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The Manifestation of Depressed Mood in Student-Athletes and Their Attitudes Toward, Barriers to, and Preferences for Seeking Professional Psychological Help

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To the Graduate Council:

I am submitting herewith a dissertation written by Renée L. López entitled "The Manifestation of Depressed Mood in Student-Athletes and Their Attitudes Toward, Barriers to, and Preferences for Seeking Professional Psychological Help." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

Jacob J. Levy, Major Professor

We have read this dissertation and recommend its acceptance:

Leslee A. Fisher, P. Gary Klukken, John W. Lounsbury

Accepted for the Council:

Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

To the Graduate Council:

I am submitting herewith a dissertation written by Renée Lorraine López entitled “The Manifestation of Depressed Mood in Student-Athletes and Their Attitudes Toward, Barriers to, and Preferences for Seeking Professional Psychological Help”. I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

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THE MANIFESTATION OF DEPRESSED MOOD IN STUDENT-ATHLETES AND THEIR
ATTITUDES TOWARD, BARRIERS TO, AND PREFERENCES FOR SEEKING
PROFESSIONAL PSYCHOLOGICAL HELP

A Dissertation

Presented for the

Doctor of Philosophy Degree

The University of Tennessee, Knoxville

Renée Lorraine López

December 2008

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DEDICATION

This is dedicated to my wonderful family. You have shown me love without conditions and support without compromise. I am forever grateful to you for without you I would not be who I am today.

To my Mom and Dad, Gail and Ron Richards:

You have instilled in me faith in self, faith in others, and the persistence and tenacity to dream high and reach higher. I cannot thank you enough for your *literal* cheers of support! I don't think I would have made it through this program without you being there for me!

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ABSTRACT

Student-athletes are thought to be at greater risk for some psychopathologies while underutilizing mental health services. Few studies have explored depression in student-athletes or the reasons behind the resistance to seeking psychological help. The goals of this study were to examine in a nationwide sample of NCAA D-IA and D-IAA student-athletes the (a) manifestation of depressed mood as it relates to gender, injury, injury characteristics (i.e., perceived impact, time in treatment, chronicity), and student-athlete role behaviors (e.g., frequency of skipping events, role strain, self-destructive behaviors) and (b) examine their treatment resistance, perceived barriers to seeking help, and counselor preference should they choose to seek psychological help. Using a web-survey format, student-athletes were presented survey materials and the Personality Assessment Inventory (Morey, 1991) Depression and Treatment Rejection scales. Results indicated student-athletes reported moderately low depression scores. Depression was not impacted by gender or the occurrence of injury; however, for those who were injured, only the perceived impact of their injury accounted for variance in depression scores. Strong relationships between role behaviors and depression indicated possible outward expressions of depression. Additionally, student-athletes reported moderately high treatment rejection scores indicating little desire or perceived need to change and little motivation for entering into counseling. Access to services, privacy issues, stigmatization, and the fear of not being understood acted as barriers to seeking help. Lastly, student-athletes indicated clear preferences for counselor type and practitioner's location, familiarity with sport, gender, racial similarity, and age. Results highlighted a need for education, awareness, promotion of mental health services, and increased accessibility to services for student-athletes. Recommendations were put forth for university counseling centers as well as athletic department staff members.

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CHAPTER ONE

Introduction

Statement of Problem

Athletes are typically characterized as being physically strong, mentally tough, popular, charismatic, and intense. We are often shocked when an athlete is stricken with a physical malady that is common to humankind (e.g., Lance Armstrong's battle with cancer). We may be even more shocked and amazed when we learn that an athlete is coping with a mental illness. For example, Jordan (2005) found that fans are often unsympathetic when athletes take a leave of absence from their sport to seek treatment for a mental illness. However, while athletes are considered by many to be privileged, strong, and mentally tough competitors, they too can suffer from the debilitating effects of depression and other mental illnesses.

