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Effects of Faculty and Peer Mentoring on Perceived Stress and Social Support of College Student Athletes

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Effects of Faculty and Peer Mentoring on Perceived Stress
and Social Support of College Student Athletes

by

Valerie R. Pfister

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
Department of Adult, Career and Higher Education
College of Education
University of South Florida

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Dedication

First and foremost, I would like to thank my father, Dr. Robert M. Pfister, and my mother, Jeanne D. Pfister for their continuous support and encouragement during my educational career. I would also like to thank Jeanette C. Phipps for her help during the early stages of this degree. Finally, I would like to provide a special thank you to Laura A. Witter for her understanding and patience during the pursuit of this degree.

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Effects of Faculty and Peer Mentoring on Perceived Stress
and Social Support of College Student Athletes

Valerie R. Pfister

ABSTRACT

Mentoring programs often focus on assisting students with the transition to college life and encouraging academic success. This study consisted of a quantitative examination of faculty and peer mentoring and freshmen student athletes' perceived transitional stress and social support. Surveys that provided a numerical value to perceived stress and social support supplied a basis for comparison. In addition, a qualitative element, consisting of personal interviews, was used to assess the quality of the mentoring relationships that developed.

Volunteer mentors were trained on mentoring strategies by the researcher. Sixty-one student-athlete volunteers from the sports of baseball, basketball, cheerleading, cross country, competitive dance, football, golf, rowing, soccer, track and field, and volleyball were divided into two groups with similar high school grade point averages. Thirty-one of these student athletes were then randomly assigned to peer mentors and 30 were assigned to faculty mentors. Stress and social support were measured three times during a 16-week semester and the data were analyzed using repeated measures analysis of variance.

No significant differences were found in the perceived stress levels of student athletes mentored by faculty versus peers. However, stress levels were found to significantly increase between the beginning and the end of the semester. Regarding social support derived from friends, no significant difference was found in the perceived level of social support received from friends. However, students mentored by faculty perceived significantly more social support from their mentor than that perceived in the peer-mentored group. No effects for race or gender were found with either perceived stress or social support levels.

This research suggests the need to investigate specific stress sources and what assistance may be provided through mentoring. Academic advisors may wish to consider alternative ways to assuage the stresses experienced by first-semester student athletes, such as reduced course loads or reduced athletic demands.

The results of this study provide additional insights regarding mentoring and its effects on perceived levels of stress and social support. In addition, this research provides the building blocks for a mentoring program to assist student athletes transitioning to college.

CHAPTER ONE

INTRODUCTION

Mentoring typically involves matching an inexperienced person with another more experienced person who will individually provide sustained guidance and support, thereby strengthening self-esteem and confidence (Lester & Johnson, 1981; Merriam, 1983; Zey, 1984). Mentoring is a process of engagement in which both parties work collaboratively in a committed relationship toward specific goals (Zachary, 2000). Mentoring also may involve a group process that embraces reciprocal and synergistic relationships (Mullen, 1999). In this scenario, people of varying levels of power, knowledge, and experience join together in the pursuit of mutual interests and benefits in a relationship described as *comentoring* (Mullen, 1999; Mullen & Lick, 1999).

A recent development in the mentoring arena involves the use of distance technology to develop a mentoring relationship. Also known as *telementoring*, email and computer conferencing systems are used to support a mentoring relationship when a face-to-face interaction is not possible (Miller, 2002). Through mentoring relationships, more experienced individuals provide time, thought, practical guidance, and communication of professional expertise to those in need (Boice, 1992; Merriam, 1983). Individuals may find themselves continually seeking the empowerment and self-actualization found in the restructuring and

maintenance of mentoring and “comentoring relationships” through the process of “lifelong mentoring” (Mullen & Kealy, 1999).

Regardless of the mentoring construct, both the protégé and the mentor benefit from the relationship. The inexperienced individual obtains guidance and support, and can learn to negotiate institutional, social, and personal barriers. The mentors learn about themselves, their protégés (Zachary, 2000), and receive the benefit of knowing that, through their efforts, another individual has been helped (Lester & Johnson, 1981; Zey, 1984).

Mentors traditionally have been extended family members, church members, school employees, or concerned neighbors. Mentors can be business people, retired individuals, faculty members, or college students (Miller, 2002; Phillip-Jones, 1982; Zey, 1984). An effective mentor is patient and willing to listen, and challenges the mentored individual to strive to achieve full potential (Yeager, 2000; Zachary, 2000). In one study examining systematic mentoring programs for new faculty members, exemplary mentors also were identified as being open and generous in sharing their experiences and thus moved beyond the role of advice-giver and expert to a more compassionate level of interaction (Boyle & Boice, 1998).

Researchers and practitioners agree that today’s youth need positive, consistent relationships with adults to support their development (Reglin, 1997). Learning is a fundamental process and a primary purpose of mentoring. Mentoring relationships that fail often do so because of a lack of focus on learning goals or the lack of preparation and dedication (Zachary, 2000). Mentoring has the potential to

assist individuals through times of transition and to provide encouragement and support to inexperienced individuals who may be stymied by the challenges they face (Merriam, 1983).

One special group who may experience the benefits of mentoring as stressful life transitions are faced includes freshmen student athletes. Upon entering the collegiate environment, the athletic and academic demands placed upon student athletes, compounded with their significant life transitions, seem to suggest a perfect scenario for implementing a successful mentoring program.

Stress of Transition for Student Athletes

Student athletes confront their own unique set of challenges as they enter the world of higher education. Just as the majority of first-time college students, student athletes face the *transitional stresses* involved with leaving home for the first time: establishing new friends, encountering diversity, increased academic demands, assuming the responsibilities of self-discipline, and financial concerns (Jordan & Denson, 1990; Schwitzer, McGovern, & Robbins, 1991). In addition, student athletes also must balance athletic and academic tasks, deal with feelings of isolation (Hollis, 1997; Parham, 1993; Waalkes, Yukelson, Hale, & Wheeler, 1999), and confront injury and career retirement (Chartrand & Lent, 1987; Parham, 1993).

The National Collegiate Athletic Association (NCAA) recognized the need for additional support to assist student athletes with these stresses and encouraged all of its institutions to adopt a CHAMPS (Challenging Athletes' Minds for

Personal Success)/Life Skills Program. The goal of this program is to assist student athletes in reducing the transitional stress by insuring that they develop more than just their athletic skills. The CHAMPS/Life Skills Program teaches skills that support academic, personal, and career development in addition to the development of athletic programs that encourage excellence by promoting the well-being of the student athlete (*CHAMPS/Life Skills Program*, 2001).

Once the student athlete is afforded university admission, the public spotlight is increased. The disproportionate emphasis on academic failures of high profile student athletes has resulted in pressures on athletic and academic administrations to find methods of ensuring the academic success of those highly visible student athletes who get admitted to the higher education institutions.

Athletic directors have agreed overwhelmingly that the provision of academic support services is critical to increasing graduation rates (Sherman, Weber, & Tegano, 1986). In the early 1980's, academic support services primarily consisted of tutoring, adult mentoring, and counseling for academics, personal, or athletic problems (McFarland & Yeorgan, 1981). Over the last two decades, researchers have continued to redefine "academic support services" as they developed additional program components that improve student-athlete academic outcomes. These program components include developing peer-helping programs (Morrissey & Helfrich, 1996; Waalkes et al., 1999), teaching life skills, improving faculty/university attitudes and understanding of the student athlete, and teaching coping strategies to athletes under stress (Young & Lovett, 1994).

Mentoring Theory

In addition to the many mentoring successes documented in the literature, significant research has been conducted that promotes mentoring theory. Jacobi (1991) performed an extensive review and analysis of mentoring literature and suggested links between mentoring and theories developed around role-modeling, social integration, cognitive development, and social support. Jacobi (1991) discussed the lack of theoretically-based mentoring research and also recognized the lack of studies that examine gender or ethnic differences in mentoring outcomes.

McManus and Russell (1997) examined links between mentoring and theories of organizational behavior. They suggested commonalities between mentoring and leader-member exchange, organizational citizenship behavior, organizational socialization, and social support theories. McManus and Russell (1997) compared informal mentoring with the four organizational behavior constructs and then provided propositions for future research investigating the suggested links.

Another suggestion found in the literature promoting mentoring theory proposes a link between mentoring and the reduction of stress through the provision of social support to improve student outcomes (House & Kahn, 1985; Jacobi, 1991).

Social Support: Literature Overview

Social support has been defined broadly as the resources provided by other persons (Cohen & Syme, 1985). People call upon these resources when faced with demands or unexpected circumstances. More specifically, social support is the term used to describe the resources that aid a person when faced with a stressful situation (Gore, 1985, 1987). Social support also has been defined as social interactions that are used to meet a need (Gore, 1987). When individuals can no longer cope with a stress, they seek the help of one of their social supports. Social support resources are seen to buffer or moderate the health effects of stress (Gore, 1985).

Stress arises when one appraises a situation as threatening or demanding and does not have an adequate coping response to meet the demand. Support is seen to intervene between the stressful event and the stress reaction, by attenuating the stress appraisal. Support also may alleviate the impact of stress appraisal by providing a solution to the problem or reducing the perceived importance of the problem (Cohen & Wills, 1985). Social support can thus be defined as the perceived availability of interpersonal resources that are responsive to the needs elicited by stress.

The type of support needed may vary depending upon the situation producing the stress (Gore, 1987). Cohen and Syme (1985) describe both structural and functional perspectives used in the study of social support. Structural support is defined by the quantity and quality of interpersonal relationships a person has for resources. The functional perspective looks in depth at the type of relationships and what kinds of information are exchanged. Functional support includes four types of

resources. Esteem support is information provided that bolsters a person's self-esteem. Informational or appraisal support provides help in defining, understanding, and coping with problematic events. Social companionship is spending time with others in leisure and recreational activities to reduce stress through distraction or creating positive affective moods, and the fourth type of functional social support, instrumental support, is the provision of financial aid, material resources, or needed services that may in turn eliminate the stress by directly solving the problem.

The general concept of social support can be divided into three broad categories: social embeddedness, perceived social support, and enacted support (Barrera, 2000). Social embeddedness refers to the number of significant relationships an individual claims to have. The number of resources can also be thought of as a support network. A drawback of measuring embeddedness is that it does not take into account the quality or strength of the relationships. Perceived social support refers to the level of connectedness in one's relationships. Measures of perceived social support often evaluate the perceived availability and adequacy of relationships and the perception of the availability of resources if needed (Barrera, 2000). Some feel that measuring perceived social support might overlap with measures of stress (Gore, 1981). The third category of social support, enacted support, refers to what individuals actually do when they provide support. A drawback to measuring enacted support is that it often uses a retrospective methodology, which might distort the actual support behaviors with what was perceived to be received (Barrera, 2000).

Regardless of the category, social support is a resource used by people to help solve their problems and is able to provide esteem support, informational support, instrumental support, social companionship, or motivational support (encouraging persons to persist) through interpersonal relationships (Wills, 1985).

Mentoring as a Form of Social Support

Social support functions primarily to buttress self-esteem and mastery in the face of hardship. When individuals can no longer cope with a stressful situation, they seek the help of one of their social supports (Gore, 1985), often talking to others to seek guidance, support, and information (Gore, 1987). Social support provides a solution to the problem or reduces the perceived importance of the problem thus diminishing the stress appraisal (Cohen & Wills, 1985).

Mentoring has been defined in terms of providing five functions. The five functions provided by the mentor are teaching, sponsoring, encouraging, counseling, and befriending (Anderson & Shannon, 1988). Mentoring also has been defined as a relationship that contains three components: emotional and psychological support, direct assistance with career and professional development, and role modeling (Jacobi, 1991). The support provided through a mentoring relationship can be compared similarly with both the emotional and appraisal support defined by social support researchers (Cohen & Syme, 1985). Mentoring is known to provide both types of support, yet research is scarce which connects mentoring and stress (Cohen, Mermelstein, Kamarck, & Hoberman, 1985; McManus & Russell, 1997).

Stress: Literature Overview

From a biological perspective, *stress* was defined originally as the bodily response to stressful life events or stressors (Freese, 1976). In 1926, an Austrian physician named Hans Selye identified a consistent pattern of psycho-physiological reactivity of the human body to a demand (Everly Jr. & Sobelman, 1987). Selye later borrowed the term "stress" from the field of physics to describe his observations. Although the implications of his studies indicate that stress refers to a reaction of the body, the term has been used more recently to refer to its source, mental or physical (Everly Jr. & Sobelman, 1987).

Bodily responses include physical responses such as biochemical or hormonal changes and psychological changes as well. Stress is not all bad, but is essential to life. Potentially life-threatening situations produce adaptive responses in the human body that provide the best possible chances for survival. In other words, stress is a mobilization of bodily resources to produce the best defense against physical, psychological, or social threats. Mild stress can be produced by minor stressors and anticipation of a stressful life event can be just as stressful as the actual event (Freese, 1976).

Stress can produce desirable, positive effects or negative, undesirable effects. From an evolutionary perspective, stress may be an adaptive environmental coping mechanism. When faced with excessively chronic or intense stress, the human often responds by exhibiting signs of psychosomatic, psychophysiologic, or psychiatric disorders (Everly Jr. & Sobelman, 1987).

Selye's description of stress as a bodily response required expansion to cover certain types of situations such as those that elicit psychological stress. Research has shown that generalization across categories of stressors, across different timeframes, or across different extents or intensities of stressors does not hold true and modifications to the stress models were needed (Appley & Trumbull, 1986).

Over the past decade, stress research has grown to include the concept of the study of relations between individuals and their environments as they influence each other over time. Recent stress models include the concept of transitional events. A transitional event is the term used to describe an extensive change in an individual's life that demands significant adaptation. Transitional events may be positive (e.g., promotion, marriage) or negative (e.g., demotion, divorce). Interventions into transitional events may be individual-focused in helping to build the skills to effectively adapt to the changing demands (Sandler, Braver, & Gensheimer, 2000).

The Stress Process

The stress process involves four stages. These stages include the demand placed upon an individual, the appraisal or perception of the demand, the response to the perception, and the perceived consequences. At any stage, feedback can alter the stress process (Appley & Trumbull, 1986).

Five groups of factors mediate the interpretation of stressors. These factors include the availability of resources for coping, attitudes toward the source of stress,

prior experience with the stress source, risk assessment, and stress vulnerability (Appley & Trumbull, 1986).

Perceived stress is related to an appraisal of the balance between environmental demands and available resources. Stress occurs when the demands posed by negative environmental occurrences exceed an individual's coping abilities and resources. The consequences of such stress include a decreased self-esteem, perceptions of low self-efficacy, and perceived lack of control (Coyne & Lazarus, 1980).

Stress Producers

Role conflict has been shown to be associated with increased distress in both men and women. Research has shown that men and women are equally likely to engage in coping behaviors that alter a stressful situation. Coping behavior is highly specific to the individual and the context. In order to ease stress, men are more likely to engage in depersonalization, while women are more likely to elicit social support. While men detach themselves from the stress, women seek advice, information, emotional support, and assistance in order to cope with stress (Greenglass, 2002).

The college years, often portrayed as a time of fun and frolic, are fraught with stress. College students feel pressure to obtain good grades and handle financial burdens, while facing an unstable network of social support (Hale, Greenberg, & Ramsey, 1990). College students face many transitional stresses as they struggle to adapt to a new environment (Jordan & Denson, 1990; Parham,

1993; Schwitzer et al., 1991). In addition, many students must work to meet their financial obligations and those that work more than 10 hours per week in addition to attending college are more prone to stress (Hale et al., 1990). Many of the physical and emotional symptoms of stress experienced by college students are a result of the differences in their perception of the stressor and their perception of their ability to cope with the stressor. Once college students experience extreme stress, they may become interested in finding ways to manage stress. These college years may be one of the more teachable moments for learning about stress management (Hale et al., 1990).

Stress responses have been shown to be buffered by social support (Barrera, 2000; Carlson & Perrewe, 1999). Social support has a positive effect on physical and mental health. Social support is a major contributor to coping and is another means by which stress can be lowered (Coyne & Lazarus, 1980; Greenglass, 2002). Simons, Aysan Thompson, Hamarat, and Steele (2002) found significant correlations between life satisfaction and perceived economic well being, social support, and stress monitoring in college students.

Statement of the Problem

Mentoring programs can be found at many institutions of higher education. Although the purpose behind the establishment of these mentoring programs often focuses on assisting the students with the transition to college life, and encouraging the academic success of the students, the designs of these programs vary. Some mentoring programs utilize faculty or university staff as mentors, while others use

student or peer mentors to assist the incoming students. Research investigating the beneficial outcomes of both faculty mentoring and peer mentoring of college students can be found. However, no studies can be found that elicit any differences in the perceptions of transitional stress or in the perceptions of social support based upon these two basic mentoring strategies.

Purpose of the Study

This research study examined the differences that may exist in student outcomes between faculty and peer mentoring efforts directed at university student-athletes. By matching a more experienced student or faculty member with an incoming freshman student athlete in a mentoring relationship, the transitional stress could be greatly reduced, as the younger student athlete would then have a trusted, respected source of social and emotional support and guidance. The outcomes measured included any changes in the perceived stress and perceived social support of college student athletes over the course of a semester. The study identified any differences in changes of perceived stress or perceived social support levels that existed in student athletes mentored by university faculty or adult personnel and student athletes mentored by their peers.

Based upon the premise behind mentoring, the transitional issues faced by college student athletes, and the successes demonstrated by both faculty mentoring (Erkut & Mokros, 1984) and peer mentoring (Gershon, 1999; Morrissey & Helfrich, 1996) studies at institutions of higher education, mentoring programs seem to offer a practical solution to the problems that so often drive the student athlete to

academic failure. Given the situation of the current collegiate student athlete, mentoring programs potentially offer a means to increase academic success by reducing transitional stress through increased social support.

Research Design

The design of this study was both a quantitative and qualitative examination of how a mentoring condition may affect the perceived stress and perceived social support levels of first-semester, full-time college student athletes in the United States. The study measured perceived stress as the degree to which situations are appraised as unpredictable, uncontrollable, and overloading. Perceived social support was measured because the perception of support was more likely to help individuals cope with their perceived stress than was the actual support or the size of the support network. A small qualitative piece of the research design examined and assessed the quality of the mentoring relationships through interviews of a sample of mentors.

Research Questions

The primary research questions addressed by this study were:

1. Do faculty mentoring programs and peer mentoring programs, which are incorporated into the academic services offered to student athletes at an institution of higher education, produce differences in perception of stress by the student athletes?

2. Do faculty mentoring programs and peer mentoring programs, which are incorporated into the academic services offered to student athletes at an institution of higher education, produce differences in the perception of social support by the student athlete?

The secondary research questions addressed by this study were:

1. Is the effect of type of mentoring program (faculty vs. peer) on the perceptions of stress and social support the same for male and female student athletes?
2. Is the effect of type of mentoring program (faculty vs. peer) on the perceptions of stress and social support the same for student athletes of White and Other races?

Limitations

The most significant limitations of this study include the following:

- The research design included only those student athletes who were willing to participate in the mentoring program.
- The research design included a small number of minority students, thus reducing the power of the statistical calculations examining effects on race.
- The research design, which measured transitional stress for student athletes, allowed only for a limited amount of time for the student athletes to spend with their mentor during one semester of the study.
- This research design had no control over the social support a student athlete received outside of the mentoring relationship. The research attempted to

identify any outside sources and the importance or influence of these sources on stress reduction.

- The research design had only limited control over the mentoring relationships between mentors and protégés. Mentors were provided specific instructions to guide the development of their mentoring relationships with the student athletes. The match of the mentor with the student athlete was through random assignment and thus the actual development of a healthy, supportive rapport with the student athlete varied depending upon the mentor.
- The research design most likely did not prohibit experimental treatment diffusion. Some of the students in the peer-mentored group may have sought guidance provided by faculty mentors and some faculty-mentored students may have used a peer for additional guidance when handling their transitional stress. This limitation was not anticipated to be a great threat since the research attempted to identify all sources of social support and the resources used by the student athletes in their quest to adapt to the collegiate environment.
- The research design could not prevent a potential Hawthorne Effect. The student athletes were told that stress would be measured and thus this knowledge may have influenced the stress levels measured.

Delimitations

The most significant delimitations of this study include the following:

- The research design considered only the effects of mentoring in reducing transitional stress through social support and did not examine any effects on academic performance.
- The focus of the mentoring relationship was strictly defined. The mentoring relationships were encouraged to develop using the more experienced faculty member or peer to assist the student athlete with organization and study skills, guidance regarding the academic and career resources available, enhancement of social interactions to develop outlets for stress, and involvement with others outside of the student athletes' sport.
- The evaluation of the stress-reducing effects of faculty or peer mentoring was limited to the freshmen student athletes at one collegiate institution in Florida. Although it would have been ideal to evaluate a wider range of students from more than one institution of higher education, the logistics involved in training and orienting the mentors, managing the mentoring relationships, conducting the surveys to evaluate perceived stress and social support throughout a semester, and conducting detailed interviews with several mentors regarding the quality of their mentoring experience limited the researcher. All student data were highly confidential and difficult to obtain. Permission was obtained from each student-athlete participant. In addition, institutions often put extra firewalls of protection around all data associated with their student-athlete populations due to the desires of the

media to obtain data they consider newsworthy and that often generate negative publicity for the institution.

