education Program.

January 1997-December 2000.

Adjunct Instructor
University of North Florida, Jacksonville, FL
CAAHEP/JRC-AT Sports Medicine-Athletic Training Education Program

Courses Taught

"Rehabilitation of Athletic Injuries", PET 4623, College of Health, Sports Medicine-Athletic Training.

Spring 1997-Fall 2000.

"Athletic Training Administration", PET 3660, College of Health, Sports Medicine-Athletic Training.

Fall 1997-Fall 2000.

Assistant Athletic Trainer
University of Miami, Miami, FL

Coordinator of athletic training services.

Head Assistant with football, August 1991-January 1997.

Supervisor for student athletic trainers.

July 1990-January 1997.

Adjunct Instructor
University of Miami, Miami, FL

Courses Taught

"Advanced Techniques in Athletic Training", ESS 523, Sport Medicine minor class,
School of Education.

Spring 1996-January 1997.

"Introduction to Sports Medicine", ESS 473, Sports Medicine minor class, School of
Education.

Fall 1993-January 1997.

"Athletic and Sports Injuries", ESS 384, Sports Medicine minor class, School of
Education.

Fall 1991-January 1997.

Graduate Assistant Athletic Trainer
Clemson University, Clemson, S.C.

Primary responsibility, baseball and football.
August 1988-May 1990.

Graduate Assistant Athletic Trainer
University of Florida, Gainesville, FL

Primary responsibility, baseball and tennis.
January 1987-June 1988.

Scholarship
Referred Journal Publications

Beam JW. Clinical Perspectives. Adhesive Capsulitis: The "Frozen Shoulder"
Syndrome. Journal of Bodywork and Movement Therapies. 2000;4:4-12.

Beam JW. Clinical Perspectives. Thigh Adductor Strain and Groin Pain. Journal of
Bodywork and Movement Therapies. 1998;2:144-148.

Beam JW, Hechtman, KS. Felt Augmentation for Thumb Dislocation. Journal of
Athletic Training. 1997;32:68-71.

Beam JW, Lozman PR, Uribe JW. Surgical Treatment of Chronic Patellar Tendinitis in a
Collegiate Football Player. Journal of Athletic Training. 1995;30:342-344.

Non-Refereed Journal Publications

- Beam JW. Contusions to the Upper Arm. American Football Quarterly. 1999;5:77-78.
- Beam JW. Muscle Strains or Pulls. American Football Quarterly. 1998;4:79-82.
- Beam JW. It's Just a Charley Horse. American Football Quarterly. 1998;4:75-76.
- Beam JW. Off-Season Knee Problems? Maybe It's Patellar Tendinitis. American Football Quarterly. 1996;2:67.

In Preparation Manuscripts

- Beam, JW, Serwatka TS. Preferred Leadership of NCAA Division I and II Intercollegiate Student-Athletes.
- Beam, JW, Lozman PR. Pelvic Pain in the Athlete.

Service

- Faculty Advisor, Student Athletic Trainers' Association, University of North Florida, June 2001- present.
- Search Committee Member, College of Health Athletic Training-Physical Therapy Department Chair, University of North Florida, Fall and Spring 2001.
- Search Committee Member, Athletic Department Assistant Athletic Trainer, University of North Florida, August 2001.
- Video Participant, National Athletic Trainers' Association Spine Injury Management, University of North Florida, April 2001.

Presentations

- Lecturer, Physical Conditioning/Nutrition, Miami-Dade Community College, Health Issues Class, June 1993.
- Lecturer, University of Miami Student Athletic Trainer Workshop. Topics covered: Ankle and knee. Classroom and Practical Experience, Instruction to High School/University Student Athletic Trainers, July 1990.
- Lecturer, Athletic Training Promotion, W.C. Friday Junior High Science Day, October 1989, Ashbrook Senior High Career Day, December 1988.
- Lecturer, East Carolina University Sports Medicine Conference. Topics covered: Ankle,

knee, shoulder, and preventive taping. Classroom and Practical Experience, Instruction to High School/University Student Athletic Trainers, April 1982-1986.

Lecturer, East Carolina University Student Presentation, Mid-Atlantic Athletic Trainer's Association District Meeting, Virginia Beach, Virginia, "A Comparison of Methods for Removing the Football Facemask: Knife vs. Boltcutters", May 1986. "Application and Theory Behind Preventive Knee Braces", May 1985.

Lecturer, Cardiopulmonary Resuscitation/Heat Illness, East Carolina University, Basic Scuba Class, December 1985.

Lecturer/Counselor, North Carolina Coaches Association Student Athletic Trainer Clinic, Greensboro, North Carolina. Topics covered: Rehabilitation of athletic injuries. Classroom and Practical Experience, Instruction to High School Athletic Trainers. Supervision of Student Athletic Trainers, July 1983.

Honors

National Athletic Trainers' Association, Inc. Outstanding Service Award, May 1985.
Mid-Atlantic Athletic Trainers' Association, Outstanding Service Award, May 1985.
East Carolina University Sports Medicine Division, Outstanding Service Award, April 1985.

Certifications

Athletic Trainer, Certified, National Athletic Trainers' Association, Inc., January 8, 1987.
HeartSaver AED, American Heart Association.
Standard First Aid, American Red Cross.

Memberships

National Athletic Trainers' Association, Inc., Fall 1983-present.
National Athletic Trainers' Association, Inc., District 9, July 1990-present.
State of Florida, Licensed Athletic Trainer, October 1995-present.
The Athletic Trainers' Association of Florida, Spring 1991-present.
South Region Representative, January 1995-1997.
Nominated for Athletic Trainer of the Year, December 1994.
Placement Committee member, February 1993-1994.