Compared to their non-student-athlete counterparts, collegiate student-athletes endure more life stressors and experience greater demands on their time and energy due to their dual roles as students and elite athletes (Etzel, Ferrante, & Pinkney, 1991). Due to the impact of more stressors and the greater demands placed on student-athletes, many consider intercollegiate student-athletes to be at greater risk for specific psychopathologies (Carter & Rudd, 2005; Doumas, Turrisi, Coll & Haralson, 2007; Leichliter, Meilman, Presley, & Cashin, 1998; Miller, Miller Verhegge, Linville, & Pumariega, 2002; Nattiv, Puffer, & Green, 1997; Nelson & Wechsler, 2001; Petrie & Sherman, 1999; Sundgot-Borgen, 1994). While researchers have investigated the incidence of psychopathologies such as eating disorders (Carter & Rudd, 2005; Sundgot-Borgen, 1994) and substance abuse (Doumas, Turrisi, Coll, & Haralson, 2007; Leichliter, Meilman, Presley, & Cashin, 1998; Miller, Miller Verhegge, Linville, & Pumariega, 2002; Nattiv, Puffer, & Green, 1997; Nelson & Wechsler, 2001), little research has been

conducted to empirically study the incidence and experience of student-athletes with depression. Questions remain as to how student-athletes manifest depression, how they express depression, and how injury impacts the prevalence and level of depression.

While research has indicated that student-athletes experience mental health issues and may be even more susceptible to developing certain psychopathologies, experts have noted that student-athletes, as a group, maintain negative attitudes toward psychological help providers, specifically sport-related professionals (Maniar, Curry, Sommers-Flanagan, & Walsh, 2001; Martin, 2005; Martin et al., 2001; Watson, 2005), and characteristically underutilize mental health services (Pinkerton, Hinz, & Barrow, 1989). Literature focusing on sport psychology consultation provides the bulk of our knowledge of the views athletes hold toward psychological help; however, the extant literature neglects to address student-athletes' attitudes toward seeking help from mental health professionals for issues which are not necessarily sport-related. Also, helping professionals working with and researching student-athletes have indicated that student-athletes underutilize mental health services (Pinkerton, Hinz, & Barrow, 1989), yet no empirical research has been conducted to explore the barriers student-athletes perceive as thwarting their use of services or their preferences should they choose to seek services. This gap in the literature makes it difficult to address student-athletes' reluctance to use services.

Purpose of Study

The purposes of this study were two-fold. The first purpose of this study was to empirically examine the manifestation of depression in student-athletes. More specifically, this dissertation examined the affective, cognitive, and physiological components of depression as reported by student-athletes and measured by an objective psychopathology instrument, the Personality Assessment Inventory (PAI; Morey, 1991a). Additionally, this study examined the

relationship between the student-athletes' standard depression scores on the PAI and various athletic environment and lifestyle behaviors in order to explore possible sport-specific behavioral cues to the presence of depression in collegiate student-athletes. The second purpose of this study was to empirically investigate the attitudes of intercollegiate student-athletes regarding their use of mental health services. This study explored (a) student-athletes' reluctance to seeking treatment, (b) perceived barriers to seeking mental health services, and (c) preferred characteristics of a helping professional.

Significance of the Study

There are a number of studies that have focused on depression in special populations such as gifted students (Baker, 1995; Bartell & Reynolds, 1986; Jackson & Peterson, 2003; Neihart, 2002) and medical students (Givens & Tjia, 2002; Rosal, Ockene, Ockene, Barrett, Ma, and Hebert, 1997; Tjia, Givens, & Shea, 2005). There are also studies that have focused on specific psychopathology in student-athletes, such as alcohol abuse (Doumas, Turrisi, Coll, & Haralson, 2007; Leichliter, Meilman, Presley, & Cashin, 1998; Miller, Miller, Verhegge, Linville, & Pumariega, 2002; Nattiv, Puffer, & Green, 1997; Nelson & Wechsler, 2001) and disordered eating (Carter & Rudd, 2005; Petrie & Sherman, 1999; Sundgot-Borgen, 1994). However, there have been only three studies conducted that focus specifically on depressed mood and psychiatric concerns in student-athletes (Donohue et al., 2004; Mentink, 2002; Storch, Storch, Killiany, & Roberti, 2005). Two of these studies (Donohue et al., 2004; Storch, Storch, Killiany, & Roberti, 2005) focused on the prevalence of depression among athletes as compared to non-student-athletes and they found conflicting results. The third study by Mentink (2002) used qualitative methods to explore three student-athletes' experiences with depression. Each of these studies utilized small samples and samples from a single institution. The relative dearth of

literature makes the current study quite unique as does the nationwide sample of student-athletes who participated. Undoubtedly, the nature of the study and the breadth of the sample will add to the body of literature as it pertains to this particular research topic.