Definition of Terms

For the purpose of this research study, the following terms were defined as stated below.

- *Student Athlete*—a student who also participates on one of the intercollegiate athletic teams at an institution of higher education (Underwood, 1984). Since the level of athletic scholarship does not dictate the dedication and amount of time a student athlete spent on his or her sport, all student athletes who engaged in the sport (regardless of their level of scholarship) were considered as potential participants.
- *Faculty Mentor*—a faculty member, graduate student, or institutional staff member who assisted new students to manage the transitional stresses of collegiate life (Erkut & Mokros, 1984; Pascarella & Terenzini, 1978). The faculty mentor was at least 22 years of age and associated with the institution of higher education.
- *Peer Mentor*—a fellow student, who was working on his or her undergraduate degree at the higher education institution and was at least 18 years of age, who assisted new students to manage the transitional stresses of collegiate life (Morrissey & Helfrich, 1996; Whitner & Sanz, 1988).

- *Protégé*—a student athlete who was enrolled in his or her first full-time semester at a university, and who agreed to be assigned a mentor as a resource and guide (Morrissey & Helfrich, 1996; Whitner & Sanz, 1988).
- *Mentoring*—a formal arrangement in which a more experienced individual provided guidance to a less experienced protégé in matters concerning organization and study skills, guidance regarding the academic and career resources available, and enhancement of social interactions to develop outlets for stress (Miller, 2002).
- *Mentoring Program*—an arrangement where student athletes were matched with mentors who were trained to provide guidance to the student athlete through the provision of mentoring services (Miller, 2002; Willoughby, Willoughby, & Moses, 1991, Fall). Within this program, mentors and protégés completed a Mentoring Partnership Agreement (Appendix A) (Zachary, 2000). Mentors documented each meeting with the student athlete by completing a Mentoring Partnership Reflection Guide (Appendix B) (Zachary, 2000).
- *Mentoring Partnership Agreement*—written contract between the mentor and protégé that clearly articulated the goals of the mentoring sessions, ground rules for the mentoring services, a meeting schedule, and a definition of confidentiality (Zachary, 2000).
- *Mentoring Partnership Reflection Guide*—a form used by the mentor to document progress in the development of the mentoring relationship, through notations on the meetings held, progress toward agreed upon

objectives, perceptions of the relationship between the mentor and protégé, and learning opportunities (Zachary, 2000).

- *Mentoring Services*—weekly meetings lasting between 30–45 minutes between the mentor and student athlete in which the mentor offered assistance and guidance to the student athlete on how to schedule study time and juggle class assignments in addition to their athletic demands each week (Willoughby et al., 1991, Fall). The mentor also aided the student athlete with learning about the institutional resources available to assist the student athlete in their academic endeavors and encourage the student athlete to become involved with activities of interest outside of his or her sport (Willoughby et al., 1991, Fall).
- *Perceived Stress*—the degree to which situations were appraised as unpredictable, uncontrollable, and overloading (Appley & Trumbull, 1986; Cohen & Wills, 1985) during the first full-time semester of collegiate life when the transition requires an extensive change in an individual's life that demands significant adaptation (Pearson & Petitpas, 1990).
- *Social Support*—resources that aid a person when faced with a stressful situation (Gore, 1985, 1987). The resources in this case consisted of social interactions that were used to meet a need (Pearlin, 1985).

CHAPTER TWO

LITERATURE REVIEW

The practice of mentoring has existed since before written history. The origin of the term is from the Greek poet, Homer. In his work, *The Odyssey*, Odysseus, a great warrior, knew he would be away from home for an extended period and chose a trusted friend, Mentor, to be the guardian and tutor to his son (System, 1990; Wunsch, 1994). Besides a guardian and tutor, a mentor can take on many different roles. In more recent times, the term has been used to describe a coach, advocate, role model, buddy, or friend (Lester & Johnson, 1981; Merriam, 1983; Miller, 2002; Pascarella & Terenzini, 1978). Many prominent figures of today claim their success is partially due to their mentor who provided guidance and emotional support. Examples include Muhammad Ali who claimed his coach as his mentor, and Reverend Jesse Jackson, who was a student and protégé of Reverend Martin Luther King, Jr. (Kwalick, 1994). Marshall Lefferts, a Western Union executive, watched over the growth and development of Thomas Edison (System, 1990).

Expanded Definitions of Mentoring

In addition to the traditional view of mentoring as an informal arrangement in which a more experienced individual grooms a less experienced protégé, the

mentoring construct has been expanded to include relationships that are reciprocal and synergistic. Groups of individuals interested in mutual pursuits now interact in ways that promote learning with shared respect, value and reward (Mullen, 1999). The relationship, known as comentoring (Mullen, 1998), offers opportunities for multilevel, self-directed learning and interaction (Lick, 1999). The relationships developed in comentoring situations are based upon mutuality and nonhierarchical affiliations. Comentoring offers an unconventional method to encourage professional learning (Mullen, 1998).

Another method of unconventional mentoring involves the use of technology. Telementoring has begun to appear in the literature as a mechanism by which one individual seeks the guidance of another through the use of email and teleconferencing (Miller, 2002). As with traditional mentoring, telementoring may occur naturally or as part of a structured program and has the advantages of no geographical limitations, meeting time constraints, or limits in the amount of interaction. Drawbacks to telementoring include the impersonal contact, lack of social cues, and lack of immediate feedback. Regardless of its drawbacks, the advantages of telementoring in today's technologically advanced society make it a credible practice (Miller, 2002).

Basic Characteristics of Mentoring

In 1904, Ernest K. Coulter founded a new movement that used church members, school employees, concerned neighbors, business people, retired individuals, and college students as "big brothers or big sisters" to reach out to

children in need of socialization, guidance, and connections with positive adult role models. The Big Brother Big Sister Program now operates across the nation as the largest mentoring organization of its kind and serves as an example of the benefits mentoring may bring to a community (Grossman & Garry, 1997).

As found in the Big Brother Big Sister Program, as well as in educational settings, mentoring relationships are ideal for the promotion of an individual's or group's well-being. Mentoring involves matching inexperienced persons with other more experienced persons who will individually provide sustained guidance and support, thereby strengthening self-esteem and confidence (System, 1990).

Mentoring is a collaborative process of engagement in which all parties work in a committed relationship toward specific goals (Zachary, 2000) in order to promote mutual interests, purposes, or rewards (Mullen, 1998). In a mentoring relationship, interactions promote the exchange of thoughts, practical guidance, and professional expertise. In a successful relationship, the mentor must challenge the mentored individual to strive to achieve full potential. Both the protégés and mentors benefit from the relationship (Lester & Johnson, 1981; Zachary, 2000; Zey, 1984).

A fundamental process and a primary purpose of mentoring and co-mentoring is learning. Today's youth need positive, consistent relationships with adults to support their development and learning processes (Reglin, 1997).

Mentoring relationships are able to facilitate learning and development and to assist individuals through times of transition through the provision of encouragement and support (Merriam, 1983).

Mentoring Program Successes

Models of mentoring programs that have proven successful can be found throughout the literature. One example of a mentoring arrangement whose structure has improved the outcomes of the lives of children is that of the Big Brother Big Sister Organization. The activities shared by the Big Brother or Big Sister and their mentored youth range from exercising, attending entertainment events, visiting the library, performing small tasks together, or just talking about life. These activities enhance communication and relationship skills, and support positive decision-making. An 18-month evaluation of eight of the Big Brother/Big Sister Programs found that mentored youth were less likely to engage in drug or alcohol use, resort to violence, or skip school once involved in a mentoring relationship. In addition, mentored youth were more likely to improve their grades, and relationships with family and friends compared to their pre-mentored behaviors (Grossman & Garry, 1997).

Mentoring successes cross socioeconomic obstacles. Robinson (1997) found that mentoring relationships between business people and at-risk inner-city youth were not negatively affected by socioeconomic diversity. The results of this research suggest that mentoring relationships that involve a more holistic approach may be advantageous in facilitating pre-adult transitions for the truly disadvantaged and at-risk youth.

Federal Juvenile Mentoring Program

Another example of mentoring success is the Federal Juvenile Mentoring Program (JUMP). In 1992, the Federal government designed JUMP to reduce juvenile delinquency and gang participation, improve academic performance, and reduce school dropout rates. After funding the program for the years 1994-1997, an informal evaluation of the effectiveness of the program revealed that at-risk youth who participated in JUMP showed improvement in general behavior, school attendance, academic performance, and interactions with peers once they became involved in a mentorship (Grossman & Garry, 1997).

Mentoring and Tutoring Help Program

In public schools, truancy is highly correlated with low achievement and an increased possibility of drop out. The Mentoring and Tutoring Help (MATH) program was designed in 1993 as an additional component to the Truancy Court Conference Program in Escambia County, Florida (Reglin, 1997). After only 5 months in the MATH program, nearly all 30 of the high school students increased their attendance at school by 30 %, increased their grades in math and English, increased their self-esteem, and had fewer disciplinary referrals (Reglin, 1997).

School Mentoring Programs

At South Mountain High School in Arizona, students receiving mentoring showed a statistically significant increase in attendance and academic achievement over similar students who were not mentored. In addition, mentored students

perceived the program to be successful and felt that the mentoring services had provided them with career-development motivation, and a vision for the future (Woodlief, 1997).

Kwalick (1994) described a collaborative student-mentoring program between a college in New York and the local high schools. Within this program, college students received course credit for acting as role models for high school students. The college students met with the high school students with the idea that they would assist the secondary students in setting academic and personal goals and provide a future vision of college or work. One of the intentions of the collaboration was to prevent the high school student from dropping out. The program was evaluated based upon open-ended comments of the mentors and high school students and the reduction of the number of dropouts. Based upon these evaluation methods, the program appeared to be effective.

At Lewis Fox Middle School in Connecticut, Black male 7th and 8th graders who participated in the Benjamin E. Mays Institute mentoring program displayed significantly more positive ethnic identity development, racial socialization, academic identification, and academic achievement than similar students who did not participate in the program. In addition, the mentored students expressed having a stronger attachment to their academic success and its importance (Gordon, 2000).

Mentoring programs have proven to foster intrinsic motivation, work ethic, reduced feelings of victimization, and facilitate family involvement. The Ron Charity/Sugar Creek Junior Tennis/Academic Program in Charlotte, North Carolina

utilized tennis players and university students as mentors to empower high school students to accomplish the personal goals above and improve their academic performance (Reglin, 1995).

Business Mentoring Programs

Willoughby et al. (1991, Fall) discussed the success of mentoring programs in the business world. Companies such as IBM and Merrill Lynch utilize mentors to assist new employees in assimilating into the organization. These mentoring relationships have two basic attributes: individuality and coherent goals. Each mentoring relationship must evolve and include periods of acclimation, progress, independence, and eventual dissolution. Some mentor/protégé relationships occur by chance and others are intentionally assigned. Regardless of how the team is paired, the shaping of the learner's attitudes and skills is a primary goal of the mentor relationship (Willoughby et al., 1991, Fall).

The mentoring literature is filled with examples of mentoring successes in the business environment. Shapiro, Haseltine, & Rowe (1978) showed significant relationships between the vocational and social support functions, and promotions and salary respectively. Fagenson (Fagenson, 1989) demonstrated that mentored individuals in a management company reported higher levels of satisfaction, career mobility, and a higher rate of promotion when compared with individuals who were not mentored. In two similar studies, protégés who received psychosocial and career-related support reported higher levels of career outcomes. The outcomes included career planning, career involvement, organizational socialization, job

satisfaction, and income (Orpen, 1995; Scandura, 1992). In yet another study, significant relationships existed between two long-term outcome measures (promotions and salary growth) and the career coaching mentoring function (Hunt & Michael, 1983; Orpen, 1995; Scandura, 1992; Shapiro, Haseltine, & Rowe, 1978).

Mentoring in the Post Secondary Setting

Within a university setting, Vidoni, Smith, Bushway and Powell (1988) examined the mentor-protégé relationship. These authors identified three roles of a mentor as including: supporting, challenging, and providing vision. In their role of providing support, mentors provided structure, affirmed validity of the present experience, and expressed positive expectations for the student protégés. When challenging the protégés, mentors presented contradictory ideas and question assumptions. In the role of providing vision, mentors acted as models of self-transformation, and assisted with the accomplishment of goals. The mentors balanced their competing roles acting as a teacher, consultant, role model, and counselor, while allowing for the protégés' self-discovery and maintaining a trusting relationship. An evaluation of the mentoring system at the University of Illinois through interviews and open-ended response forms proved the system to be rewarding and positive (Vidoni et al., 1988).

Mentoring in the Community College

Perri Petruolo (1998) conducted an assessment of mentoring provided to

undergraduate students at a public community college in New Jersey and found that the quantity of mentoring (the number of contacts between the student and mentor) was significantly correlated with students' academic persistence, self-concept, and academic performance. The quality of mentoring was not related to student academic performance or persistence.

Brown-Minis (1999) conducted a study of the effect of a mentoring program on first-time, full-time community college students. In this study, mentored students were compared with similar students who did not participate in the mentoring program. Brown-Minis (1999) found that students who were mentored completed more courses than those who were not mentored, however, those same mentored students were not more likely to stay in school, nor did they attain higher grade point averages.

Peer Mentoring

When faced with life transitions, peer counseling was shown to effectively assist the challenged student. Hill (1990) described the Peer Counseling Program at the State University of New York that utilized trained peer counselors to promote positive coping alternatives. As life events interrupted the students' sense of identity and required new behavioral responses and awareness, the students reported that the additional support from peer counselors assisted them to manage their personal life changes.

Gershon (1999) examined the perceived effectiveness of a peer-mentoring program and the peer-mentors' influence on the adjustment of first-year college

students. In this study, the mentors were returning students who were residents in on-campus housing. These mentors were matched with first-year students. Mentors participated in an orientation session and structured activities were implemented to facilitate the mentor-protégé relationship. Evaluation of the program indicated that both the mentor and protégé felt that sharing common interests (like major area of study) was important. As common interests increased, the mentors and protégés were more likely to spend more time together. The amount of time spent together was an important variable in the adjustment of the protégé. Protégés who met with their assigned mentors once per week or more scored significantly higher in areas of social adjustment and college attachment than did other protégés and the non-participants surveyed.

Mentoring to Address Issues of the Student Athlete

Student athletes confront their own unique set of challenges as they enter the world of higher education. Not only must student athletes face the transitional stresses involved with leaving home for the first time, establishing new friends, encountering diversity, increased academic demands, assuming the responsibilities of self-discipline, and financial concerns (Jordan & Denson, 1990; Schwitzer et al., 1991), but they also must balance athletic and academic tasks, deal with feelings of isolation (Hollis, 1997; Parham, 1993; Waalkes et al., 1999), and confront injury and career retirement (Chartrand & Lent, 1987; Parham, 1993). The National Collegiate Athletic Association (NCAA) recognized the need for additional support to assist student athletes with these stresses and encourages all of its institutions to

adopt a CHAMPS/Life Skills Program. The goal of this program is to assist student athletes in reducing the transitional stress by insuring that they develop more than just their athletic skills. The CHAMPS/Life Skills Program teaches skills that support academic, personal, and career development in addition to the development of athletic programs that encourage excellence by promoting the well-being of the student athlete (*CHAMPS/Life Skills Program, 2001*).

Educational and Career Planning

In a study that examined the achievement level of developmental tasks, collegiate level athletes scored significantly lower in the development of educational plans, career plans, and development of mature relationships with peers (Sowa & Gressard, 1983). One consideration for these findings and presented by these authors is that the time spent in the participation in sports at the high school and college level inhibits the student-athlete's developmental abilities in these areas.

Research conducted at two Division I and two Division III institutions in New England compared the level of competition to the student-athletes' ability to formulate educational and career plans (Blann, 1985). Using the revised Student Developmental Task Inventory, Blann found that freshmen and sophomore male athletes, regardless of the level of competition, were significantly less likely to formulate educational and career plans compared to non-athletes of the same class. The difference did not exist between athletes and non-athletes of the junior and senior classes.

Role Conflicts

Sack (1987) conducted research that indicated that athletes from Division I institutions are much more likely to experience role conflicts between academics and athletics than student athletes from lower collegiate divisions. These same athletes are much more likely to be recruited (and be on scholarship) to enter collegiate life with marginal academic backgrounds and are more likely to experience academic difficulty. Within this population, males tend to have more difficulty than females and minority student athletes tend to be faced with academic issues more so than non-minority student athletes. Upthegrove, Roscigno, and Charles (1999) supported these findings by showing that student athletes participating in revenue-producing sports experience lower academic achievement, most likely due to pressures that force the student athlete to prioritize sport first.

Loss of Control, Segregation, and Career Retirement

Wittmer, Bostic, Phillips, and Waters (1981) identified several additional issues that face today's intercollegiate student athlete. Factors such as the loss of identity, rigid control over daily activities, regulated social relationships and segregation from the total educational structure all present special needs for the incoming freshman. In addition, modified admission standards present special academic needs. The student athletes researched in Wittmer et al. (1981) self-identified problems in the areas of adjustment to school work, social life, financial management, and future vocational and educational problem areas to a significantly

greater amount than those identified by non-athletes.

The findings of Wittmer et al. (1981) were confirmed by Chartrand and Lent (1987) as they further defined several of the issues faced by student athletes as role conflicts and athletic retirement. These authors discussed the stress faced by student athletes when faced with the heavy demands of athletic participation in addition to academic demands and the lack of time for social development opportunities. The more committed the athletes were to their sports, the more difficulty they had addressing the issues. The student athletes exhibited a strong resistance to change, as their focus on their participation in a sport had provided the majority of their success up to this point in their lives.

Stress

Specific research on stress sources and responses of student athletes compared to non-athletes showed that student athletes reported a significantly higher amount of personal relationship and family stress (Etzel & Lantz, 1999). This increased stress was likely related to the increased demands on the student-athlete's time and their lack of socialization outside of their sport. Chartrand and Lent (1987) suggested that one of the keys to confronting the conflicts was to encourage the student athletes to develop competence in identifying, and utilizing coping resources and strategies and to become aware of the alternatives they have to athletic participation.

Parham (1993) identified important developmental challenges faced by student athletes that are not faced by non-athlete college students. Because of their

participation in intercollegiate athletics, demands were placed upon the schedules of the student athletes that often forced them to put athletic pursuits in front of academic endeavors. The demands of the sport often engulfed a majority of their non-academic time, thus leaving little time for socialization and interaction outside of their athletic environment. This lack of socialization opportunity often left the athlete feeling isolated and alienated from university life. In addition to this isolation, these student athletes also must learn to manage the successes or failures of their participation in sport, manage their physical health to minimize the chance for injury, and concern themselves with the prospect of terminating their athletic careers while replacing athletics with another activity from which they will be able to attain life satisfaction. Add to these challenges the pressures of being a minority or female which often confront the student athlete in the form of discrimination and stereotype, and the feelings of isolation, anxiety, and confusion can be magnified (Hollis, 1997; Parham, 1993).

Assisting the Student Athlete

Once the student athlete is afforded university admission, the public spotlight is increased. The disproportionate emphasis on academic failures of high profile student athletes has resulted in pressures on athletic and academic administrations to find methods of ensuring the academic success of those highly visible student athletes who get admitted to the higher education institutions.

Not only do academic pressures often conflict with athletic demands, but student athletes are more likely to need additional academic assistance and

remediation to attain the standards of the average general student population at an institution. Purdy, Eitzen and Hufnagel (1982) examined 10 years of academic data on more than 2,000 student athletes at Colorado State University and found that the high school grade point averages, high school class rank, and college admission test scores (SAT and ACT) were consistently lower for male student athletes participating in football or basketball than for the general student population. Sack (1987) confirmed these findings when the research he conducted indicated that athletes from Division I institutions are much more likely to be recruited (and be on scholarship) to enter collegiate life with marginal academic backgrounds and are more likely to experience academic difficulty than student athletes in lower collegiate divisions. These same athletes are much more likely to experience role conflicts between academics and athletics (Sack, 1987).

Academic Support Services for Athletes

Given these additional academic obstacles for many student athletes, what support can be provided that will provide the greatest opportunity for their success? Sherman, Weber, and Tegano (1986) asked Division I athletic directors for their solution. The athletic directors overwhelmingly agreed that the provision of academic support services was critical to increasing graduation rates. In the early 1980's, academic support services primarily consisted of tutoring, adult mentoring, and counseling for academics, personal, or athletic problems (McFarland & Yeargan, 1981). Over the last two decades, researchers have continued to redefine

“academic support services,” as they developed additional program components that improve student-athlete academic outcomes.

At a national forum on new student athletes in 1994, premier higher education institutions across the nation presented papers on the new academic services programs they had developed to improve the success of the student-athlete’s academic experience. These programs included such ideas as promoting development of academic counselors (Cavanaugh, 1994), teaching athletes to be aware of their athletic-transferable skills and how they transfer to the classroom (Hefferan & Cunningham, 1994; Titlebaum, Stankovich, & Meeker, 2000), summer orientation, teaching life skills (Conder, 1994), improving faculty/university attitudes and understanding of the student athlete (Young & Lovett, 1994), and teaching coping strategies to athletes under stress (Martin, 1994). Reports on the development of peer-helping programs also are beginning to appear in the literature (Morrissey & Helfrich, 1996; Waalkes et al., 1999).

Sherman, Weber, and Tegano (1986) found that program staffing and support, context, timing, and extent of services offered in an athletic academic services program were critical determinants of its success. As so much of a student-athlete’s time is consumed by athletic activities that take precedence over academics, the athletes present special academic needs. Institutions that handle these needs in a professional manner, are viewed as having the best academic assistance programs by other schools (Sherman et al., 1986).

Greer, Moore, and Horton (1986) identified the use of a study skills program as a key factor in improvement of the student athletes at the University of Central

Arkansas. The study skills program had seven sessions that were conducted during the first weeks of school during study hall hours. The sessions included learning basic skills in studying, time management, note taking, test taking, and reading. The students who participated in these sessions remained academically eligible and maintained or improved their grade point averages.

Since athletic programs often promote the admission of marginal students to the university's academic environment, the university has a responsibility to encourage the development of each student-athlete's academic potential (Gerdy, 1997). A well-designed academic support program can assist the student athlete overcome academic deficiencies, personal issues, and time management constraints to lead to graduation, future employment, and personal success (Underwood, 1984).

Mentoring within Athletic Academic Services

Mentoring programs within the collegiate athletic environment have addressed the education and handling of specific troublesome areas for college athletes. These programs were used as a mechanism to educate student athletes about topics such as drug and alcohol abuse and to teach student athletes the value of community service. Identified as a peer-helping program, in 1989, the University of Virginia developed Student Athlete Mentors (S.A.M.) to educate younger university athletes about the dangers of drug and alcohol use (Waalkes et al., 1999). Similarly, Buckeyes Against Alcohol and Drugs (B.A.A.D.) was developed in 1989 at Ohio State University as a mechanism for varsity athletes to educate younger children within the community while the student athlete learned

the value of community service (Waalkes et al., 1999). Pennsylvania State University developed the Student Peer Athlete Network (S.P.A.N.) in 1990. Unlike the S.A.M. and B.A.A.D. mentoring programs, S.P.A.N. incorporated a more-rounded approach in the teachings of the peer mentors. In addition to drug and alcohol abuse, peer athletes were trained to help their less-experienced fellow athletes with personal, academic, and athletic problems. This mentoring program utilized the pre-established informal peer-helper network that existed among the athletes in an attempt to create a healthier athletic, academic, and personal environment at Pennsylvania State University (Waalkes et al., 1999). Although the S.P.A.N. program features are described in depth, no description was provided regarding the evaluation of its success.

Mentoring successes for the student athlete. Morrissey and Helfrich (1996) examined the use and potential effectiveness of peer-mentoring programs for first-year student athletes at the University of Delaware. The Student Services for Athletes Program designed and implemented a mentoring program in 1995. Their program matched multiple small groups of first-year student athletes with three or four upper-class mentor student athletes. Mentors were selected and trained and then met with their groups after orientation and several other times throughout the year. Topics for discussion at group meetings included use of alcohol, homesickness, interpersonal relationships, lack of playing time, time management problems, nutrition, and roommate problems. The discussions were designed to allow the junior and senior student-athlete mentors to assist the first-year student athletes with handling athletic, academic, social, and emotional transitional issues.

The success of this program was not formally measured, but many of the freshman student athletes informally communicated their positive feelings about the program.

Willoughby et al. (1991, Fall) discussed a mentoring program for student athletes at Texas A&M University. They identified the academic issues surrounding many college student athletes. Minority students received a significant portion of the athletic scholarships each year. These students also received a less than ideal preparation on the secondary level because of substandard academic settings such as overcrowded inner-city schools, or the allowance of special privileges when performing academically. Thus, many of these students had poorly developed study skills, and academic goal-setting abilities. These skills, along with time management techniques were critical to the academic success of the collegiate student athlete.

At Texas A&M University, upper-class mentors were paired with beginning student athletes. The mentors were trained in a two-hour orientation. They were instructed that their goals included assisting the new student athlete with campus acclimation, time management, and study skill development. Mentors used three steps for this purpose. In Step One, mentors provided guided tours of the campus to assist the student athletes in identifying the location of campus resources like the library and campus buildings where they would attend classes. Step Two involved assisting the student athlete in completing a calendar with daily obligations including practices, games, assignments, quizzes, tests, and paper due dates. Finally, Step Three assisted the student athlete with the development of his/her study skills. Willoughby et al. (1991, Fall) mention that the program's

effectiveness would be monitored over years to come by comparing academic records and graduation rates of mentored students to non-mentored.

Mentoring failures in athletic academic programs. Contrary to the mentoring success found within other collegiate environments, Whitner and Sanz (1988) related the details of a failed attempt to initiate a peer-mentoring program at the University of Toledo. In this mentoring program, fellow upper-class student athletes were provided training on how to assist incoming freshmen student athletes complete the educational transition from high school to college. The peer mentors were to utilize their prior experience and teach the incoming freshmen the same university survival skills that they had acquired and mastered. Hopes for the long-term effects of this program included increased retention and higher graduation rates.

The peer mentoring pilot project within the University of Toledo Athletic Academic Support Program did not provide these results. The mentors lost interest in their task and dropped out of the pilot project. The peer counselors were perceived as traitors, and began to feel isolated. The incoming freshmen did not feel that their peer counselors were a bridge to a new environment, nor did they perceive them as models of appropriate academic behavior. The pilot program folded before the end of its second semester. The authors provided several helpful suggestions for further development and recommended using other student populations as the source of the peer counselors to avoid the conflicts and distrust which developed among the fellow student athletes in their relationships (Whitner & Sanz, 1988).

Potential for Mentoring in Athletic Academic Support Programs

Based upon the premise behind mentoring and the transitional issues faced by college student athletes, mentoring programs seem to offer a practical solution to the problems that so often drive the student athlete to academic failure. Given the situation of the current collegiate student athlete, mentoring programs potentially offer a significant method to increase academic success of today's collegiate athlete. By matching a more experienced student or faculty member with an incoming freshman student athlete, the transitional stress could be greatly reduced, as the younger athlete would then have a trusted, respected source of social and emotional support.

The demands placed upon a student athlete participating in a competitive sport environment have been shown to result in isolation (Parham, 1993; Upthegrove et al., 1999) making the transition to college life more difficult. The feelings of isolation are particularly prevalent within the college athletic community as student athletes have few opportunities to participate in activities with the general student population (Adler & Adler, 1985). Minority students (Hollis, 1997) are particularly vulnerable to these feelings as they not only find themselves ostracized due to cultural differences, but also lack minority figures to emulate or from whom they may seek guidance.

Pearson and Petitpas (1990) found that social support systems reduce the uncertainty an individual may feel about themselves or their environment when faced with new situations. Thus, the greater the social support systems available, the greater the chance that the individual may learn to cope with stressors and

transitional issues. Unfortunately, opportunities for developing the social networks outside of athletics are limited (Chartrand & Lent, 1987; Jordan & Denson, 1990). Rosenfeld, Richman and Hardy (1989) specifically identified the social support networks of student athletes to include their coaches and teammates for support in their athletic endeavors and their friends and parents for support in other areas of the student's life. Rosenfeld, Richman and Hardy (1989) identified strategies for enhancing these social support networks. The strategies include such ideas as teaching coaches, teammates, friends, and parents to actively listen, encouraging informal contacts, maintaining relationships with former coaches, arranging for parents to attend events, and encouraging inter-team as well as intra-team interaction and support. The strategies also included the recommendation for formation of mentoring relationships between veteran and new student athletes or between starters and non-starters.

Titlebaum, Stankovick, and Meeker (2000) presented a model that focuses on assisting student athletes with identifying the athletic-transferable skills they have mastered to become top athletes. The model then illustrated for student athletes that these same skills could be incorporated into the academic realm of self-management, note taking, test taking, and career resources. Along the same idea of self-realization, Lock and Layton (2000) also examined the concept of self-accommodating techniques. In their analyses, athletes could improve their academic outcomes by evaluating their learning strengths and weaknesses. Mentoring relationships, which traditionally have been used to assist an inexperienced individual down a road of self-discovery, could assist the student

athlete with a self-analysis of their strengths and weaknesses and how to best approach difficult academic situations. In addition, the structured environments of the student athletes offer an opportunity to conduct research that would add a significant contribution to mentoring theory.

Mentoring Theory

Although a significant number of studies have investigated the effects of mentoring, very few studies have targeted the development of a theory that provides the intellectual foundation to explain why mentoring is often successful in assisting individuals through times of transitional stress. One of the first studies that explored the foundations of mentoring was conducted by Kram (1983). In her research, Kram conducted in-depth interviews with 15 managers to identify four stages of a mentoring relationship (initiation, cultivation, separation, and redefinition) and two mentor functions: career-related and psychosocial roles. Career-related functions promoted the protégé's career advancement by including such assistance as sponsorship, exposure, coaching, protection, and providing challenging assignments. Psychosocial functions concerned the protégé's self-image and competence and included role modeling, acceptance, confirmation, counseling, and friendship. Within a mentorship, Kram concluded that the career-related functions emerge first and the psychosocial functions become important in later phases. Kram and Isabella (1985) also found that the benefits of mentorship participation last beyond the duration of the relationship as lessons learned can then be applied to future situations.

A Mentoring Model

To further the conceptualization of mentoring, Anderson and Shannon (1988) examined and analyzed the basic definitions and functions of a mentoring relationship. They utilized their analysis to develop a model of mentoring. Anderson and Shannon (1988) found that effective mentoring programs should be grounded on a strong conceptual foundation, which includes a definition of mentoring, the essential functions of the mentor role, the activities to be utilized to express the functions, and the temperament that mentors must exhibit to effectively carry out the mentor functions. The Anderson and Shannon Model of Mentoring is defined as a process with several key factors required for a successful mentoring relationship. The mentoring relationship must be nurturing, provide a role model, provide professional/personal development, and be a genuinely caring relationship. Further, the relationship must provide five conjunctive functions, which are teaching, sponsoring, encouraging, counseling, and befriending.

Basic Elements of Mentoring

An examination of the various definitions of mentoring utilized by a multitude of researchers and business leaders lead to confusion and a lack of a clear conceptualization of mentoring (Jacobi, 1991). In an attempt to develop one standard operational definition, Jacobi (1991) clarified the rather diverse definitions by further describing mentoring based upon the three disciplines examined: higher education, management, and psychology. Jacobi (1991) identified the basic

elements of a common definition to provide a foundation for rigorous research. These elements included the roles or functions of a mentor classified into three components of the mentoring relationship (emotional and psychological support, direct assistance with career and professional development, and role modeling) in which these functions can be classified.

Jacobi (1991) summarized that mentoring relationships are helping relationships usually focused on achievement. The relationships include any or all of the three broad components. They are reciprocal relationships, personal relationships, and relationships where mentors exhibit greater experience, influence, and achievement. These analyses of mentoring were enhanced with a critical examination of mentoring and its effects on undergraduate education. Virtually none of the previous mentoring studies used a cross-section of institutions and students for their studies, and empirical studies linking mentoring with academic outcomes were scarce. Jacobi (1991) then suggested that mentoring may not even be the most efficient method of promoting academic success as one study showed only the first few encounters with faculty appeared to have the greatest impact on student success. In addition, mentoring researchers often inappropriately infer a causal relation from an observed correlation. Other difficulties with the mentoring research include the lack of standardization of goals and differing outcomes of interest. Some studies examined achievements such as standardized test scores or grades, while others emphasized reductions in attrition or increased interest in graduate schools. In addition, very few studies addressed gender or ethnic

differences in mentoring outcomes, and often did not control for confounding factors (Jacobi, 1991).

Theoretical Perspectives of Mentoring

Jacobi (1991) suggested several theoretical perspectives, which could be used for the basis of future research. One such theory was the involvement in learning concept that focuses on mentoring as a vehicle for promoting involvement in learning through role modeling or direct involvement. A second theoretical basis suggested was that of academic and social integration, which looks at mentoring as a mechanism to influence student behaviors and attitudes, feelings, and self-concept. A third theory involves House's (1981) four categories of social support (emotional, informational, appraisal, and instrumental). Social support prevents the deleterious effects of stress on health through the reduction of stress levels. Both the quantity and quality of social relationships with family, friends, and coworkers affect the amount of stress in a person's life and, thus, their overall well-being. Social support promotes mutual obligation, and belonging. Attachments among individuals that improve adaptive competence, promote emotional mastery, offer guidance with problems, provide feedback to validate identity, and foster improved performance are considered to involve social support (House, 1981). From this context, mentoring is thought to provide such support to reduce stress and improve student outcomes. The final theoretical basis for mentoring, suggested by Jacobi (1991), included developmental support in which mentoring was the mechanism used to enhance cognitive development.

Given the definition of mentoring as a developmental relationship between senior and junior individuals within an organization, McManus and Russell (1997) advanced mentoring theory based upon concepts rooted in leader-member exchange theory, organizational citizenship behavior, social support, and socialization. By definition, mentors serve career functions, which include sponsorship, exposure, coaching, protection and providing challenges, as well as psychosocial functions, which include role modeling, acceptance, counseling, and friendship. With regard to leader-member exchange theory, subordinates have been reported to view their leader-member exchange in a similar fashion as that of mentoring relationships with the exception of role-modeling functions. However, the similarities are not as predominant when the leader and mentor are different people. With regard to organizational citizenship behavior, McManus and Russell (1997) point out that little research has been conducted to compare this phenomenon with informal mentoring, although both involve extra-role behaviors.

When social stress is examined, researchers have found that social support buffers the effects of stress. The support can be in the form of both emotional and appraisal support. Mentoring is known to provide both types of support, yet research is scarce that connects mentoring and stress. Finally, mentoring relationships may be utilized to effect socialization of newcomers or newly transferred employees, however, little research has been conducted that might elucidate which specific aspects of mentoring (psychosocial or career functions) are more critical in the process (McManus & Russell, 1997).

In a more recent analysis, Eby (1997) further defined the mentoring concept by suggesting that mentoring has two primary dimensions: the form of the relationship (lateral or hierarchical) and the type of skill development obtained (job-related or career-related). As the nature of work is changing, different forms of mentoring are suggested to serve the various changes. Eby presented a topology of alternative forms of mentoring that included ten types of mentoring regarding job-related skill development and four types of mentoring which address career-related skill development.

Mentoring theory seems to focus on the characteristics and benefits of the mentoring relationship, but does not delineate any differences that may exist depending upon who is serving as the mentor. Research describing successful mentoring programs in the collegiate setting has included examples of both faculty and peer mentoring, yet any comparison between the two mentoring structures has not been made.

Mentors

The characteristics of a mentor include being encouraging, supportive, nonjudgmental and a confidante (Reglin, 1997; Zachary, 2000; Zey, 1984). Mentors serve as a source of support in the world of the student that is void of reliable contacts and authoritative adults. A mentor is one who teaches, sponsors, and guides a protégé into a new social world while acting as a counselor for moral support and a role model to provide vision (Pascarella & Terenzini, 1978; Vidoni et al., 1988). Effective mentors have goals, commitment, realistic or high

expectations, flexibility, respect for an individual's rights, firmness, supportive techniques, and good listening skills (Boyle & Boice, 1998; Flaxman, Erwin, & Ascher, 1992; Wunsch, 1994).

Mentor Characteristics

Mentors within the Big Brothers/Big Sisters Program were found to have a high level of contact. They met their protégés at least three times per month for four hours each time. In addition, the relationships between these mentors and protégés were built on the basis that the mentor was a friend, not a teacher or preacher (Grossman & Garry, 1997).

Rose (1999) found that mentor personality plays a key role in the development of mentor relationships for graduate students at a university. Her study identified intellectual curiosity, reliability, and good communication skills as important mentor characteristics. In addition, her research showed that mentors should provide challenges, constructive criticism, and should convey belief in the student's capabilities.

Benefits of Mentoring

Yeager (2000) examined the benefits perceived by a sample of 12 mentors in a university setting. The mentors identified benefits that included the opportunity to provide a nurturing role, to expand knowledge, to receive intrinsic rewards, and to form a significant relationship. The mentors identified the following challenges to implementing their role: time challenges, cultural/value

differences, and lack of response of the protégés. Despite the challenges, mentors found the relationship to be positive as it facilitated the growth and development of the mentored student and offered the opportunity for the mentor to continue learning.

Mentor Training

Formal structured mentoring programs with specific goals and activities offer the opportunity to identify all participants (mentors and protégés) who may derive benefits. The recognition of specific goals and activities necessitates specific training for the process of mentoring (Wunsch, 1994). The amount of training needed varies with each mentoring program. Often, the amount of training provided is determined by the balance struck between what is desirable and what can realistically be provided (Miller, 2002). Mentor training generally includes three objectives: to explain the goals of the mentoring program and outline the needs of the protégés; to establish mentoring ground rules and procedures; and to develop mentoring skills (Golden & Sims, 1999).

The objectives of the mentoring program should be passed to the mentors through an informal and interactive training style. Use of experienced mentors to relay the information, share experiences, or provide case study or role playing examples have proven effective in training mentors (Miller, 2002).

Part of a mentor's training should include a self-assessment of mentoring skills. This assessment should be followed by a clear explanation of the role the mentor will play. The mentor is then able to determine which of their skills might

need honing in order to fulfill the demands of the mentoring relationship (Zachary, 2000).

In addition to the assessment of skills and the provision of a clear role definition, a component recommended for mentor training includes codes of practice. Mentors should receive clear guidelines to acceptable behaviors when dealing with their protégés (Miller, 2002).

Faculty Mentoring

Campbell and Campbell (1997) conducted research to investigate the academic benefits for university students who had a faculty mentor. The target population was students of ethnic minorities. These students were matched to faculty mentors based upon shared academic interests. The research was conducted using a matched pairs design based upon gender, ethnicity, grade point average, and entering enrollment status. Three hundred and thirty-nine undergraduates were assigned to faculty mentors and paired with non-mentored students. Mentors and students were encouraged to meet regularly over the period of one semester, but were not required to adhere to any particular schedule. The research found significantly higher GPA's for mentored students, with more academic units completed and lower dropout rates when compared to the non-mentored students. The amount of mentor-protégé contact was positively correlated with GPA. Academic success was unrelated to gender or ethnicity of either the mentor, protégé, or the match of mentor and protégé (Campbell & Campbell, 1997).

In a similar study seeking to identify improved academic outcomes as a result of faculty mentoring, Perri Petruolo (1998) conducted an assessment of mentoring provided to undergraduate students at a public community college in New Jersey. Perri Petruolo found that the quantity of mentoring (the number of contacts between the student and mentor) was significantly correlated with students' academic persistence, self-concept, and academic performance. The quality of mentoring was not related to student academic performance or persistence.

Over a decade before the Perri Petruolo study, Erkut and Mokros (1984) examined 723 subjects from five coeducational and one women's liberal arts college using a questionnaire which elicited information on faculty role models and mentors. Female students were found to neither gravitate toward nor avoid female role models, whereas men avoided female role models. No gender difference was found in the academic success (as measured by grades) of mentored students from the coeducational institutions. No gender difference was seen in the information obtained from the mentors regarding academic issues, career development, or conducting research. Similar to the later studies by Campbell and Campbell (1997) and Perri Petruolo (1998), this study also identified an improved outcome. All students reported an increased self-confidence as a result of their mentoring relationship (Erkut & Mokros, 1984).

Rose (1999) found that faculty mentor personality plays a key role in the development of mentor relationships for graduate students. The results of a survey of graduate students at an institution of higher education identified intellectual curiosity, reliability, and good communication skills as important mentor

characteristics. In addition, her research identified that protégés most often expect to receive challenges, constructive criticism, and encouragement from their faculty mentors.

Peer Mentoring

Gershon (1999) examined the perceived effectiveness of a peer-mentoring program and the peer-mentors' influence on the adjustment of first-year college students. In this study, the mentors were returning students who were residents in on-campus housing. These mentors were matched with first-year students. Mentors participated in an orientation session and structured activities were implemented to facilitate the mentor-protégé relationship. Evaluation of the program indicated that both the mentor and protégé felt that sharing common interests (like major area of study) was important. As common interests increased, the mentors and protégés were more likely to spend more time together. The amount of time spent together was an important variable in the adjustment of the protégé. Protégés who met with their assigned mentors once per week or more scored significantly higher in areas of social adjustment and college attachment than did other protégés and the non-participants surveyed.

Morrissey and Helfrich (1996) examined the use and potential effectiveness of peer-mentoring programs for first-year student athletes at the University of Delaware. The Student Services for Athletes Program designed and implemented a mentoring program in 1995. Their program matched multiple small groups of first-year student athletes with three or four upper-class mentor student athletes.