In addition, while studies of various groups' attitudes toward psychological services (Atkinson & Gim, 1989; Atkinson, Jennings, & Liongson, 1990; Gonzalez, Alegria, & Prihoda, 2005; Hall & Tucker, 1985; Smith, 2004; Tata & Leong, 1994) and athletes' attitudes toward sport psychology services are abundant (Maniar, Curry, Sommers-Flanagan, & Walsh, 2001; Martin, 2005; Martin et al., 2000), little research (Miller & Moore, 1993; Watson, 2005; Watson, 2006) has expressly examined the attitudes of student-athletes toward seeking professional psychological help for mental health issues. This study was designed to identify treatment reluctance among student-athletes as well as explore the barriers they perceive as thwarting their seeking of services and their preferences for various counselor characteristics should they choose to seek help for a psychological concern. This study adds to the body of literature geared toward improving the mental health services offered on campuses and in athletic departments of colleges and universities across the United States.

Definition of Terms

Barriers

Factors that may prevent or make it difficult for an individual to seek out professional psychological services (Givens & Tjia, 2002).

Counseling

Counseling is a therapeutic process through which a client works collaboratively with a trained professional counselor. Counseling can help clients identify, examine, process, and alter thoughts, feelings and behaviors that are causing turmoil or difficulties in their lives. Through the process of counseling, the client builds on personal strengths by gaining insight, skills, and strategies to cope with their problems. Counseling can effectively deal with a wide range of personal problems. Counseling, mental health services, and psychotherapy are often used interchangeably (Gelso & Fretz, 2001).

Counselor Preference

Counselor preference refers to a potential client's personal choices with regard to the characteristics and type of mental health professional from which the individual would seek services (Smith, 2004). For the purposes of this study, counselor preferences include preference for: (a) counselor type (e.g., family, friend, psychologist, religious leader, physician, etc.), (b) office location, (c) counselor's familiarity with sport or sport knowledge, and (d) counselor's gender and race, and (e) counselor's age.

National Collegiate Athletic Association Divisions

The National Collegiate Athletic Association (NCAA) is the governing body for many of the college and university sport programs in the United States. The governing body (originally named Intercollegiate Athletic Association of the United States) was founded in 1906 and the present name, NCAA, was adopted in 1910. In 1973, the association's members were divided into three legislative and competitive divisions, known as Division I, II, and III (D-I, D-II, and D-III, respectively). In 1978, D-I was further divided into three subdivisions: two divisions of top-tiered athletic programs with

football programs, D-IA and D-IAA, and one division of top tiered athletic programs without football programs, D-IAAA. In 2006, Divisions I-A and I-AA were renamed Football Bowl Subdivision (FBS) and Football Championship Subdivision (FCS), respectively (NCAA, n.d. b). Membership in each of the divisions, IA, IAA, IAAA, II and III, is determined by the number of sports programs sponsored, meeting of various scheduling requirements, and meeting maximum and minimum financial aid requirements, wherein D-I, specifically D-IA, has the most stringent standards (NCAA, 2007). For the purposes of this study, the NCAA divisions provided guidelines for categorizing institutions from which participants were recruited. The pilot study used participants from D-II. The main study participants were recruited from only D-IA and D-IAA as these institutions all had football programs and D-IAAA institutions did not have a football program which may have impacted the athletic department culture. Division membership was determined when this project was conceived and thus was based on 2005 NCAA membership.

Student-Athlete

“A student-athlete is a student enrolled in a college or university and who participates in an intercollegiate sport at a DI, D-II, or D-III NCAA-member institution,” (Howard-Hamilton & Watt, 2001, p.2). A student is not deemed a student-athlete solely on the basis of prior high-school athletics participation or on the basis of participation in collegiate intramural, club, or recreation sports (Howard-Hamilton & Watt, 2001).