Mentors were selected and trained and then met with their groups after orientation and several other times throughout the year. Topics for discussion at group meetings included use of alcohol, homesickness, interpersonal relationships, lack of playing time, time management problems, nutrition, and roommate problems. The discussions were designed to allow the junior and senior student-athlete mentors to assist the first-year student athletes with handling athletic, academic, social, and emotional transitional issues. The success of this program was not formally measured, but many of the freshman student athletes informally communicated their positive feelings about the program.

Pennsylvania State University developed the Student Peer Athlete Network (S.P.A.N.) in 1990. S.P.A.N. incorporated a rounded approach that utilized peer athletes, who were trained to help their less-experienced fellow athletes with personal, academic, and athletic problems. This mentoring program utilized the pre-established informal peer-helper network that existed among the athletes in an attempt to create a healthier athletic, academic, and personal environment at Pennsylvania State University (Waalkes et al., 1999). Although the S.P.A.N. program features are described in depth, no description was provided regarding the evaluation of its success.

Contrary to the mentoring success found within other collegiate environments, Whitner and Sanz (1988) related the details of a failed attempt to initiate a peer-mentoring program at the University of Toledo. In this mentoring program, fellow upper-class student athletes were provided training on how to assist incoming freshmen student athletes to complete the educational transition from high

school to college. The peer mentors were to utilize their prior experience and teach the incoming freshmen the same university survival skills that they had acquired and mastered. Hopes for the long-term effects of this program included increased retention and higher graduation rates.

The peer mentoring pilot project within the University of Toledo athletic academic support program did not provide these results. The mentors lost interest in their task and dropped out of the pilot project. The peer counselors were perceived as traitors, and began to feel isolated. The incoming freshmen did not feel that their peer counselors were a bridge to a new environment, nor did they perceive them as models of appropriate academic behavior. The pilot program folded before the end of its second semester. The authors did provide several helpful suggestions for further development and recommended using other student populations as the source of the peer counselors to avoid the conflicts and distrust which developed among the fellow student athletes in their relationships (Whitner & Sanz, 1988).

Thus, with all the research that specifically examines the nature and effectiveness of both faculty and peer mentoring provided to students at institutions of higher education, no studies specifically compare faculty and peer mentoring to determine if either of these mechanisms are more effective than the other. In addition, no research has been conducted that seeks to identify any connection between mentoring and the reduction of perceived stress or the increase in perceived social support. More specifically, no research has been conducted which

seeks to identify outcome differences, measured as changes in perceived stress and perceived social support, between faculty and peer mentoring.

The potential for reducing the transitional stresses and thus the academic outcomes of student athletes through the use of a mentoring program exists. The success of mentoring programs in the world of academics and social development of youth demonstrates this potential. To date, mentoring programs have not been clearly linked with the reduction of transitional stresses within the business world, psychological development, or within the realm of education. However, mentoring has been defined as a relationship that contains a component of emotional and psychological support (Jacobi, 1991).

The support provided through a mentoring relationship can be compared similarly with both the emotional and appraisal support defined by social support researchers (Cohen & Syme, 1985). Social support has been defined as the perceived availability of interpersonal resources that are responsive to the needs elicited by stress (Cohen & Wills, 1985), and social support is known to buffer the stress response through the provision of esteem support, informational support, instrumental support, social companionship, or motivational support through interpersonal relationships (Wills, 1985).

The perception of social support involves the evaluation of the perceived availability and adequacy of relationships and the perception of the availability of resources (Barrera, 2000). Through interpersonal relationships, mentoring is known to provide these types of support, yet research is scarce which connects mentoring and social support or mentoring and stress (Cohen et al., 1985; McManus &

Russell, 1997). In addition, mentoring relationships within athletic academic support services at a university offer a relatively structured environment from which the relationship between mentoring and the perception of stress and social support can be examined.

CHAPTER THREE

METHODS

The term *mentoring* has been utilized to define many different relationships in various contexts (Rose, 1999). To add to the body of knowledge on mentoring, the mentoring relationship for student athletes at an institution of higher education, which was studied in this research, was thoroughly examined and described. The components of the program were defined, the methods for determining mentored status of the student athletes were described, and the procedures for mentoring were outlined in detail.

The methods used for this study primarily consisted of a quantitative examination of the relationship between a mentoring condition, faculty versus peer mentoring, and student athletes' perceived stress and perceived social support levels. Surveys that provided a numerical value to perceived stress and social support were used to supply a basis for comparison of these variables. In addition, a qualitative element was also used to assess the quality of the mentoring relationships that developed. In this part of the study, interviews were used to collect the perceptions of the mentors regarding the growth of the relationships with their protégés.

Population and Sample

The accessible population of interest included all first-year, freshmen student athletes who attended an institution of higher education in Florida. The institution was classified as Division I with over 43,000 students and had more than 500 student athletes participating in 18 sports. Of these athletes, 153 were enrolled full time as freshmen for the first time. The sample population included approximately 61 first-year student athletes enrolled full time.

Study Participants

This research study included three groups of participants: faculty mentors, peer mentors, and student athletes. The faculty mentors included individuals, both male and female, and of both White and Other (African American and Hispanic) races, who completed their undergraduate education and were at least 22 years old. The faculty mentors were members of the teaching staff of the institution, academic advisors, or graduate students working toward a post-baccalaureate degree. The faculty mentors were volunteers with various interests and specialties and were associated with the higher education institution.

The peer mentors included individuals, both male and female, and of both White and Other race, who had not completed their undergraduate education but were at least 18 years old. The peer mentors were volunteers with various interests and majors and were enrolled as students at the higher education institution.

The protégés included student athletes in their first full-time semester at the institution. The protégés were volunteers from a variety of the university's

intercollegiate teams. They were selected from those student athletes who actively participated in the practices and competitions of the intercollegiate athletic teams including: football, basketball, baseball, volleyball, golf, swimming, track and field, cross country, rowing, dance, cheerleading and softball. The protégés were a mix of male and female, White and Other and ranged in scholastic ability from those requiring special permission for admission to the college due to poor Scholastic Aptitude Test scores to those admitted with exceptional academic abilities.

Procedures and Data Collection

The researcher served as the coordinator for the mentoring program. The duties of the coordinator included explaining the mentoring program, soliciting all volunteers for the mentoring program, facilitating the matching of mentors and protégés, and monitoring the weekly meetings. The mentoring program coordinator would also provide training for mentors and handle any questions or problems that arose during the semester. During the first week of the semester, the mentoring program coordinator explained the mentoring program to all the incoming student athletes as a component of their orientation on the athletic academic services available. Every team scheduled a meeting primarily to explain compliance issues and academic services. The pitch on the mentoring program was added to every meeting. The potential benefits of a mentoring program were explained from both the perspectives of a mentor and a protégé. Student athletes were asked to contact their advisor if they wished to participate in the program. Participation was

encouraged through the promise of completion of required community service hours through mentoring a fellow student athlete.

During the second week of class, a presentation was provided to every Student Life Skills class, which all freshmen student athletes were required to attend. The mentoring program was described once again and the details of the program provided. The potential benefits and potential negative effects of participation were explained. Each student athlete, who volunteered to participate, was then asked to sign an informed consent form (Appendix C).

Only those students who agreed to participate were included in the study (n=61). Demographic data were collected (Appendix D) on the population to ensure that the population could be adequately described. These data were also used to properly divide the student athletes into two groups whose average high school grade point averages were somewhat equal. The high school grade point average is the criterion used for prediction of success. The goal of the researcher was to compare two groups of students with similar academic abilities. Studies of predictors of academic success for student athletes at major universities have shown that the high school grade point average is a better predictor than other predictors such as achievement test scores, socioeconomic background, or education levels of parents (Carodine et al., 1999; Lang, Dunham, & Alpert, 1988; Sellers, 1992; Walter, Smith, Hoey, Wilhelm, & Miller, 1987).

During the meeting held in the Student Life Skills class, the student athlete volunteer were asked to complete a survey that determined their initial perceived stress levels and elucidated their perceived levels of social support resources from

friends. Upon collection of all of the demographic data, the student-athlete participants were then assigned to two groups based upon anticipated academic achievement. The individuals within each group were then randomly assigned to a faculty or peer mentor.

The mentors were then chosen using a recruitment process that involved the following:

- A request/notification was sent to the College of Education and the College of Business describing the mentoring opportunities available. These two colleges were targeted because they were known to promote mentoring as part of their programs and student involvement.
- A Mentor Training Session was held to explain clear guidelines on the expectations of mentoring and the mentor-protégé interaction. All mentors were asked to attend. The training session was designed to educate mentors on mentoring techniques and resources in an attempt to reduce the differences in mentoring abilities of the volunteers. If attendance was not possible, the mentor was asked to come to the Academic Services Office and receive individual instructions and the presentation of potential mentoring activities.
- All potential mentors who volunteered were then asked to complete a Mentoring Skills Inventory (Appendix E) (Zachary, 2000) that solicits information on the interests, mentoring skills and experiences, and availability.
- Finally, the mentors watched a presentation by the researcher on

potential mentoring activities that included both positive and negative role-playing scenarios. Discussions were then held regarding potential issues and all questions were answered. The mentors were provided with a resource packet that provided a synopsis of the National Collegiate Athletic Association rules regarding treatment of student athletes, university rules of mentoring, a list of campus resources, and suggested mentoring strategies (Zachary, 2000) and goals (Miller, 2002) (Appendix F).

Mentors were asked to schedule meetings with each student athlete on a weekly basis. Upon their first meeting, they were to complete the Mentoring Partnership Agreement (Appendix A) (Zachary, 2000). Mentors were to document each meeting with the student athlete by completing a Mentoring Partnership Reflection Guide (Appendix B) (Zachary, 2000). Prior to its use, five experienced mentors reviewed the reflection guide. Each mentor provided suggestions to improve the understanding of the guide's questions. Suggestions were incorporated into the guide before its use. After each meeting, mentors were asked to provide information regarding their meeting by answering the questions on the reflection guide, which was sent electronically to each mentor through email. The comments on the guide reflected the time spent with the protégé and their perception of the student-athlete's progress regarding his or her organizational skills, involvement with activities of interest outside of his or her sport, learning about institutional resources, handling of stressful situations, and general transition to the college lifestyle of a student athlete.

Mentors were told to hold all meetings at the athletic academic services facilities or in the office of the faculty mentor, unless specific approval was requested to meet elsewhere (e.g., library or computer lab). The mentors were asked to return the Reflective Guides via email each week to the mentoring program coordinator and these documents were kept in the confidential environment of the athletic academic services office. Mentors were asked to meet their protégés at least nine times during the semester out of a possible 13 weekly meetings throughout the semester. Of these nine meetings, a maximum of three were permitted to occur through the use of telementoring.

For the students willing to participate, the first meeting with their mentor was arranged by the mentoring program coordinator. The students and mentors were asked to initiate their mentoring meetings within the third week of class and continue weekly meetings throughout the semester. The mentoring program coordinator held two mid-semester meetings, one in the 7th week of the semester and one in the 11th week, with the mentors in order to provide them the opportunity to discuss any challenges, reinforce the mentoring protocols, discuss tips for mentors in providing feedback, and encourage professional learning through multilevel, synergistic interaction (Lick, 1999). In addition to these meetings, several individual meetings were held with a few of the mentors at various times throughout the semester to discuss issues and assess progress with the development of their mentor-protégé relationships.

Perceived changes in stress levels and social support resources utilized by the student athletes were determined by completion of two follow-up surveys given

during mid-semester and at the end of the semester. The perceived stress levels and perceived levels of social support of the student athletes who were mentored by faculty were compared with those who were mentored by peers to determine any differences. Both gender and race of the participants also were collected to determine if any differences in changes of perceived stress or social support could be accounted for by these factors. Finally, the number of hours per week spent on practicing, participating, or traveling for their sport also was collected and used as a covariate to assist in explaining any variances in the outcomes.

In order to assess a quality dimension on the mentoring relationships, six mentors (three faculty mentors and three peer mentors) were interviewed using the Monitoring the Quality of the Mentoring Interaction Interview (Appendix G) developed after years of research on mentoring (Zachary, 2000).

The entire research project was conducted over the first semester of the 2003–2004 academic year. The timeline in Table 1 was used as a guideline to ensure the appropriate timing of scheduled activities.

Table 1

Mentoring Program Timetable

Week of:	Planned Activities:
August 25	Sign up mentors & protégés for program Protégés take initial stress & social support survey
September 1	Continue sign up for mentors & protégés Hold mentor training session Assign protégés
September 8	Begin mentor – protégé meetings
October 6	Hold mentor training refresher session
October 13	Protégés take midterm stress & social support survey
November 3	Hold mentor training refresher session
December 1	Protégés take final stress & social support survey Interview mentors for quality of relationship

Data Analyses

Descriptive data were collected and analyzed for the two groups of student athletes (those mentored by faculty and those mentored by peers). Means and standard deviations were calculated on group ages, and the number of student athletes by gender and race were reported for each group.

The data collected on perceived stress levels of the student athletes were analyzed using a repeated measures analysis of variance (ANOVA), which placed the mentoring condition as the independent variable and the stress level as the dependent variable. The covariate was the total hours spent participating in the sport through practice, training, travel or competition during the semester. This

factor was most likely to have a negative influence (increasing) on perceived stress levels and decrease social support levels, since the hours spent participating in sporting activities detract from the student-athletes' efforts to study and attend class (Sack, 1987; Upthegrove et al., 1999) and to develop social support networks used to reduce stress (Rosenfeld et al., 1989).

The information collected at the beginning, middle, and end of the semester on perceived levels of social support of the student athletes was analyzed. The perceived levels of social support of the faculty-mentored and peer-mentored students were analyzed using a repeated measures ANOVA, which places the mentoring condition as the independent variable and the social support level as the dependent variable.

All results were then analyzed using two-way repeated measures ANOVAs using race (White vs. Other) and gender (male vs. female), as additional independent variables to determine any differences in changes of perceived stress or levels of social support for those faculty-mentored and peer-mentored student athletes that may be attributed to race or gender.

Survey Instruments

Perceived stress was measured using the Perceived Stress Scale (PSS) (Appendix H) (Cohen, Kamarck, & Mermelstein, 1983). Scores from the global measure (designed to assess the degree to which situations are appraised as unpredictable, uncontrollable, and overloading), demonstrated both internal and test-retest reliability as well as concurrent and predictive validity. The study

presents evidence from three samples (two of the samples were drawn from college students and one sample was drawn from participants in a community smoking-cessation program). Cronbach's alpha was greater than .84 for all three samples. The test-retest correlation was .85 when the test was retaken after a two-day interval and .55 when given after a six-week interval.

In order to determine the type of stress measured, the PSS was correlated with life-event scores, depressive and physical symptomatology, social anxiety, use of health services, and smoking-reduction maintenance. The PSS was correlated to the College Student Life-Event Scale, the Center for Epidemiologic Studies Depression Scale, the Cohen-Hoberman Inventory of Physical Symptoms, and the Social Avoidance and Distress Scale. The instrument is more global than life-event scales and is sensitive to chronic stress, stress derived from expectations, and to reactions to stress. Age was shown to be unrelated to the PSS (Cohen et al., 1983).

The surveys were scored by adding the individual responses to produce an overall stress score for the individual for each time period. The student athletes read each question on the survey and provided an estimation of the frequency with which they experienced the feelings described in the question. Responses ranged from never (0) to very often (4) (Appendix H). Questions 4, 5, 7, and 8 were reverse scored prior to calculation of the total stress score.

The reliability of the stress scores obtained in the current study also proved to be internally consistent. Cronbach's alpha was .84 for the sample of stress scores obtained at the beginning of the semester, .86 for the stress scores obtained in the

middle of the semester, and .89 for the stress scores obtained at the end of the semester.

Perceived social support was measured using the Perceived Social Support – Friends Survey (Appendix I) (Procidano & Heller, 1983). Using three separate studies of university undergraduates, Procidano and Heller developed and validated measures of social support from both friends and family. Perceived social support (PSS) measures were internally consistent (Cronbach's alpha of .88 and .90 for the Friends and Family instruments respectively, and a test-retest reliability of $r = .83$) and appeared to measure valid constructs that were separate from each other and from network measures such as the Life Experience Survey, the Social Network Questionnaire, and the Langner Screening Instrument.

The survey asked each student athlete to read 20 statements regarding various aspects of social support and to circle whether they agreed with the statement (Yes), disagreed with the statement (No) or were uncertain of their feelings about the statement (Don't Know). Each item was scored according to the response provided. "Yes" responses were scored with 2 points. "No" responses were scored with 0 points, and a response of "Don't Know" was scored with 1 point. The individual survey items were summed to produce a total stress score for each individual for each time period.

The social support scores measured in this current study also proved to be reliable. The Cronbach's alphas calculated from the social support scores from friends measured at the beginning, middle, and end of the semester were .84, .82,

and .82, respectively. The Cronbach's alphas for the social support from mentors measured in the middle and end of the semester were .83 and .84, respectively.

Perceived social support was defined as the extent to which individuals believe that his/her need for support, information, and feedback are fulfilled. Procidano and Heller's (1983) studies showed that perceived social support is related to certain network characteristics, personality traits, and sometimes may be affected by mood states. The perception of family support seems to be more stable and not influenced by attitudinal changes.

Quality of Mentoring

The data collected from the Monitoring the Quality of the Mentoring Interaction Interview were analyzed qualitatively to determine if differences exist in the perceived quality of the faculty mentoring relationships and the peer mentoring relationships. The assessment of quality originated from the perspective of the mentors.

Through the use of an unordered meta-matrix, basic information from the interview was brought together in one large chart. This display allowed for an analysis on the full set of data or on one or several variables at a time (Miles & Huberman, 1994). The meta-matrix, or master chart, was used to assemble and juxtapose the relevant data collected from all the mentor interviews into one large display. The mentors were asked to respond to seven questions, each designed to elicit information that would assist in determining the quality of the relationship developed. Each response provided by the mentor interviewed was summarized

and placed into the appropriate cell designated for the responses to each question asked. The meta-matrix contained the quality determining variables such as the description of the mentoring interaction and the mentor's feeling of authenticity of the mentoring relationship. The meta-matrix was sorted then into a case-ordered descriptive matrix where information from each interview was sorted from high to low on the quality variable, authenticity of the mentoring relationship.

In this site-ordered matrix, the data were partitioned further in order to cluster the data into sets of cases that allowed for variables of interest to be contrasted and clarified. The question regarding the feeling of authenticity was used as the main variable on which to sort the mentor's responses. In this question, the mentors rated their impression of the relationship that they had developed with their protégé. Each mentor chose the type of relationship from a scale of 1 to 10, 1 relating to a very business-like relationship, 5 described a cordial relationship, and 10 described an authentic or genuine friendship. The responses to this question were used to further cluster and refine any differences in the quality of the mentoring relationship between faculty and peer mentors. The scale used to assess quality was interpreted from the best relationships to the worst. The best developed were relationships perceived as genuine, and those relationships that remained very cold and business-like were considered the worst developed and of a lower quality. This within-category sorting allowed for an examination and analyses of the perceptions of the mentors regarding the quality of their mentoring relationships.

CHAPTER FOUR

RESULTS

The purpose of this research study was to examine the differences that existed in the perceptions of general stress and social support between faculty and peer-mentored student athletes. A mentoring program was designed, implemented, and monitored over a semester at a large university. The design of this study was primarily a quantitative examination of the relation between a mentoring condition and student athletes' perceived stress and perceived social support levels, but also contained a qualitative element used to assess the quality of the mentoring relationships. Perceived stress was measured as the degree to which situations were appraised as unpredictable, uncontrollable, and overloading, while perceived social support was measured as an inventory of resources available and utilized to help an individual cope with their perceived stress. The results from these measures and their analyses are presented below.

Data were collected through the use of two surveys, given to the same set of student athletes at the beginning, middle, and end of a university's academic semester. In addition, personal interviews were conducted with six mentors at the end of the semester in order to collect the mentors' impressions of the quality of their mentoring relationships.

Description of Sample

Approximately 145 freshmen student athletes who were in their first full-time semester at college listened to a presentation regarding the new mentoring program designed to help them transition to collegiate life. Of these students, 74 (51%) volunteered to participate in the program, by requesting a mentor for the semester. Of those who volunteered, two were dropped from the study because they would not turn 18 years of age until sometime in the middle of the semester, and five dropped out the following week, citing schedules too busy to meet weekly with a mentor, or they simply changed their mind regarding their desire to participate. Of the 67 students remaining in the mentoring program, six additional students met less than nine times with their mentors during the semester and their data were dropped from the study.

In addition to the solicitation of student-athlete volunteers, mentors were recruited through individual meetings with every intercollegiate athletic team, the university's business institute, the College of Education, and the Academic Services for Student Athletes Office. A total of 27 mentors were recruited (17 student athletes, and 10 faculty and staff members). Of the 17 student-athlete mentors, 2 dropped from the program early in the semester due to schedule conflicts. Of the 10 faculty and staff mentors, 1 dropped out after the first week of the mentoring program due to time demands.

Thus, a total of 67 student athletes were individually assigned to one of the 24 mentors. Each peer mentor was assigned two protégés, except for two peer mentors who agreed to meet with three protégés. Each faculty mentor was assigned

four protégés except one who had 3 protégés. For 61 of these student athletes, the mentor-protégé relationships were developed over the course of the semester through a minimum of nine encounters.

Treatment of Data

Mentoring relationships were monitored through the completion of the Mentoring Reflection Guide (Appendix B). Even though the guide was made available electronically through email, obtaining completed forms was not always possible. In the absence of the submission of these weekly, completed Reflection Guides, verification that the mentoring meetings were occurring was accomplished by calling, emailing, or through a direct encounter with the mentor or the student-athlete protégé.

Of the 61 student athletes who were mentored throughout the semester, 57 completed all three of the stress and social support surveys during the semester. Those cases with incomplete data sets were not included in the statistical analyses. On two of the stress surveys, the student athlete failed to provide a response for one of the 10 items on the survey. Scores for these missing items were computed by calculating the mean score for the remaining 9 of the 10 items on the survey and substituting this value for the missing data. On six of the social support surveys, the student athlete neglected to respond to 1 of the 20 items on this survey. Scores for these missing items were computed by calculating the mean score for the remaining 19 of the 20 items on the survey and substituting this value for the missing data.

Descriptive Statistics

In order to obtain a clear understanding of the sample and the research conditions, descriptive statistics were calculated for the sample of student athletes as well as the mentors. The descriptive statistics were then calculated for each of the mentor-type groups in order to ensure that the groups were relatively similar prior to the treatment.

Total Sample Descriptive Statistics

The 57 student athletes who completed the study were a diverse group made up of the following demographics. Thirty-three were female, 24 were male. Forty-four of the student athletes classified their race as White and 13 classified themselves as Other (African American or Hispanic). The student athletes represented a diverse cross-section of the university's athletic teams. The breakdown of student athletes can be seen in Table 2.

Table 2

Volunteers by Intercollegiate Team

Intercollegiate Team	No. of Student-Athlete Volunteers
Baseball	3
Basketball	3
Cheerleading	14
Cross Country	2
Dance	3
Football	10
Golf	2
Rowing	8
Soccer	6
Track and Field	5
Volleyball	1
Total Volunteers	57

All student athletes were first semester, full-time freshmen at the university. The overall high school grade point average (HSGPA) was 3.41 ($SD = 0.68$) on a 4.0 scale. The ages of the participants ranged from 18 years to almost 20 years of age; the average age was 18.67 years. The demographics regarding the representation of race and gender are presented in Table 3.

Table 3

Gender and Race of Student Athlete Volunteers

Variable	No. Volunteers	Percentage of Total
Females	33	57.89
White	28	49.12
Other	5	8.77
Males	24	42.11
White	16	28.07
Other	8	14.04
Totals	57	100
White	44	77.19
Other	13	22.81

Mentors' Descriptive Statistics

Fifteen students and nine faculty/staff volunteered to serve as mentors on the project. Peer mentors were recruited during team meetings conducted during the first week of the semester. The mentoring program was explained and students were offered the opportunity to help incoming freshmen adjust to collegiate life. In addition, the mentors were credited with community service points for their team. Each team must conduct community service as part of its role to promote the university, as well as build a sense of community responsibility in the student athletes. The demographics of the mentors regarding race and gender were

representative of a diverse group. The demographics of the mentors are displayed in Table 4.

Table 4

Gender and Race of Mentor Volunteers

Variable	Faculty Mentors (n=9)	Peer Mentors (n=15)	Total (n=24)
Gender			
Female	6	11	17
Male	3	4	7
Race			
White	7	11	18
Other	2	4	6
Total	9	15	24

Peer mentors represented the diversity of the university’s athletic teams as well. The breakout of athletic participation by the peer mentors is found in Table 5. Peer mentors ranged in age from 19 to 22 years of age. The average age of the peer mentors was 20.6 years. The range in the number of years that peer mentors had attended the university was from 1 year to 4 years. The average number of years that peer mentors had attended the university was 2.6 years.

Table 5

Sport Participation of Peer Mentors

Sport	Number of Mentors
Basketball	1
Cross Country	5
Football	1
Rowing	5
Softball	1
Track and Field	2
Total	15

Three faculty members and 6 staff members of the university composed the group of faculty mentors. The staff members were employed in the Office of Academic Services for Student Athletes as graduate assistants or advisors, or were graduate students at the university's business institute. The faculty members represented the College of Education, the College of Business, and the College of Arts and Sciences. All of the faculty members serving as mentors had at least 3 years of employment at the university. Of the graduate assistants serving as mentors, 2 were in their first year of attendance at the university and 4 were second-year students. Eight of the 9 faculty mentors had been student athletes during their undergraduate careers.

Descriptive Data by Mentor Type Group

In order to ensure a similarity of each of the mentor groups, descriptive data were compared for the groups of students who were mentored by peers versus those student athletes who were to be mentored by faculty. Both groups were found to be fairly similar, especially with regard to the key predictor of academic success, the high school grade point average (HSGPA). The HSGPA was 3.42 for faculty-mentored student athletes ($SD = 0.62$) and 3.41 for peer-mentored student athletes ($SD = 0.75$) on a 4.0 scale. Table 6 demonstrates that no significant difference ($p = .65$ at $p = .05$) was found between the average HSGPA of faculty and peer-mentored student athletes. Table 7 and Table 8 compare the breakout of Gender and Race by Mentor Type, respectively.

Table 6

Significance of Differences in HSGPA by Mentor Type

Source	<i>df</i>	<i>Type III SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Mentor Type	1	0.10	0.10	0.20	.65

Note: $p < .05$

Table 7

Mentor-Type Group by Gender

Gender	Faculty	Peer
Female	15 (52%)	18 (64%)
Male	14 (48%)	10 (36%)
Totals	29	28

Table 8

Mentor-Type Group by Race

Race	Faculty	Peer
White	26 (90%)	18 (64%)
Other	3 (10%)	10 (36%)
Totals	29	28

Perceived Stress Levels

Surveys were administered to the freshmen student-athletes three times during the semester. The first survey, which measured general perceived stress levels (Stress1) and levels of perceived social support from friends (Support1), was conducted during the second week of the 2003 fall term at the university. The second and third surveys (Stress2 and Stress3, Support2 and Support3, Mentor Support2 and Mentor Support3), which measured the same construct as the first

survey, were administered during the 8th week of the semester, and the 15th week of the semester, respectively. The data were analyzed using a repeated measures analysis of variance (ANOVA) at p value of .05. General statistics for all items measured were obtained by running a univariate procedure and are presented in Table 9. Perceived stress scores ranged from 4 (very low perceived stress) to 35 (very high perceived stress).

Table 9

General Statistic Measures for Perceived Stress at Three Points in the Semester

Item	Stress 1	Stress 2	Stress 3
Mean	14.09	16.13	16.31
Standard Deviation	5.64	6.03	6.64
Variance	31.76	36.40	44.04
Skewness	0.74	0.23	0.46
Kurtosis	0.83	-0.95	-0.05

Note: N = 57

Prior to the repeated measures ANOVA analyses on the stress data, the variables were found to meet the necessary assumptions of normality, homogeneity of covariance matrices, and compound symmetry. The results of the repeated measures ANOVA tests for Between Subjects Effects (BSE) presented in Table 10 show that no significant difference existed in the perceived levels of stress overall between student athletes grouped by Mentor Type, Gender, or Race.

Table 10

Differences in Perceived Stress by Mentor Type, Gender, and Race

Source	<i>df</i>	<i>Type III SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between subjects					
Mentor Type	1	6.16	6.16	0.07	.80
Gender	1	21.87	21.87	0.24	.63
Race	1	62.91	62.91	0.69	.41
Error	53	4798.96	90.55		

Note: $p < .05$

When considering the average perceived stress levels over the three points in time during the semester, no time effect was found for overall stress ($F(2, 106) = 3.07, p = .05$) measured at three points during the course of the semester (Table 11). In addition, the other p -values indicate that no interaction effect across time existed for any of the independent variables in this study.

Table 11

Changes in Perceived Stress Levels over the Semester

Source	<i>df</i>	<i>Type III SS</i>	<i>Mean Square</i>	<i>F</i>	<i>p</i>	<i>G-G</i>
Within subjects						
Time	2	75.68	37.84	3.07	.05	.05
Time*Mentor Type	2	16.37	8.18	0.66	.52	.51
Time*Gender	2	16.41	8.20	0.67	.52	.51
Time*Race	2	28.97	14.49	1.18	.31	.31
Error(Time)	106	1305.42	12.32			

Note: $p < .05$. Greenhouse-Geisser (*G-G*) Epsilon = .9650

Although the time effect did not meet the criteria for significance, further analyses of any potential differences in average stress levels between the three measures of perceived stress during the semester were warranted. An analysis of variance of contrast variables was conducted. Stress1, Stress2, and Stress3 refer to the three measures corresponding to those taken at the beginning, middle, and end of the semester, respectively. The $p = .06$ and $.57$, for the comparison of the Stress1 to Stress2 measures and between the Stress2 and Stress3 measures, respectively, indicate no significant difference in these scores (Table 12). However, the difference between the average perceived stress scores for Stress1 and Stress3 was significant at a $p = .03$. Perceived stress levels increased from the beginning of the semester to the end of the semester, but did not change significantly at mid-semester.

Table 12

Comparison of Average Perceived Stress Measured at the Beginning, Middle and End of the Semester

Time Comparisons	Measure Comparisons	<i>p</i>
Beginning and Middle	Stress1 and Stress2	.06
Beginning and End	Stress1 and Stress3	.03
Middle and End	Stress2 and Stress3	.57

Note: $p < .05$

Given that a difference was found in overall stress levels between the beginning and the end of the semester, further analyses were conducted to directly compare the perceived levels of stress by mentoring group over the course of the semester. The means of the Stress1, Stress2 and Stress3 for both faculty-mentored and peer-mentored student athletes are presented in Table 13. Perceived stress scores for the faculty-mentored group were lower than those of the peer-mentored group for both the measure taken in the beginning and at the end of the semester, but the reverse relationship occurs for the stress measurement taken in the middle of the semester.

Table 13

Means of Perceived Stress Levels at Beginning, Middle and End of Semester by Mentor Type

Mentor Type	<i>M</i>	<i>SD</i>	Minimum	Maximum
Faculty				
Stress1	13.21	5.19	4	24
Stress2	16.31	6.26	5	29
Stress3	15.69	6.41	4	30
Peer				
Stress1	15.00	6.02	7	32
Stress2	15.95	5.90	8	27
Stress3	16.96	6.91	6	35

N = 29 for faculty-mentored group; N = 28 for peer-mentored group. Stress scores scale ranged from 0 (very low) to 40 (very high).

In order to determine if these differences were statistically significant, the ANOVA of Contrast Variables individually examined the changes in average perceived stress over the semester for student athletes who were mentored by faculty versus student athletes who were mentored by peers. These results, shown in Table 14, indicate no statistical significance ($p = .09$) between stress levels measured in the beginning of the semester compared to those measured in the middle of the semester for student athletes mentored by faculty. In addition, no significance was identified for the comparisons of stress levels measured in the

middle of the semester to those measured in the end of the semester ($p = .31$), nor between the stress levels measured at the beginning of the semester to those measured at the end of the semester for faculty mentored student athletes ($p = .72$). These findings suggest that faculty-mentored groups have approximately the same stress-levels throughout the semester, and are somewhat stable.

Table 14

Comparison of Average Perceived Stress Measured at the Beginning, Middle and End of the Semester for Faculty-Mentored Student Athletes

Time Comparisons	Measure Comparisons	p
Beginning and Middle	Stress1 and Stress2	.09
Beginning and End	Stress1 and Stress3	.31
Middle and End	Stress2 and Stress3	.72

Note: $p < .05$

These same analyses of stress scores run for student athletes mentored by peers (Table 15) indicate no statistical significance in the difference between stress scores measured at the beginning of the semester to those measured at the middle of the semester ($p = .49$), between stress scores measured at the beginning of the semester and those measured at the end of the semester ($p = .12$), and no significance in the difference of the stress scores measured at the middle and the end of the semester ($p = .46$). These findings suggest that stress levels for the peer-mentored group remained relatively constant over the course of the semester similar to the perceived stress levels for the faculty-mentored group.

Table 15

Comparison of Average Perceived Stress Measured at the Beginning, Middle and End of the Semester for Peer-Mentored Student Athletes

Time Comparisons	Measure Comparison	<i>p</i>
Beginning and Middle	Stress1 and Stress2	.49
Beginning and End	Stress1 and Stress3	.12
Middle and End	Stress2 and Stress3	.27

Note: $p < .05$

Perceived Social Support Levels

Perceived social support was measured through the administration of a social support survey at the same time as the perceived stress surveys. Social support was measured from two perspectives. Student athletes were asked to respond to the social support survey once regarding their perception of support from friends, and once regarding their perceived support from their mentor. Perceived support from friends is referred to as Support1, Support2, and Support3, corresponding to the three times support was measured in the semester, beginning, middle, and end. The perception of social support received from their mentor is referred to as SupportM2 and SupportM3, corresponding to the two times when mentors' support was measured during the semester, middle and end.

The data were analyzed using a repeated measures analysis of variance at α value = 0.05. General statistics for all items measured regarding perceived social

support from friends were obtained by running a univariate procedure and are presented in Table 16. The student athletes' scores for perceived social support from friends ranged from 10 (very low support) to 40 (very high support). When asked to identify the source of their social support from friends, over half the student athletes named their family as their main source of support.

Table 16

General Statistic Measures for Social Support from Friends at the Beginning, Middle and End of the Semester

Item	Support 1	Support 2	Support 3
Mean	34.09	33.07	34.68
Standard Deviation	5.51	6.73	5.43
Variance	30.40	45.32	29.43
Skewness	-1.53	-1.17	-1.01
Kurtosis	2.40	0.88	0.03

Note: N = 57

Social Support from Friends

Prior to the repeated measures ANOVA analyses on the social support data, the variables were found to meet the necessary assumptions of normality, and homogeneity of covariance matrices. However, the assumption of compound symmetry was not met. A violation of this assumption is not uncommon when repeated measures are utilized. In this case, an adjustment to the sphericity parameter, E , was made using the Greenhouse-Geisser ($G-G$) adjustment. This

adjustment resulted in a more conservative estimation of overall significance of any differences. The results of the repeated measures ANOVA tests for Between Subjects Effects presented in Table 17 show that no significant difference existed in the perceived levels of social support from friends between student athletes grouped by Mentor Type, Gender, or Race.

Table 17

Differences in Perceived Social Support from Friends by Mentor Type, Gender, and Race

Source	<i>df</i>	<i>Type III SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between subjects					
Mentor Type	1	6.10	6.10	0.08	.78
Gender	1	80.63	80.63	1.07	.31
Race	1	96.02	96.02	1.27	.26
Error	53	3993.86	75.36		

Note: $p < .05$

When considering the average perceived social support from friends over the three points in time during the semester, no effect for social support across time was identified ($G-G = .10$). In addition, the other $G-G$ values indicate that no interaction effect across time existed for any of the other independent variables in this study (Table 18).

Table 18

Changes in Perceived Social Support from Friends over the Semester

Source	<i>df</i>	<i>Type III SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>	<i>G-G</i>
Within subjects						
Time	2	74.90	37.45	2.54	.08	.10
Time*Mentor Type	2	2.97	1.49	0.10	.90	.87
Time*Gender	2	19.99	10.00	0.68	.51	.48
Time*Race	2	41.29	20.65	1.40	.25	.25
Error(Time)	106	1564.07	14.76			

Note: $p < .05$. Greenhouse-Geisser (*G-G*) Epsilon = .8122

In order to identify any significant differences in average social support from friends that may have occurred between the three measures of perceived social support during the semester, an Analysis of Variance of Contrast Variables was conducted. The $p = .11$ for the comparison of the Support1 to Support2 measures are not statistically significant, but $p = .03$ comparing the Support2 and Support3 measures indicates a significant difference in these scores (Table 19). However, the difference between the average perceived social support scores for Support1 and Support3 was not significant at a $p = .92$. Perceived social support levels derived from friends fluctuated somewhat during the semester, but did not change significantly over the course of the entire semester.

Table 19

Comparison of Average Perceived Social Support Measured at the Beginning, Middle and End of the Semester

Time Comparisons	Measure Comparison	<i>p</i>
Beginning and Middle	Support1 and Support2	.11
Beginning and End	Support1 and Support3	.92
Middle and End	Support2 and Support3	.03

Note: $p < .05$

Given the differences that were found between social support scores measured at the three time periods during the semester, further analysis was conducted to directly compare the perceived levels of social support from friends by mentoring group over the course of the semester. The means of the Support1, Support2 and Support3 for both faculty-mentored and peer-mentored student athletes are presented in Table 20. The means of the perceived social support from friends for both the faculty-mentored group and the peer mentored group decreased from the beginning of the semester to the middle of the semester and then increased again for the final measurement taken during the last week of the term.

Table 20

Means of Perceived Social Support Levels by Mentor Type

Mentor Type	<i>M</i>	<i>SD</i>	Minimum	Maximum
Faculty				
Support1	34.31	5.81	20	40
Support2	33.72	6.20	20	40
Support3	34.86	5.52	21	40
Peer				
Support1	33.86	5.28	15	40
Support2	32.39	7.29	11	40
Support3	34.50	5.42	22	40

N = 29 for faculty-mentored group; N = 28 for peer-mentored group

In order to further clarify the significance of the differences identified above, the ANOVA of Contrast Variables was run individually on the changes in average perceived social support over the semester for student athletes who were mentored by faculty versus student athletes who were mentored by peers. These results, shown in Table 21, indicate no statistical significance ($p = .87$) between social support from friends measured in the beginning of the semester compared to those measured in the middle of the semester or for the comparisons of social support from friends measured in the beginning of the semester to those measured in the end of the semester ($p = .25$) for student athletes mentored by faculty. The difference between the social support from friends measured at the middle of the

semester to those measured at the end of the semester for faculty mentored student athletes was also not significant ($p = .13$).

Table 21

Comparison of Average Perceived Social Support from Friends Measured at the Beginning, Middle and End of the Semester for Faculty-Mentored Student Athletes

Time Comparisons	Measure Comparison	p
Beginning and Middle	Support1 and Support2	.87
Beginning and End	Support1 and Support3	.25
Middle and End	Support2 and Support3	.13

Note: $p < .05$

These same analyses of perceived social support from friends run for student athletes mentored by peers (Table 22) indicate no significance ($p = .28, .93,$ and $.11$) in the difference between social support from friends measured at the beginning, middle, and the end of the semester for student athletes mentored by peers. In both cases of perceived social support from friends by student athletes who were faculty-mentored and peer-mentored, social support from friends fluctuated somewhat over the course of the semester, but did not change significantly.

Table 22

Comparison of Average Perceived Social Support from Friends Measured at the Beginning, Middle and End of the Semester for Peer-Mentored Student Athletes

Time Comparisons	Measure Comparison	<i>p</i>
Beginning and Middle	Support1 and Support2	.28
Beginning and End	Support1 and Support3	.93
Middle and End	Support2 and Support3	.11

Note: $p < .05$

Social Support from Mentors

Since the mentors and protégés needed time to develop their relationship and had not even met one another at the time the initial survey was conducted, the student athletes did not complete a social support survey measuring mentor support at the beginning of the semester. The social support garnered from mentors by the student athletes was measured at the middle and end of the semester (SupportM2, SupportM3). Social support from mentors was analyzed using the repeated measures ANOVA and the general statistics run using a univariate procedure. The variables were found to meet the necessary assumptions of multivariate normality, and homogeneity of covariance matrices. Since only two periods of time are examined for this data (middle and end of the semester) the assumption of compound symmetry was not needed. The general statistics are presented in Table 23. The student athletes' scores for perceived social support from mentors ranged from 9 (very low support) to 39 (very high support).

Table 23

General Statistic Measures for Social Support from Mentors at the Middle and End of the Semester

Item	SupportM2	SupportM3
Mean	23.28	23.86
Standard Deviation	7.65	7.76
Variance	58.53	60.19
Skewness	-0.05	-0.42
Kurtosis	-0.75	-0.92

Note: Possible range of social support scores = 0 to 40.

A significant difference ($p = .0001$) was found in the levels of perceived social support from mentors between student athletes mentored by faculty compared to those mentored by peers. The p -value indicates that the two mentored groups report differing levels of support given to them by their mentors (Table 24). Table 25 displays the results for the test to determine if an interaction effect across time for Mentor Type existed in this data. No statistical significance was found. Thus, the perception of social support from mentors changed in a similar fashion for both the peer and faculty-mentored students during the semester.