University Counseling Center

A division within the university system, typically housed within a University’s student affairs unit, committed to providing University students, faculty, and staff members with

psychological and mental health services. University counseling centers provide services to their campus such as individual, group and couples therapy; crisis intervention; psychological assessment; psychoeducation; outreach and consultation; program development and evaluation; and doctoral and professional training (Boyd, et al., 2000).

CHAPTER TWO

Review of the Literature

In a given year, depression afflicts close to 19 million Americans, or 9.5% of the total United States population (National Institute of Mental Health [NIMH], 2002). Over the course of a lifetime one in four individuals (26% lifetime risk) will experience symptoms of depression (Kramlinger, 2001). Depression is an egalitarian disorder that can impact anyone regardless of race, ethnicity, wealth, education, marital status, or sexual orientation. And while depression has been found to affect individuals regardless of their demographic characteristics, it afflicts women at rates of two or three times that of men (American Psychiatric Association, 2000). Depression is a potentially debilitating disorder that can follow multiple courses and result from a number of variables, including biological, social, or environmental factors.

In the mental health services arena, the term “depression” is a shorthand clinical reference for a condition defined by a specific set of features. In *The Diagnostic and Statistical Manual of Mental Disorders* (4th edition, text revision; American Psychiatric Association, 2000) the diagnosis of a major depressive episode refers to a constellation of symptoms which last two weeks or more. The possible symptoms of major depression consist of affective, cognitive, and physiological facets. The potential affective symptoms entail a depressed mood, irritability, and anhedonia or loss of interest in activities that were once pleasurable. The possible cognitive symptoms consist of feelings of worthlessness or excessive inappropriate guilt, diminished ability to concentrate, indecisiveness, and recurrent thoughts of death. Lastly, the prospective physiological symptoms of depression consist of weight loss/gain due to decrease/increase in appetite, insomnia or hypersomnia, fatigue, and psychomotor agitation or retardation.

Mental health professionals and psychological researchers use the term depression with an understanding of the word as it is described by the criteria set forth above. This usage particularly emphasizes either the presence or absence of a disorder. Others argue that mental health issues, such as depression, are not entirely absent or present, but rather a constellation of symptoms that occur on a continuum (Mirowsky & Ross, 1989). The current study assumed this latter position and focused on the magnitude and the pattern of symptoms experienced rather than distinguishing the presence or absence of a diagnosis of depression.

Depression can take many forms and its manifestation can range in severity (American Psychiatric Association, 2000), but depression, in all cases, causes the sufferer distress. Many of the individuals suffering with depression function relatively well and maintain much of what they attained prior to the origination of their symptoms. However, those suffering with even a mild form of depression may feel the impact of their symptoms in their daily routines, social relationships, and occupations (American Psychiatric Association, 2000). A person suffering from depression may interact with others differently or may feel stigmatized and/or shunned by society, acquaintances, and even family members who are confused or scared by the changes they witness (Wahl, 1999). Also, the sufferer's productivity may be affected, making difficult the continuance of employment or a student status (Kramlinger, 2001).

Depression in Context

Depression is considered to be an equal opportunity disorder; and is not avoided because of grand intelligence, success, wealth, or talent. In fact, many successful and productive individuals have suffered from depression. Winston Churchill, Edgar Allan Poe, Buzz Aldrin, and Patty Duke are all known to have suffered from depressive disorders (Mentink, 2002). The following literature review illustrates that highly functioning and exceptionally talented groups

of individuals, such as gifted and talented students, medical students, and student-athletes, can and are affected by symptoms of depression and clinical depression. In addition, this review illuminates the need for the current study by highlighting the scarcity of literature focusing on the mental health of athletes and the need for further and more in-depth research into the depressive states experienced by intercollegiate student-athletes.

Depression in the Gifted and Talented

It is a popular notion that gifted and talented individuals are at a higher risk for depression (Neihart, 2002). The notion of the “insane genius” is easily conjured up and denotes the unstable yet brilliant individual. Experts in the field of gifted and talented students have noted that many of the characteristics that are associated with giftedness, such as perfectionism, asynchronous development, social isolation, and heightened sensitivity, put gifted individuals at risk for developing anxiety and mood disorders (Hayes & Sloat, 1990; Jackson & Peterson, 2003). Other researchers and practitioners propose that gifted children exhibit characteristics that protect them from depression and anxiety. Neihart (2002) suggested that high intelligence, strong problem-solving ability, advanced moral reasoning skills, outside interests, and androgyny are characteristics of gifted children that may act to shield them from negative effects of negative and stressful events.