Table 24

Differences in Perceived Social Support from Mentor by Mentor Type

Source	<i>df</i>	<i>Type III SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between subjects					
Mentor Type	1	1445.38	1445.38	17.43	.0001
Error	55	4560.06	82.91		

Note: $p < .05$

Table 25

Effect of Perceived Social Support from Mentor across Time by Mentor Type

Source	<i>df</i>	<i>Type III SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>	<i>G-G</i>
Within subjects						
Time	2	74.90	37.45	2.54	.08	.10
Time*Mentor Type	2	2.97	1.49	0.10	.90	.87
Time*Gender	2	19.99	10.00	0.68	.51	.48
Time*Race	2	41.29	20.65	1.40	.25	.25
Error(Time)	106	1564.07	14.76			

Note: $p < .05$. Greenhouse-Geisser (*G-G*) Epsilon = .8122

An analysis to determine which mentoring group perceived higher levels of support was then conducted. The means of the SupportM2 and SupportM3 for both faculty-mentored and peer-mentored student athletes are presented in Table 26.

The means of the perceived social support from the mentor for the faculty-mentored

group are higher than those of the peer-mentored group for both the measure taken in the middle and at the end of the semester. Thus, the faculty-mentored student athletes perceived significantly higher levels of social support from their mentors than did the peer-mentored student athletes throughout the semester.

Table 26

Means of Perceived Social Support from Mentor by Mentor Type

Mentor Type	<i>M</i>	<i>SD</i>	Minimum	Maximum
Faculty				
SupportM2	26.66	6.48	13	39
SupportM3	27.48	5.29	11	35
Peer				
SupportM2	19.79	7.28	9	34
SupportM3	20.11	8.19	9	37

N = 29 for faculty-mentored group; N = 28 for peer-mentored group

In a further examination of the significance (or lack thereof) of the findings for stress and social support, the effect sizes for each variable were calculated. The effect sizes for the data collected on each variable are presented in Table 27. The small effect sizes for stress and social support from friends indicate that a very large sample size would have been needed in order to find any significant difference between Mentor Type groups. In contrast, the effect sizes for the perceived social support from mentors are large and indicate that the significant difference was also

a practical one. The differences found between the Mentor Types for perceived social support from the mentor were reasonable given the scores for these groups.

Table 27

Effect Sizes of Data Collected on Stress and Social Support

Variable	Effect Size
Stress1	-.32
Stress2	.06
Stress3	-.19
Social Support from Friends1	.08
Social Support from Friends2	.20
Social Support from Friends3	.07
Social Support from Mentor2	1.00
Social Support from Mentor3	1.07
Mean	.25

Quality of the Mentoring Relationship

Of the 15 peer and 9 faculty mentors who participated in this research project, all were able to arrange mentoring visits with their protégés for at least the minimum nine visits throughout the semester. Most of the mentors exceeded this goal, and met 10 to 12 times throughout the semester. Although telementoring was presented to the mentors to be used as an alternative when a face-to-face meeting

was not possible, most mentors preferred the face-to-face interaction and utilized telementoring only one or two times during the semester. The meetings between faculty mentors and their protégés all occurred in the offices of the mentors. The meetings between the peer mentors and their protégés occurred at various locations around the university, such as the Student Union, the library, the Campus Dining facility, and at the study hall locations for student athletes.

The mentors were asked to complete a Reflection Guide for each meeting, but this did not happen. Even though the Guide was provided by electronic means, students and faculty were overwhelmed with daily email and often the completion of this guide was postponed or never completed. The mentors completed an average of six Reflection Guides for each protégé throughout the semester. When a mentor failed to complete the Guide, the mentor was contacted and the basic information regarding their mentoring encounter was collected via telephone. In several cases, the information regarding the type of mentoring interaction (face-to-face or telementoring), duration, and the general topics of the mentoring meeting were obtained directly from the protégé. Meeting duration with the protégé each week varied from 20 to 60 minutes, but averaged approximately 30 minutes in length. The majority of the relationship interactions focused on time-management, study skills, sport-related and personal issues.

In order to validate the implications of the analyses of the quantitative data on the mentoring relationships, the quality of the mentoring relationship was assessed using a survey of six mentors. Three faculty and three peer mentors were asked to respond to the questions on the Quality of Mentoring Survey (Appendix G)

in a post-semester interview. The results of their responses are presented in Table 28. This unordered matrix presents the abbreviated responses to each of the survey items by each of the mentors surveyed. The responses provided by all of the mentors indicate that all the relationships, regardless of mentor type, developed beyond a business or professional interaction to a relationship perceived as somewhere between cordial and genuine. This observation was made as every mentor selected a score on the relationship scale which fell between cordial and genuine. The contact time for the mentoring interactions each week was between 20 and 60 minutes. In addition, all mentors felt that their protégés would perceive the relationship that developed over the semester to fall somewhere between an assessment of fair and excellent.

The action strategies to improve the mentoring experience proposed by the peer mentors focused on making it easier to implement the mentor meetings by coordinating the match-up of the protégé with the mentor based upon a determination of their practice schedules. In some cases, the meetings were difficult to coordinate due to the conflicts in class times and practice schedules of the student athletes and their peer mentors. In addition to this suggestion, both groups of mentors recommended that some type of “ice-breaking” activity would facilitate the initial meeting between the student athlete and the mentor and that additional training of both mentors and protégés on potential mentoring activities, strategies, and the expectations of mentoring might be useful in assisting in the development of the relationships.

Table 28

Case-Level Display of the Quality of Mentoring Interactions

<u>Mentor</u>	Faculty or Peer	Interactions	Protégé /Learner	Relationship Quality	Interaction Frequency	Protégé's View	Mentor Action Strategies	Protégé Action Strategies
1.	P	Open, comfortable, personal	Not quite independent, adjusting, managing time	Very trusting, genuine	Weekly, 45-60 min	Better than fair...	Match practice schedules	Train protégé on mentoring
2.	P	Really cool, friendly, supporting	Improved as semester progressed, became confident, independent	Very open, trusting, genuine	Twice per week, 30-45 min	Excellent	Match practice schedules, more workshops on mentoring	Open up semester with big party, both mentors & protégé
3.	P	Connected, well-developed	Improved as semester progressed, Independent	Midway between cordial & genuine	Weekly, 30-45 min	Midway between fair & excellent	Meet more often with other mentors	Provide more start-up activities
4.	F	Professional friendly, helping	Not quite independent, need guidance	More cordial, trusting	Weekly, 30-45 min	Better than fair	More training	Facilitate relationship development in less formal environment
5.	F	Professional supportive, friendly	Still somewhat dependent, rely on others	Cordial, but friendly	2 X week / 20 min	Between fair & excellent	Facilitate 1 st meet, less formal	Explain mentoring to students
6.	F	Informative, encouraging but open	Not yet independent,	Cordial, but friendly, trusting	Weekly, 30 min	Midway between fair & excellent	Use ice-breaking activities	Use ice-breaking activities

When these data were sorted based upon the quality item, the sorted matrix (Table 29) shows that the peer mentors felt that their mentoring relationships developed into more genuine, personal, well-connected interactions than did the relationships developed by the faculty mentors. The faculty mentoring relationships tended to develop into professional, cordial, and supportive interactions. No real differences were identified between the faculty and peer mentors in the amount of time spent with the protégé, or in the mentor's perception as to how the protégé would likely view the relationship. Question 3 on the Monitoring the Quality of the Mentoring Interaction interview asked each mentor to provide an assessment of their protégés level of independence as a learner. In all cases, during most of the semester, the mentors perceived their protégés as somewhat dependent in their need for assistance and abilities to solve their own problems. The data presented in the Protégé/Learner column showed that the protégés expressed more dependent personalities in the beginning of the semester and developed more independence as the semester progressed.

Table 29

Quality Ordered Display of the Mentoring Interactions

Mentor	Faculty or Peer	Interactions	Protégé /Learner	Interaction Frequency	Protégé's view	Mentor Action Strategies	Protégé Action Strategies
Genuine Quality							
1.	P	Open, comfortable, personal	Not quite independent, adjusting, managing time	Weekly, 45-60 min	Better than fair ...	Match practice schedules	Train protégé on mentoring
2.	P	Really cool, friendly, supporting	Improved as semester progressed, became confident, independent	Twice per week, 30-45 min	Excellent	Match practice schedules, more workshops on mentoring	Open up semester with big party, both mentors & protégé
3.	P	Connected, well-developed	Improved as semester progressed, Independent	Weekly, 30-45 min	Midway between fair & excellent	Meet more often with other mentors	Provide more start-up activities
Cordial Quality							
4.	F	Professional friendly, helping	Not quite independent, need guidance	Weekly, 30-45 min	Better than fair	Provide even more mentor training	Facilitate relationship development in less formal environment
5.	F	Informative, encouraging but open	Not yet independent,	Weekly, 30 min	Midway between fair & excellent	Use ice-breaking activities	Use ice-breaking activities
6.	F	Professional supportive, friendly	Still somewhat dependent, rely on others	2 X week / 30 min	Between fair & excellent	Facilitate 1 st meeting, less formal	Explain mentoring to students
Business Quality							

Answers to Research Questions

This research project was designed in order to provide some insight into the following research questions. The results from the study address and provide valuable information, which could assist program directors with the design of their mentoring programs for student athletes. In addition, this research adds to the body of knowledge regarding mentoring theory through the examination of peer and faculty mentoring relationships with student athletes. The primary questions dealt with the effects of Mentor Type on perceived stress and social support. The secondary questions examined the effects of Gender and Race on perceived stress and social support.

Research Question One: Faculty Mentoring versus Peer Mentoring and Effects on Student Athletes' Perceived Stress

No effect was found for Mentor Type on overall perceived stress. However, when perceived stress was examined at different times during the first four months of the student's freshman year, a significant increase was identified between the beginning and end of the semester. Further investigation examining the effects of Mentor Type revealed neither the stress levels of faculty-mentored nor the peer-mentored student athletes changed significantly over the course of the semester.

Research Question Two: Faculty Mentoring versus Peer Mentoring and Effects on Student Athletes' Perceived Social Support

This research provided analyses of perceived social support levels from both friends and mentors. The Mentor Type did not affect the overall perceived support score from friends, however a significant difference was found in the scores of perceived support from mentors for faculty-mentored student athletes and peer-mentored student athletes. With regard to scores measuring social support from friends, a fluctuation was identified across the semester. This fluctuation was due to a decrease in the perceived support from friends in the middle of the semester. Student athletes from both groups appeared to feel that they had less support from friends in the middle of the semester than they had at the beginning or at the end. Both the faculty and peer-mentored groups reported constant levels of social support from friends over the semester.

The effect of mentor type on social support from mentors was significant and this relationship did not change across time. The faculty-mentored student athletes consistently reported higher levels of social support from their mentors than the scores reported by the peer-mentored group.

Research Question Three: Gender Differences in Perceived Stress and Social Support of Student Athletes

No significant gender effects were found in the perceived stress or perceived social support scores. Therefore, both males and females reported similar levels of perceived stress and social support throughout the semester.

Research Question Four: Race Differences in Perceived Stress and Social Support of Student Athletes

No significant Race effects were found in the perceived stress or perceived social support scores. Therefore, both Whites and Others reported similar levels of perceived stress and social support at throughout the semester.

CHAPTER FIVE

CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Upon entering college for the first time, student athletes are faced with tremendous transitional stress (Hale et al., 1990; Jordan & Denson, 1990). Not only must they try to adapt to a new environment, meet new friends, and face increased academic challenges, but also they must compete in their sport at a higher level than they previously experienced. These stresses could affect the student athletes' ability to adjust to collegiate academic and athletic environments if they are not managed.

To assist the student athletes with their transition to college life, universities have continued to provide and improve their athletic academic support services (McFarland & Yeargan, 1981). These support services aid the student athlete with handling some of the issues that cause transitional stresses (*CHAMPS/Life Skills Program*, 2001).

More recently, the athletic academic services have included mentoring as one of the support mechanisms for student athletes (Willoughby et al., 1991, Fall). Mentoring has been shown to provide resources for individuals who are faced with difficulties while attempting to guide the individuals through their troubled times (Flaxman et al., 1992; Grossman & Garry, 1997). Specifically, in academic

environments, mentoring has improved academic outcomes through the provision of assistance and guidance of students (Cosgrove, 1986; Erkut & Mokros, 1984).

Social support has been defined as the provision of resources to individuals in need. By definition, a mentoring relationship then provides social support to the individual seeking assistance or guidance. Social support has been shown to reduce stress by providing necessary resources to someone in need (Cohen & Wills, 1985). However, mentoring appears to have not been directly linked to the reduction of stress.

This research looked at the direct effect of faculty and peer mentoring on perceived stress, while simultaneously investigating the effect on perceived social support. In addition, the design of this research project allowed for an examination of the effects of gender and race on perceived stress and social support.

Conclusions

The results of this research study suggest a number of conclusions regarding the effects of faculty and peer mentoring on perceived stress and social support. These conclusions lead to a range of implications for mentoring programs provided to college student athletes, as well as recommendations for further research on mentoring, perceived stress, and social support.

The fact that this study was conducted with student athletes at a large university may have played a role in the outcome of the study. Student athletes at this level have often participated in sports for a significant amount of time and are used to being coached. The effects of the mentors' efforts may have been altered as their

services may have been perceived by the student athletes as a form of coaching (Lester & Johnson, 1981; Merriam, 1983; Miller, 2002; Pascarella & Terenzini, 1978). In addition to this idea, the university chosen for the study included competitive cheerleaders and dancers as members of their student athlete population. These student athletes maintained similar schedules to the traditional student athletes as they had 20 hours of weekly practice and weight training. They traveled for their sport and participated in a national competition. These student athletes received priority scheduling and advising services as well. This particular treatment of these two groups of students is indicative of a unique approach and philosophy toward their student athlete population. This environment may have influenced the outcome of the study as the university's policies toward its student athlete were friendly and understanding.

In addition to the environment of the study, the role of the methods used to match the student athlete and the mentor may be significant to the study. In this study, mentors and protégés were matched by similar gender and interests. This matching may have facilitated the development of mentoring relationships, but it certainly reduced the opportunities for any inappropriate relationships between mentors and protégés. Having a common interest provided the springboard for conversation and a common bond.

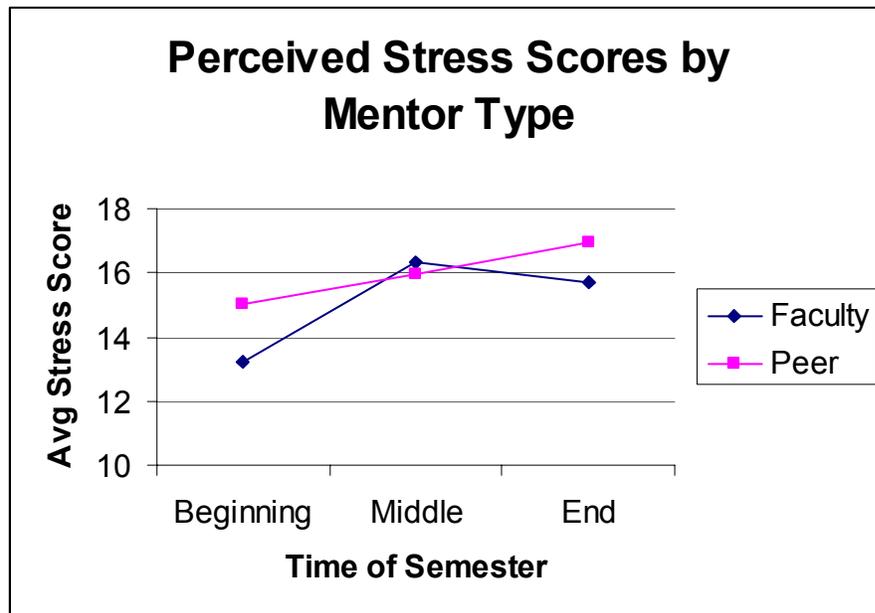
Effects on Perceived Stress

Although the results indicated that no effect was found on overall perceived stress for Mentor Type, the results show that the overall stress levels of the student

athletes increased from the beginning of the semester to the end of the semester. When analyzed by the two Mentor Type groups, the stress levels were seen to mirror one another for the peer-mentored and the faculty-mentored student athletes. The conclusion drawn from these results is that the type of mentor, faculty or peer, does not seem to have an effect on the transitional stresses faced by student athletes in their first full-time semester of their freshman year at a Division I institution. A comparison of the average support levels by Mentor Type can be seen in Figure 1.

Figure 1

Perceived Stress Scores by Mentor Type



For this research, the student athletes were divided into two equal groups with respect to their predicted success in college, and the student athletes all faced tremendous time management issues as they juggled academic and athletic demands

(Jordan & Denson, 1990; Schwitzer et al., 1991) . In addition, one of the functions of mentoring is to provide guidance and support (Merriam, 1983). This support is similar to the social support described in the literature that alleviates the impact of appraised stress (Cohen & Wills, 1985) or moderates the effects of stress (Gore, 1985). Therefore, the lack of a significant difference in the changes in perceived stress levels between Mentor Types may be attributed to the idea that any support provided by either faculty or peer mentors affected the student athletes' perception of their transitional stress in a similar fashion. Based upon this finding, one might also expect to find similarities in perceived levels of social support between Mentor Type groups.

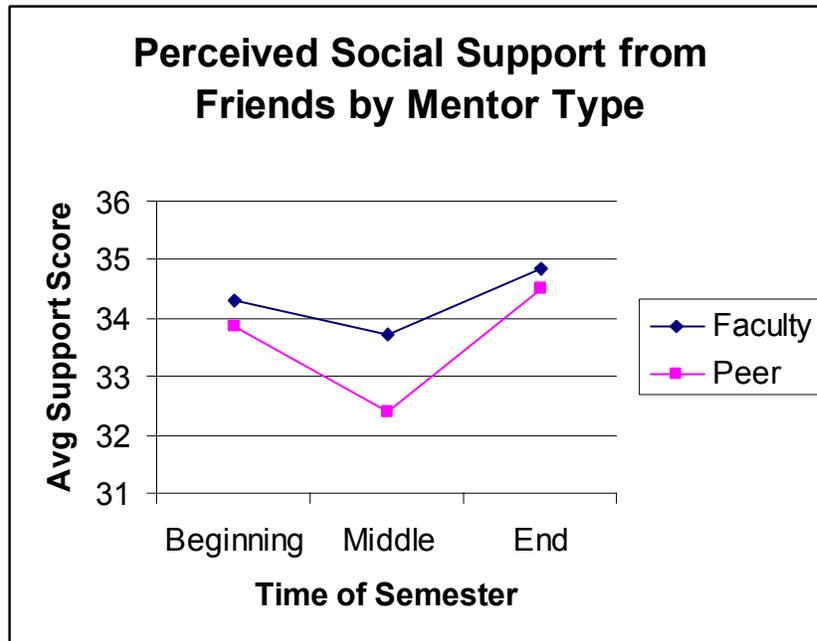
Effects on Perceived Social Support

The results from the data collected on the perceived social support garnered from friends indicate that Mentor Type does not affect the social support score. Thus, the student athletes' perceptions of the support they receive from their friends were relatively constant, regardless of their mentoring relationship. The investigation indicated that the support scores fluctuated during the semester but did not change significantly over the 15-week semester. Thus, perceived social support resources from friends remained constant from the beginning to the end of the semester for both faculty and peer-mentored student athletes. Both groups had a slight reduction in their perception of social support from friends in mid-semester (Figure 2) possibly due to the restructuring of their friendship support networks as

their connections with friends from high school were replaced by the development of new friends in college.

Figure 2

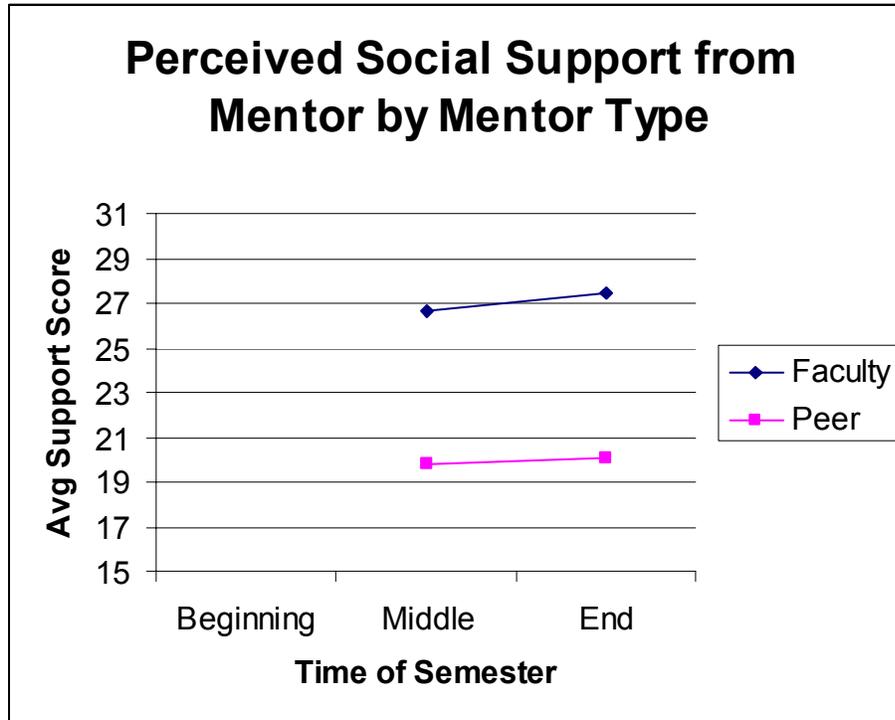
Perceived Levels of Social Support from Friends by Mentor Type



Unlike the social support from friends, the effect of Mentor Type on the perception of social support from the mentor was significant. The faculty mentors were perceived by the student athletes as providing a significantly greater amount of social support than were the peer mentors (Figure 3).

Figure 3

Perceived Social Support from Mentors by Mentor Type



The conclusion derived from the significant difference found in social support by Mentor Type is that faculty mentors provided more of the support regarding the students' needs than did the peer mentors. As a first semester, full-time student athlete at a university, many of the issues that might cause stress would revolve around such issues as the academic challenges they face, their new environment, new friends, and financial issues (Hale et al., 1990; Jordan & Denson, 1990). The needs generated by these issues might then be alleviated by the accessibility of both informational and emotional support (Cohen et al., 1985).

Thus, the faculty mentors were perceived as providing more of the resources needed to assist the student athletes with their issues than did the peer mentors.

A reasonable explanation of this result is that peer mentors may not have been able to provide as much perceived social support, especially during the times of increased stress, because they, as student athletes themselves, were experiencing similar stresses. Further evidence that buttresses this idea was provided in one of the mentor interviews. The mentor mentioned that the relationship she developed with her protégé was a mutually supportive one. Both parties talked about their problems and situations in open discussions. Thus it is possible that the protégé did not receive the support she may have needed because she was busy providing support to the mentor. This situation was never mentioned by any of the faculty mentors. The faculty mentors reportedly maintained more cordial relationships with their protégés than did the peer mentors.

If Mentor Type affected the perceptions of social support, and social support is known to alleviate the perceptions of stress, one might expect to find a difference in the perceived stress levels. However, no effect for Mentor Type was found for overall perceived stress. This apparent contradiction could be explained if the student athletes mentored by faculty perceived they had more social support than peer-mentored student athletes, but did not act on the support offered. For example, the faculty mentor provided the student athlete with information on how to use the library to research a paper and even encouraged the protégé to complete the paper well before its due date, however, the student did not take the advice. In this situation, even though faculty-mentored student athletes social support levels were

higher, the student athlete's stress levels might remain the same because the perception of stress was not reduced (Barrera, 2000).

Gender and Race Effects

This research allowed the exploration into the potential for race and gender effects on perceived stress and social support levels. However, no effects were identified under any circumstances. Thus, neither race nor gender played a significant role in the perceived levels of stress and social support at any time during the semester. These results do not agree with the results of previous studies which have shown that minorities often experience increased feelings of stress due to isolation and discrimination (Hollis, 1997; Parham, 1993). The limitations to this part of the research included a low number of minority participants. This limited number of minority participants reduced the power behind the statistical results obtained and may have reduced the ability to find a significant difference. These results might also be explained by the idea that the student athletes at this institution did not feel particularly isolated due to the camaraderie they found amongst their teammates.

The results regarding the effects of gender on perceived stress and social support also contradict other results found in the literature. Women have been found to increase their levels of social support compared to men when faced with stressful situations (Greenglass, 2002). Thus, the lack of an effect of gender on social support indicates that both the males and females used social support from friends and mentors in a similar fashion.

Implications

The implications derived from the results on perceived stress include the possibility that faculty mentors provide higher levels of the social support needed by incoming student athletes. This social support, if provided in a fashion that encouraged the student athlete to act on the support, might be able to reduce the transitional stresses of the incoming student athlete. However, the interaction of the student athletes with their peer mentors did not provide as much of the social support needed by these students. This result implies that perhaps the peer mentors needed additional training to learn how to provide the support needed by the first-year student athletes. This implication is supported by the comments obtained in the part of the qualitative interviews discussing potential action strategies to improve the mentoring relationships. Additional mentor training was suggested by the peer mentors.

Another possibility implied by these results is that each Mentor Type provided different types of social support and neither type was able to reduce the stresses associated with the transition to a university academic and athletic environment. Or, perhaps, both types of social support had a similar effect on perceived stress and the overall stress levels measured were altered in a similar fashion. Either of these possibilities would account for both the stress and social support results. Since no effect was found on stress, regardless of the level of perceived social support, academic advisors may need to consider alternative ways

to assuage the extreme stresses experienced by first-semester student athletes, such as recommending reduced course loads or requesting reduced athletic demands.

One additional alternative that explains the results might be that the Perceived Stress Scale was too general and that a more specific measure might reveal greater differences between the faculty and peer mentoring. Certainly, further investigation regarding the types of stressors and specific resources that alleviate their effects might be quite helpful in understanding and easing some of the transitional stresses of the college student athlete.

The findings on social support suggest that the student athletes have somewhat stable social support resources from friends. In fact, over half chose their family as the primary resource used when seeking support. Thus, they often view family members as friends who serve as resources in times of need. Regarding the fluctuations in perception of social support over the semester, perhaps the student athletes' assessments changed somewhat due to the restructuring of their friendships as the semester progressed. Old friends from high school may have been replaced with new friends at college. The mid-semester dip in perceived social support from friends might be the result of the restructuring of friendships.

Expounding further on this implication, the significantly different perceived social support from mentors between Mentor-Type groups would not be totally unexpected. This finding enhances the idea that the relationships developed between mentor and protégé were quite different depending upon if the mentor was viewed as a peer or a faculty/staff member at the university. Faculty mentors were most likely perceived to be greater sources of information and assistance to the

student athletes than were the peer mentors to their protégés. Peer mentors indicated that their relationships with their protégés grew into genuine friendships as the semester progressed, but perhaps most of the perceived social support needed centers around academic needs, rather than personal support that can be obtained from established friendship networks.

The gender and race data results suggest that for first semester, full-time student athletes, stress levels are not affected by their gender or race. Although race issues for college students were shown to be a source of additional stress for minority students (Hollis, 1997), they did not play a factor in the perceived stress levels measured. Perhaps, among college-student-athlete groups, where minorities are often disproportionately represented in greater numbers compared to the rest of the university, minority students are able to find the resources they need to address issues of race or ethnicity through the interactions with fellow student athletes.

The results with regard to gender imply that both the male and female student athletes faced issues that produced stress on the first-year student athletes, and that they used their resources, both friends and mentors, for social support to a similar extent. This result contradicts earlier research that indicates that males and females do not experience the same levels of stress in comparable situations (Etzion, 1984) and report different responses to their perceived stress. Males tend to engage in depersonalization when stress levels increase, while females tend to utilize social supports to moderate stressful situations (Greenglass, 2002).

Recommendations

The conclusions and their implications suggest a number of recommendations for the structure and operation of mentoring programs within the academic services offered to student athletes. In addition, this study opens the door to several possibilities for additional research opportunities that would assist the educators and researchers to discern the intricacies of effective mentoring programs.

Mentoring as an Academic Support Service

In this study, all protégés were volunteers. They wanted to have a mentor and did not view a weekly meeting with the mentor as an extra burden. A mentoring program that involved forcing a student athlete into the relationship might not likely develop into a meaningful relationship, if student athletes, who are already challenged with incredible time demands, were told they had yet one additional weekly demand on their time.

Although no overall differences were found in stress levels between Mentor Types, faculty mentors appear to be able to provide the support services that the student athletes needed to a greater extent than did the peer mentors. This result suggests that faculty mentors may be more suited for student athletes under transitional stress, but the issues supported by the faculty may not be the sources causing the stress for the new student athletes.

If peer mentors are used, consider the practice schedules of the various teams on which the mentors and protégés participate as the primary criteria when making mentor assignments. The peer mentors and protégés should be on similar

practice schedules for their respective sports. The peer mentors are often involved in numerous extracurricular activities in addition to their academics and sports and found scheduling of the mentor meetings to be problematic if the practice schedules of the student athlete and mentor were at different times of the day. Thus, the mentor's free time, and protégé's free time would not coordinate. The interests of the mentors and protégés could be considered as secondary criteria.

Future Research

This study has just begun to investigate an area of research that could be expanded significantly. A natural branch of this study might be to compare the effects of mentored student athletes to nonmentored student athletes on perceived stress levels. Comparison of these two groups would provide direct evidence regarding the effectiveness of the mentors' efforts to assist their protégés with their transition to collegiate life.

Another valuable study would be to expand the investigation beyond the scope of perceived general stress. The research could be applied to study different types of stress, such as emotional, psychological, and physical. Identification of more specific effects of mentoring might yield different results when analyzing the effect of mentors or mentor types on stress. In addition, identifying the type of stress affected by mentoring would improve the capabilities of academic services personnel in designing mentoring programs and training mentors to increase the effectiveness of their services.

A study of the needs of student athletes and what types of support they need from their mentors would significantly improve mentor effectiveness. If the mentor was able to focus the development of the relationship toward the specific needs of the student athlete, the perceived stress levels might then be affected more significantly. Student athletes are often provided a large number of academic services aimed at increasing the likelihood of their academic success. These services often include tutoring, schedule planning, individual academic advising, and study hall. Identification of unmet needs, such as assistance with campus resources, or growth of new friendships for example, would allow the mentor to focus the development of their protégé relationship to fulfill the specific needs.

Stress and social support levels directly impact academic outcomes such as retention and grades (Woodlief, 1997). Thus, an analysis of academic outcomes for student athletes, such as grade point averages (GPAs), between mentor types may be found to be different if student athletes use faculty mentors for academic resources and peer mentors for emotional or social issues. Thus, a study that analyzed differences in GPAs by Mentor Type would add to the body of knowledge regarding the benefits of mentoring.

Finally, the protégés' perceptions of these relationships would be exceptionally valuable. Additional investigations probing the student athletes' perceptions of mentoring relationships and comparing peer and faculty mentors would be of significant value in determining the strengths and weaknesses of the mentoring program. Their insights would provide valuable information on the preferred types of relationships and their growth during a semester. The

development of the protégés' relationships with their mentors might be directly related to their opinions of the faculty or peer mentors.

A Mentoring Model for Student Athletes

This research has provided additional information to the body of mentoring knowledge, specifically with regard to those relationships developed by student athletes and their mentors. Using this knowledge and combining it with suggestions provided by the mentors during the qualitative interviews, a framework for a model of a student athlete mentoring program can be constructed. The basic framework for such a model includes:

- The mentoring program needs to be managed and monitored by a coordinator. This person should have close contact with the student athletes and be in a position of some responsibility and authority to be able to adequately assist the program participants by obtaining any needed information when requested.
- Recruit volunteers to mentor. Encourage faculty to mentor to provide a strong base of knowledgeable individuals on campus resources and use peer mentors to supplement the staff and offer a more friendly connection to the university. More natural mentoring (rather than forced) will allow for individuals who genuinely care about the new student athletes to develop sincere, compassionate relationships with the protégés. Perhaps offering course credit for the services provided would facilitate the recruitment and development of the peer mentors.

- Provide biweekly training sessions that allow mentors to interact with each other. Training should include specifics on potential mentoring interactions and information regarding resources available that might be used to assist the protégé.
- Discuss mentoring and its benefits to the new student athletes and provide them with enough information to encourage them to take advantage of a relationship with a mentor.
- Match protégés with mentors. Assign no more than two protégés per peer mentor or four protégés per faculty mentor. Peer mentors should be matched with student athletes in sports other than their own. This matching strategy provides additional perceived levels of confidentiality as an athlete feels they can speak about team or sport-related issues without other teammates or coaches learning of their comments. Matches with peer mentors should be made with primary considerations of matching similar genders and to the student athletes' practice schedules. Athletes with similar practice schedules will most likely have similar blocks of free time. Secondary considerations could include outside interests.
- The first mentor / protégé meetings should be facilitated by a program coordinator. Perhaps coordinate a pizza party or casual gathering to serve as an ice breaker to introduce the mentors and protégés to each other.
- Meetings should be held weekly between the mentor and protégé and monitored to assist with any difficulties that may arise.

- Suggested topics on which to focus should include the transition to university living, the availability of university resources such as libraries, computer labs, tutoring and self-help groups, and recreation activities.
- Random follow-up interviews should be conducted with mentors and protégés to determine methods to improve the mentoring program and to facilitate the mentoring relationships, and
- Mentors should continue to meet with protégés for the entire first year of the student athletes' university experience.

Summary

The mentoring program for new student athletes at a large university provided the opportunity for a study to determine the effects of faculty and peer mentoring on student athletes' perceived levels of stress and social support. The mentoring program involved matching first-semester full-time student athletes with a faculty or staff member or a fellow student athlete with a junior or senior status. Weekly mentor meetings were held to encourage discussions regarding transitional issues, campus resources, time management and personal issues.

During the course of the semester, perceived levels of stress and social support were measured three times. Comparisons were made between Mentor Type groups to determine any differences. No significant difference was found in the measured levels of stress from students mentored by faculty or peers. No differences were found between Mentor Types in the general social support levels

perceived from friends, but perceived social support from mentors was significantly higher for the faculty-mentored student athletes.

These main findings suggest that a mentoring program for student athletes may be designed using faculty or peer mentors to achieve similar results. However, further studies are needed to determine a more specific focus for such a program and the specific training needed by the mentors in order to effectively assist student athletes with their stresses associated with the transition to the increased academic and athletic demands. A well-developed program might be able to offer resources to assist the student athletes by fulfilling needs not met by academic programs such as knowledge of campus resources and adjustments to collegiate living. Further studies are also needed to determine, more specifically, the needs of the incoming student athletes and how a mentoring program might be used to meet these needs. Fulfillment of these needs may assist with smoothing the transition to the life of a college student athlete.

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Appendices

Appendix A

Mentoring Partnership Agreement

We have agreed on the following goals and objectives as the focus of this mentoring relationship:

- 1.
- 2.
- 3.

We have discussed the protocols by which we will work together, develop, and in that same spirit of partnership, collaborate on the development of a work plan. In order to ensure that our relationship is mutually rewarding and satisfying, we agree to:

1. Meet regularly.
Our specific schedule of contact and meetings is as follows:
2. Look for multiple opportunities and experiences to enhance the protégé's learning.
We have identified, and will commit to, the following specific opportunities and venues for learning:
3. Maintain confidentiality of our relationship.
Confidentiality for us means....
4. Honor the ground rules we have developed for the relationship.
Our ground rules will be....
5. Provide regular feedback to each other and evaluate progress. We will accomplish this by...

We agree to meet regularly until we accomplish our predefined goals or for a maximum of one semester. At the end of this period of time, we will review this agreement, evaluate our progress, and reach a learning conclusion. The relationship will then be considered complete. If we choose to continue our mentoring partnership, we may negotiate a basis for continuation, so long as we have stipulated mutually agreed-on goals.

In the event one of us believes it is no longer productive for us to continue or the learning situation is compromised, we may decide to seek outside intervention or conclude the relationship. In this event, we agree to use closure as a learning opportunity.

Mentor's Signature & Date

Protégé's Signature & Date

Adapted from Zachary (2000).

Appendix B

Mentoring Partnership Reflection Guide

1. Mentoring Encounter Date: **Mentor Name**
(Please check one) **Protégé Name**
- Face to Face Meeting - For how long? total minutes
- Telementoring
2. Generally, what did we talk about? *(Check all that apply – estimate time spent on that area)*
- | | | |
|----------------------------------------------------|------------|------|
| <input type="checkbox"/> time management..... | minutes or | % of |
| discussion | | |
| <input type="checkbox"/> university resources..... | minutes or | % of |
| discussion | | |
| <input type="checkbox"/> academic concerns | minutes or | % of |
| discussion | | |
| <input type="checkbox"/> social concerns | minutes or | % of |
| discussion | | |
| <input type="checkbox"/> financial concerns..... | minutes or | % of |
| discussion | | |
| <input type="checkbox"/> social activities | minutes or | % of |
| discussion | | |
| <input type="checkbox"/> sports activities | minutes or | % of |
| discussion | | |
| <input type="checkbox"/> other (Describe:) | minutes or | % of |
| discussion | | |
3. What objectives did we work on? *(Please check all that apply)*
- organizational and study skills
 - handling of stressful situations
 - learning about the institutional resources
 - involvement with activities of interest outside of his or her sport
 - general transition to the college lifestyle of a student athlete
 - other (Please describe:)

Appendix B (Continued)

Relationship - *Please respond to each question by checking all that apply*

1. What is going particularly well in our mentoring relationship?

- communication
- developing a bond
- developing trust
- other (Please describe: _____)

Reflection Guide – Page 2

2. What is the greatest challenge in our mentoring relationship?

- communication
- developing a bond
- developing trust
- other (Please describe: _____)

3. What do we need to work on to improve our mentoring relationship?

- communication
- developing a bond
- developing trust
- other (Please describe: _____)

4. What assistance could we use?

Insights

1. What are your personal insights about the mentoring relationship?

2. What are your personal insights about your protégé?

Adapted from Zachary (2000).

Appendix C

Informed Consent Forms Social and Behavioral Sciences University of South Florida

Information for People Who Take Part in Research Studies - Students

Page 1 of 2

The following information is being presented to help you decide whether or not you want to take part in a minimal risk research study. Please read this carefully. If you do not understand anything, ask the person in charge of the study.

Title of Study: Effects of faculty and peer mentoring on perceived stress and social support of college student athletes

Principal Investigator: Valerie R. Pfister

Study Location(s): University of Central Florida

You are being asked to participate because mentoring services are available to many college student athletes around the country and the development of a proactive mentoring program at UCF may assist its student athletes in their transition to college life.

General Information about the Research Study

The purpose of this research study is to determine any differences in perceptions of stress and social support that may occur as a result of being mentored by a faculty or staff member or by a fellow student. The study will assess perceived levels of stress and social support of student athletes who are being mentored throughout the semester.

Plan of Study

Each student athlete will be assigned a mentor. You and your mentor will meet weekly throughout the semester for about 45 minutes to discuss any issues you may have regarding university resources, organization and study skills, academic concerns, and social activities of interest. At three times during the course of the semester you will be asked to complete two short surveys that are general measures of perceived stress and social support. These surveys will take no more than 10 minutes to complete.

Payment for Participation

You will not be paid for your participation in this study.

Benefits of Being a Part of this Research Study

By taking part in this research study, you may improve your transition process to college life by reducing your levels of stress and increasing the number and quality of the social resources to which you can turn when you are faced with any academic, emotional, or social hardship.

Risks of Being a Part of this Research Study

The risks involved in this study are very minimal. The possibility exists that you may feel an increased level of stress due to time constraints or due to the relationship with your mentor. At any point in the semester, you may withdraw if you feel that you are no longer comfortable being a part of this research study.

Appendix C (Continued)

Confidentiality of Your Records

Page 2 of 2

Your privacy and research records will be kept confidential to the extent of the law. Authorized research personnel, employees of the Department of Health and Human Services, and the USF Institutional Review Board may inspect the records from this research project. The results of this study may be published. However, the data obtained from you will be combined with data from others in the publication. The published results will not include your name or any other information that would personally identify you in any way.

All the data regarding your mentoring interactions and your perceived levels of stress and social support will be maintained in a locked file cabinet in the Athletic Academic Services Office. The data will be kept for a period of one year and then will be shredded.

Volunteering to Be Part of this Research Study

Your decision to participate in this research study is completely voluntary. You are free to participate in this research study or to withdraw at any time. Your decision to participate will in no way affect your status as students or athletes, nor will it affect your grades. There will be no penalty or loss of benefits you are entitled to receive, if you stop taking part in the study.

Questions and Contacts

- If you have any questions about this research study, contact Valerie R. Pfister @ 407-823-5896 or Dr. William Young @ 813-974-1861.
- If you have questions about your rights as a person who is taking part in a research study, you may contact the Division of Research Compliance of the University of South Florida at (813) 974-5638.

Consent to Take Part in This Research Study

By signing this form I agree that:

- I have fully read or have had read and explained to me this informed consent form describing this research project.
- I have had the opportunity to question one of the persons in charge of this research and have received satisfactory answers.
- I understand that I am being asked to participate in research. I understand the risks and benefits, and I freely give my consent to participate in the research project outlined in this form, under the conditions indicated in it.
- I have been given a signed copy of this informed consent form, which is mine to keep.

Signature of Participant

Printed Name of Participant

Date

Investigator Statement

I have carefully explained to the subject the nature of the above research study. I hereby certify that to the best of my knowledge the subject signing this consent form understands the nature, demands, risks, and benefits involved in participating in this study.

Signature of Investigator

Printed Name of Investigator

Date

Appendix C (Continued)

Information for People Who Take Part in Research Studies - Mentors Page 1 of 3

The following information is being presented to help you decide whether or not you want to take part in a minimal risk research study. Please read this carefully. If you do not understand anything, ask the person in charge of the study.