Empirical evidence has yielded contradictory findings as to the prevalence of depression in gifted students. Hayes and Sloat (1990) found gifted teens to have a higher incidence of depression and to be at greater risk for suicidal ideation than their non-gifted peers. In contrast to this finding, Baker (1995) examined the level, prevalence, and nature of depression and suicidal ideation among exceptionally academically gifted, academically gifted, and academically average high school students. She found no significant group differences in level

of depression or suicidal ideation. She did find that girls in the exceptionally gifted and academically gifted groups did report depressive symptoms at a higher level than males in these groups but found no gender effect in the average group. These gender differences did not apply to suicidal ideation, however. Baker concluded that depression was not more prevalent among gifted students than among average high school students nor did they manifest depression in a different way than average students. Bartell and Reynolds (2003) also found no differences between gifted and non-gifted students in either depression or self-esteem and found that teachers overwhelmingly perceived gifted children as less depressed than their non-gifted peers.

Researchers offer conflicting evidence as to whether gifted students are at a greater or lesser risk for experiencing depression than their non-gifted counterparts. This may be due to trouble defining what constitutes giftedness, sampling biases, or the effects of positive impression management. However, as Jackson and Peterson (2003) illuminated, the depression of gifted students is manifested as a very dark inner experience which can be and is often hidden or masked from others. The exceptionally, intelligently gifted student can suffer from deep depression; however, others may not even bear witness to their struggle. Often the gifted individual's physical manifestations of inner despair are considered to be typical physical maladies while depression may never be considered to be the culprit. The gifted student can continue to effectively produce and interact with the world, remain sensitive to the needs of others, and remain high energy in public while all the while coping with depression. Their ability to mask their symptoms appeared to be in direct relation to their need to protect themselves from revealing a "shameful" disorder or feeling like a failure for their inability to resolve their state. Amazingly though, the gifted student suffering from depression can achieve their goals, remain successful, and all the while hide their intense pain.

Depression in Medical Students

The field of medicine is one of the exceptional occupational fields in which the individuals are often iconized. Assumptions are often made that doctors and medical students should not be and could not be suffering from mental health and wellness problems because of their chosen career field (Givens & Tjia 2002). However, research suggests that medical students are prone to symptoms of depression at rates equal to and even greater than the general population (Givens & Tjia, 2002; Tjia, Givens, & Shea, 2005; Rosal, Ockene, Ockene, Barrett, Ma, & Hebert, 1997).

Medical students have been found to suffer from depressive symptoms at a relatively high rate. Givens and Tjia (2002) administered the Beck Depression Inventory (BDI) and questionnaire items to assess levels of depression and suicidal ideation in first- and second-year medical students. The authors found that 24% ($n = 46$) of the 194 medical students surveyed reported moderate to severe depression (scores of 8 or higher on the BDI). Of the 46 students determined to be depressed by way of their BDI scores, 26% ($n = 12$) had contemplated suicide during their time in medical school. It was found that although one-quarter of the first- and second-year students were experiencing moderate to severe symptoms of depression, only 22% ($n = 10$) were receiving mental health counseling. This one-institution study tapped into the presence of depression among medical student which appears to be higher than the prevalence seen in the general populations, 9.5% (NIMH, 2002).

Tjia, Givens, and Shea (2005) replicated this study in a second sample of 322 medical students at a private U.S. medical school. Again, using the BDI and a questionnaire surveying suicidal ideation, use of mental health services, current use of antidepressants, familial history of depression, and personal history of depression, the authors examined the prevalence and severity

of depression among medical school students. Tjia, Givens, and Shea found 15.2% ($n = 49$) of their sample suffered from moderate to severe depression. Additionally, 20.4% ($n = 10$) of those with depression reported suicidal ideation. The authors found that only one-quarter ($n = 12$) of those with depression were in treatment for their symptoms. This second study revealed a prevalence of depression among medical students that again exceeded the prevalence of the general public. This increased prevalence among this competitive and hard-working group is concerning.