Title of Study: Effects of faculty and peer mentoring on perceived stress and social support of college student athletes

Principal Investigator: Valerie R. Pfister

Study Location(s): University of Central Florida

You are being asked to participate because mentoring services are available to many college student athletes around the country and the development of a proactive mentoring program at UCF may assist its student athletes in their transition to college life.

General Information about the Research Study

The purpose of this research study is to determine any differences in perceptions of stress and social support that may occur as a result of being mentored by a faculty or staff member or by a fellow student. The study will assess perceived levels of stress and social support of student athletes who are being mentored throughout the semester.

Plan of Study

Each student athlete will be assigned a mentor. You and your protégé will meet weekly throughout the semester for about 45 minutes to discuss any issues they may have regarding university resources, organization and study skills, academic concerns, and social activities of interest. After each meeting you will be asked to complete a short Reflection Guide to document your perceptions of these mentoring meetings. The guides will take no more than 10 minutes to complete.

Payment for Participation

You will not be paid for your participation in this study.

Benefits of Being a Part of this Research Study

By taking part in this research study, your name will be included in any publications of this research (if desired) as having been a participant. You may also improve the transition process of a student athlete to college life by reducing their levels of stress and increasing the number and quality of the social resources to which they can turn when faced with any academic, emotional, or social hardship.

Risks of Being a Part of this Research Study

The risks involved in this study are very minimal. The possibility exists that you may feel an increased level of stress due to time constraints or due to the relationship with your protégé. At any point in the semester, you may withdraw if you feel that you are no longer comfortable being a part of this research study.

Confidentiality of Your Records

Your privacy and research records will be kept confidential to the extent of the law. Authorized research personnel, employees of the Department of Health and Human Services, and the USF Institutional Review Board may inspect the records from this research project.

The results of this study may be published. However, the data obtained from you will be combined with data from others in the publication. The published results will only include your name as having been a participant if you wish to be included.

All the data regarding your mentoring interactions will be maintained in a locked file cabinet in the Athletic Academic Services Office. The data will be kept for a period of one year and then will be shredded.

Volunteering to Be Part of this Research Study

Your decision to participate in this research study is completely voluntary. You are free to participate in this research study or to withdraw at any time. Your decision to participate will in no way affect your status at the institution. There will be no penalty or loss of benefits you are entitled to receive, if you stop taking part in the study.

Questions and Contacts

- If you have any questions about this research study, contact Valerie R. Pfister @ 407-823-5896 or Dr. William Young @ 813-974-1861.
- If you have questions about your rights as a person who is taking part in a research study, you may contact the Division of Research Compliance of the University of South Florida at (813) 974-5638.

Consent to Take Part in This Research Study

By signing this form I agree that:

- I have fully read or have had read and explained to me this informed consent form describing this research project.
- I have had the opportunity to question one of the persons in charge of this research and have received satisfactory answers.
- I understand that I am being asked to participate in research. I understand the risks and benefits, and I freely give my consent to participate in the research project outlined in this form, under the conditions indicated in it.
- I have been given a signed copy of this informed consent form, which is mine to keep.

Appendix C (Continued)

Signature of Participant

Printed Name of Participant

Date

Investigator Statement

I have carefully explained to the subject the nature of the above research study. I hereby certify that to the best of my knowledge the subject signing this consent form understands the nature, demands, risks, and benefits involved in participating in this study.

Signature of Investigator

Printed Name of Investigator

Date

Appendix D

Participant Information Form

NAME: _____

STATUS: (check one please)

Student _____ Faculty _____ Staff _____

RACE: _____

SPORT OF INTEREST: _____

YEARS @ UCF: _____

DATE OF BIRTH: ____ / ____ / ____

SPECIAL INTERESTS:

MAJOR: _____

CAMPUS PHONE # _____ CELL
PHONE# _____

EMAIL ADDRESS: _____

Appendix E Mentoring Skills Inventory

Review each skill and indicate how comfortable you are in using that skill by circling V for Very Comfortable, M for Moderately Comfortable, or U for Uncomfortable. Think of a concrete example that helps you illustrate your comfort level using that skill. Place a check mark on the mentoring skills that you feel need work.

SKILL	Comfort Level	Examples	Needs Work
1. Brokering relationships	V M U		
2. Building & maintaining relationships	V M U		
3. Coaching	V M U		
4. Communicating	V M U		
5. Encouraging	V M U		
6. Facilitating	V M U		
7. Goal Setting	V M U		
8. Guiding	V M U		
9. Managing Conflict	V M U		
10. Problem Solving	V M U		
11. Providing and receiving feedback	V M U		
12. Reflecting	V M U		
OVERALL MENTORING COMFORT	V M U		

Name: _____ Major areas of interest: _____

Position at University: (circle one) Faculty Staff Graduate Student Undergraduate Student

Number of years @ this University: _____

Would you like your name included as a participant in any publications resulting from this research? ___ Yes ___ No

Adapted from Zachary (2000)

Appendix F

Mentor Training

What is expected?

- ❖ *Assist student-athletes with transition to college*
- ❖ *Meet at least once per week with mentee. Provide assistance with such topics as:*
 - *time management – teach them to keep a master calendar of all activities*
 - *campus resources*
 - *organizational skills - teach them to use subject notebooks & folders*
 - *involvement in activities*
 - *stressful situations*
- ❖ *Meet for 30 – 45 minutes*
 - *Meet face to face a minimum of 10 times during the semester*
 - *Complete a mentoring agreement*
 - *May mentor via email or instant messaging, but these types of encounters should not replace more than 3 face-to-face meetings*
 - *Try to meet freshmen student athletes in study hall or in the ASSA office*
- ❖ *Complete a one-page synopsis of encounter and send to me via email*

Rules we need to follow:

- ❖ **Confidentiality** – *It is necessary that all members of the ASSA staff, which includes tutors, to maintain and ensure confidentiality concerning student athletes. Confidentiality refers to academics and personal matters. All staff must abide by the Family Educational Rights and Privacy Act (Buckley Amendment). According to this amendment, certain information is known as “directory information” and it may be released upon request. The following is known as “directory information”*
 - *Name*
 - *Current mailing address*
 - *Telephone number*
 - *E-mail*
 - *Date of birth*
 - *Major field of study*

Appendix F (Continued)

- *Dates of attendance*
- *Enrollment status*
- *Degrees and awards received*
- *Participation in officially registered activities and sports*
- *Athlete's height and weight*

No other information can be released pertaining to an individual unless the student athlete has given written approval to do so and has signed a consent form. For more information on FERPA please refer to page 59 in the 2002-2003 UCF Catalog.

ASSUME ALL INFORMATION IS CONFIDENTIAL !! NEVER DISCUSS ANY INFORMATION REGARDING YOUR MENTEE!!

❖ *Discrimination & Sexual Harassment Policy*

The University of Central Florida values diversity in the campus community. Accordingly, discrimination on the basis of race, sex, national origin, religion, age, disability, marital status, parental status, or veteran's status is prohibited.

Sexual harassment, a form sex discrimination, is defined as unwelcome sexual advances, requests for sexual favors, or verbal or physical conduct of a sexual nature when:

Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or enrollment;

Submission to or rejection of such conduct by an individual is used as the basis for employment or enrollment decisions affecting such individual, or such conduct has the purpose or effect of substantially interfering with an individual's work performance or enrollment, or creating an intimidating, hostile, or offensive working or academic environment.

Sexual harassment is strictly prohibited. Occurrences will be dealt with in accordance with the guidelines above and University rules. Employees, students, or applicants for employment or admission may obtain further information on this policy, including grievance procedures, from the Equity Coordinator. The office is located in Millican Hall 330.

(This information may also be found on the UCF web page and catalogs).

❖ *NCAA Rules and Regulations*

Appendix F (Continued)

ASSA must follow University rules, as well as the NCAA (National Collegiate Athletic Association) guidelines established in the Division I manual. As a mentor for ASSA, it is imperative that you have a working understanding of NCAA rules

and regulations as they apply to your involvement with student-athletes. We have listed below several guidelines that you should follow which will ensure compliance with NCAA policies. Please carefully review these guidelines prior to meeting with your assigned student-athletes. Failure to comply with NCAA regulations will automatically lead to the termination of your mentorship. If you have any questions regarding NCAA rules and how they apply to your mentoring activities, please contact the Mentoring Coordinator or Compliance Office immediately.

❖ **NCAA Regulations**

The University is responsible for ensuring that its various constituencies (e.g. University staff and faculty, student-athletes, alumni, and friends) abide by National Collegiate Athletic Association (NCAA) rules and regulations. Under NCAA rules, all alumni, friends, and employees of the University are categorized as “representatives of the university’s athletic interests.”

❖ **Conduct of University Personnel**

As an individual employed by (or associated with) the University’s Department of Intercollegiate Athletics, you must deport yourself with honesty and sportsmanship at all times so that you represent yourself as an individual, the University, and intercollegiate athletics as a whole, with honor and dignity.

Unethical conduct by an institutional staff member may include, but is not limited to, the following:

- A. Refusal to furnish information relevant to an investigation of a possible violation of an NCAA regulation when requested to do so by the NCAA or the University of Central Florida*
- B. Knowing involvement in arranging for fraudulent academic credit or false transcripts for a prospective or enrolled student-athlete.*
- C. Knowing involvement in offering or providing a prospective or enrolled student-athlete an improper inducement or extra benefit.*

Appendix F (Continued)

- D. *Knowingly furnishing the NCAA or the University of Central Florida false or misleading information concerning the individual's involvement in or knowledge of matters relevant to a possible violation of NCAA regulations.*

Please be aware that University employees found in violation of NCAA regulations will be subject to disciplinary or corrective action as set forth in both University policy and the provisions of the NCAA enforcement procedures.

What is an Extra Benefit?

An extra benefit is "any special arrangement made by an institutional employee or a representative of the institution's athletic interest to provide a student-athlete or a student-athlete's relative or friend with a benefit that is not generally available to the institution's students or their relatives or friends or to a particular segment of the student body (i.e. foreign students, minority students) determined on a basis unrelated to athletic ability."

Because mentors are members of the Athletic Department staff, it is crucial that you adhere to the guidelines listed below. By violating these guidelines, you will be jeopardizing the welfare of the institution, the student-athlete, and your own status.

- 1. Student-athletes cannot accept anything from an employee of the University of Central Florida or a UCF Athletic Booster (e.g. use of a car, hair cut, clothing, gifts, money, tickets to any kind of entertainment, payment of long distance phone calls, summer storage space, etc).*
- 2. Student-athletes cannot accept room and/or board from any employee or booster of the University of Central Florida.*
- 3. Student-athletes cannot accept a free or reduced cost meal from a restaurant. In addition, student-athletes may not eat in a restaurant as the guest of an athletic booster or employee of the University of Central Florida.*
- 4. On infrequent, special occasions (e.g. student-athlete's birthday, Thanksgiving, etc), student-athletes may accept an invitation for a meal at the home of an employee or booster of the University of Central Florida.*
- 5. Student-athletes may not use the athletic department photocopy machines, fax machines, or express mail services, or make long distance phone calls using Athletic Department equipment.*
- 6. Members of the Athletic Department staff are not permitted to type reports, papers, letters, etc. for any student-athlete.*

Appendix F (Continued)

7. *Student-athletes may not receive a special discount, payment arrangement, or credit on purchase (e.g. airline ticket, clothing, athletic gear) or service (e.g. laundry, dry cleaning, hair cut) from an employee or booster of the University of Central Florida.*
8. *University of Central Florida employees and boosters may not provide student-athletes with a loan of money, a guarantee of bond, or the signing or cosigning of a note to arrange a loan.*
9. *University of Central Florida employees and boosters may not provide student-athletes with the use of an automobile.*
10. *Under no circumstances should you ever contact a University athletic coach. Moreover, under no circumstances should a coach contact you. If you ever encounter instances of “implied pressure” from coaches or anyone associated with UCF, you must notify the Compliance Office or Mentoring Coordinator immediately.*
11. *You may occasionally encounter a situation in which a student-athlete will offer you a ticket for an athletic event. If this situation should occur, it is permissible for you to accept the ticket on a complimentary basis. However, under no circumstances should you purchase a ticket from a student-athlete, or attempt to resell the complimentary ticket.*

Appendix F (Continued)

Mentoring Pledge

I, _____, have been informed of NCAA and University rules as they pertain to my position as a mentor for student-athletes at the University of Central Florida. I agree to uphold these rules as well as the honor code of the University. I will respect student privacy and will not release any student information, including grades and academic progress, to anyone outside of the office of Academic Services for Student-Athletes. I understand that failure to comply with these policies will lead to an immediate suspension and further investigation.

Signature

Date

Appendix F (Continued)

UCF RESOURCES

<i>ASSA Office</i>	<i>Old Wayne Densch – 123</i>	<i>407-823-5895</i>
<i>Campus Life:</i>	<i>Student Union</i>	<i>407-823-2626</i>
<i>Campus Ministries:</i>	<i>Student Resource Center- 172</i>	<i>407-823-5336</i>
<i>Career Resource Center</i>	<i>Student Resource Center- 185</i>	<i>407-823-2361</i>
<i>Change of Student Records</i>	<i>Registrar’s Office Millican Hall 161</i>	<i>407-823-3100</i>
<i>Check Cashing</i>	<i>Bookstore</i>	<i>407-823-2665</i>
<i>CLAST Info</i>	<i>SARC – Phillips Hall 113</i>	<i>407-823-5130</i>
<i>Dispute Resolution Svcs</i>	<i>Student Resource Center- 153</i>	<i>407-823-3477</i>
<i>Healthcare</i>	<i>Student Health Center</i>	<i>407-823-2701</i>
<i>Legal Services</i>	<i>Student Resource Center – 155</i>	<i>407-823-2538</i>
<i>Library</i>	<i>Library</i>	<i>407-823-2580</i>
<i>Mental Health Counseling</i>	<i>Student Resource Center</i>	<i>407-823-2811</i>
<i>Parking Services</i>	<i>South Parking Garage</i>	<i>407-823-5812</i>
<i>Recreation & Wellness</i>	<i>Recreation & Wellness Center</i>	<i>407-823-5841</i>
<i>Student Organizations</i>	<i>Student Union 208</i>	<i>407-823-6471</i>
<i>Tickets, Movies, Attractions</i>	<i>Student Govt. Ticket Office, SU Mall</i>	<i>407-823-2060</i>

Appendix F (Continued)

Initial Mentoring Strategies

To-Do List	Strategies for Conversation	Mentor Considerations
Take time getting to know each other.	Obtain as much information on the protégé prior to meeting	Establish rapport Exchange information Identify points of connection
Talk about mentoring	Ask: Have you ever been in a mentoring relationship? What did you learn from that experience?	Talk about your own mentoring experiences
Determine protégé's goals	Ask: What do you want to learn from this experience? Give protégé an opportunity to articulate broad goals	Determine if the protégé is clear about his or her own goals
Determine the protégé's relationship need and expectations	Ask: What do you want out of this relationship?	Be sure that you get a clear understanding of what the protégé might want from the relationship
Define the deliverables	Ask: What would success look like to you?	Do you have an area of expertise that is relevant to this person's learning goals?
Share your assumptions, needs, expectations, and limitations candidly	Ask for feedback. Discuss implications for relationship	What are you willing and able to contribute to the relationship?
Discuss options and opportunities for learning	Ask: How would you like to go about achieving your learning goals? Discuss: learning and communication styles Ask: What is the most useful assistance I can provide?	Discuss the implications of each other's styles and how that might affect the relationship

Adapted from Zachary (2000)

Appendix F (Continued)

Initial Mentoring Goals

Developmental Aims

1. Self-esteem objective: to raise students' self-esteem and positive feelings of self-worth
2. Personal and social skills objective: to develop interpersonal and life skills
3. Motivational objective: to develop students' motivation to learn and achieve in school
4. Maturation objective: to aid transition from one phase of development to another
5. Attitudinal change objective: to change negative or anti-social attitudes into positive, pro-social attitudes
6. Behavioral change objective: to alter negative, anti-social behaviors or those infringing on institutional norms.

Work-related Aims

7. Aspirational objective: to raise students' sights and broaden horizons in terms of career or learning goals
8. Employability objective: to develop knowledge, skills, and personal qualities that are valued by employers

Subject Aims

9. Vocational objective: to develop students' knowledge and skills, and raise achievement in one or more vocational subjects
10. Academic objective: to develop students' knowledge and skills, and raise achievement in one or more academic subjects
11. Learning-skills objective: to develop students' study and learning skills

Adapted from Miller (2002)

Appendix G

Monitoring the Quality of the Mentoring Interaction Interview

Mentor _____ Protégé _____ Date: _____

1. What are some of the words or phrases you would use to describe your mentoring interactions over the semester?
2. Describe your interaction.
3. Assess where your protégé is on the continuum from dependent to interdependent learner.

[-----!-----]
Dependent Independent Interdependent

4. To what extent would you describe the interaction as authentic and genuine?

[1-----2-----3-----4-----5-----!-----6-----7-----8-----9-----10]
Business/Professional Cordial Authentic/Genuine

5. Were the frequency and duration of interactions adequate? If not what would you suggest to correct the situation?

6. How would your protégé characterize his/her relationship with you?

[1-----2-----3-----4-----5-----!-----6-----7-----8-----9-----10]
Poor Fair Excellent

7. What action strategies would you suggest to improve the quality of the mentoring interaction?

Mentor strategies –

Protégé strategies -

Adapted from Zachary (2000)

Appendix H

Perceived Stress Scale

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate how often you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer fairly quickly. That is, don't try to count the number of times you felt a particular way; rather, indicate the alternative that seems like a reasonable estimate. For each question, choose from the following alternatives:

- 0. never
- 1. almost never
- 2. sometimes
- 3. fairly often
- 4. very often

- ___ 1. In the last month, how often have you been upset because of something that happened unexpectedly?
- ___ 2. In the last month, how often have you felt that you were unable to control the important things in your life?
- ___ 3. In the last month, how often have you felt nervous or stressed?
- ___ 4. In the last month, how often have you felt confident about your ability to handle your personal problems?
- ___ 5. In the last month, how often have you felt that things were going your way?
- ___ 6. In the last month, how often have you found that you could not cope with all the things that you had to do?
- ___ 7. In the last month, how often have you been able to control irritations in your life?
- ___ 8. In the last month, how often have you felt that you were on top of things?
- ___ 9. In the last month, how often have you been angered because of things that happened that were outside of your control?
- ___ 10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

Name or Personal ID _____

Average number of Hours each week spent working out, practicing, participating in or preparing for your sport activities _____

Adapted from Cohen et al. (1983)

Appendix I

Perceived Social Support

The statements, which follow, refer to feelings and experiences that occur to most people at one time or another in their relationships with *friends* or with their *mentor*. For each statement there are three possible answers: Yes, No, and Don't Know. Please circle the answer you choose for each item. The answers on the left should reflect your feelings regarding your friends. The answers on the right should reflect your feelings regarding your mentor.

Friends				Mentor			
Yes	No	Don't Know			Yes	No	Don't Know
			1.	My friends/mentor give(s) me the moral support I need.			
			2.	Most other people are closer to their friends/mentor than I am.			
			3.	My friends/mentor enjoy(s) hearing about what I think.			
			4.	Certain friends/mentor come(s) to me when they have problems or need advice.			
			5.	I rely on my friends/mentor for emotional support.			
			6.	If I felt that one or more of my friends/my mentor were/was upset with me, I'd just keep it to myself.			
			7.	I feel that I'm on the fringe (edge) in my circle of friends/with my mentor.			
			8.	There is a friend/mentor I could go to if I were just feeling down, without feeling funny about it later.			
			9.	My friends/mentor and I are very open about what we think about things.			
			10.	My friends/mentor are/is sensitive to my personal needs.			
			11.	My friends/mentor come(s) to me for emotional support.			
			12.	My friends/mentor are/is good at helping me solve problems.			
			13.	I have a deep sharing relationship with a number of friends/with my mentor.			
			14.	My friends/mentor get(s) good ideas about how to do things or make things from me.			
			15.	When I confide in friends/my mentor, it makes me feel uncomfortable.			
			16.	My friends/mentor seek(s) me out for companionship.			
			17.	I think that my friends/mentor feel (s) that I'm good at helping them solve problems.			
			18.	I don't have a relationship with a friend/my mentor that is as intimate as other people's relationships with friends.			
			19.	I've recently gotten a good idea about how to do something from a friend/ my mentor.			
			20.	I wish my friends/mentor were/was much different.			

When I need help, I generally ask (circle one) [friends, family members, professors, advisors/counselors, mentor, others] for assistance.

Adapted from Procidano & Heller (1983)

About the Author

Valerie Renee Pfister received a Bachelor of Science degree in Botany from Ohio State University, a Master of Science degree in Biology and a Master of Business Administration degree from Florida State University before spending 12 years in Health Care and Education Consulting. Ms. Pfister then spent 3 years as the administrator of the Highlands County Public Health Department while serving as an adjunct instructor at South Florida Community College before completing her Doctor of Philosophy degree in Higher Education Administration at the University of South Florida.