Rosal, Ockene, Ockene, Barrett, Ma, and Hebert (1997) conducted a longitudinal study of depression in medical school students. Students entering medical school during the Fall terms of 1987, 1988, and 1989 ($n = 264$) received a battery of instruments four weeks prior to the start of classes. Baseline scores for the individuals in these medical school classes were assessed using the Center for Epidemiological Studies Depression (CES-D) scale, the Bortner Type A Behavior scale, the Spielberger Trait Anger scale, the Spielberger Anger Expression scale, ratings of perceived stress, and a demographics and social-life survey. Follow-up assessments were conducted during the middle of the participants' second ($n = 171$) and fourth ($n = 126$) years of medical school. The follow-up assessments consisted of a re-administration of the CES-D scale, the rating of perceived stress level, and the social-life survey. The authors found that 18% of entering students scored in the 80th percentile on the CES-D, a prevalence they report is similar to the general population. However, across their years in medical school, students appeared to evince depression at rates higher than those of the general population. The data collected during the second-year administration revealed the percentage of participants scoring in the 80th percentile on the CES-D had risen to 39% and during fourth year to 31%, increases which were statistically significant. They found no gender differences in depression levels at baseline but

found that women reported significantly greater levels of depression at years two and four. Analysis revealed that for the entire sample, gender and increased levels of perceived stress were significant predictors of depression scores. Gender analysis showed that for women, increased perceived stress, anger, and frequency of outside school contacts were significant predictors of the magnitude of the increase in their CES-D scores. Rosal and colleagues (1997) suggested that medical students began medical school mirroring the depression rates of the general population but as they progressed in school their depression rates increased indicating chronic, persistent depression rather than episodic depression.

Rosenthal and Okie (2005) noted that depression in medical school is a serious and under-recognized problem. At Duke University's School of Medicine, an anonymous chat-room was established for the students to discuss their dealings with depression. The forum received more than 100 postings and more than 1,000 hits during its 10-day pilot project existence (Rosenthal & Okie, 2005). Obviously, the student body had a great deal to say about their dealings with depression. Additionally, Rosenthal and Okie pointed to the experience of Dr. Laurie Raymond, psychiatrist and Director of the Office of Advising Resources at Harvard Medical School. Dr. Raymond reportedly met with 208 medical students (approximately 25% of the student body) in a two-year period. She reported that 15% ($n = 31$) of these students presented with a self-described state of depression. Of those who presented with symptoms of depression, 81% ($n = 25$) were diagnosed with major depression. Dr. Raymond believed that the medical students were at a greater risk for depression because as they progressed through medical school their coping skills and personal health deteriorated. Additionally, the authors indicated that medical students often do not engage in self-care tactics and dismiss their feelings as part of medical school life. They often fail to recognize the symptoms in themselves and if

they do recognize the symptoms of depression within themselves they may be reluctant to admit to these experiences and reluctant to seek help for many reasons, including fear of being stigmatized, fear of repercussions on their career, and lack of time, money, or availability of services.

Medical school students are among the most competitive college students. They are often very hard-workers and are perceived to be very competent in academic arenas. Yet, medical students, the future doctors and researchers of the world, are as prone, if not more prone, to experiencing major depression. This section of literature highlights the importance of realizing and appreciating the unencumbered reach of depression.

Depression in Athletes

Depression is a common mental health problem which impacts individuals regardless of status, religion, race, ethnicity, occupations, or hobbies. As with gifted students and those in medical school, we often assume that athletes “have it all” and are “put together” so therefore they could not be at risk for mental health problems. However, athletes are susceptible to experiencing depressed mood as well as clinical depression. Coaches, training staff, teammates, and fans often overlook or rationalize the symptoms of depression in athletes in order to make the reality of someone’s outward behaviors match the perceptions held of that person as someone who is strong, healthy, and charismatic. Surprisingly, an Internet search of the terms “depression” and “athlete” revealed that many high level athletes have reportedly suffered from clinical depression including: Major League Baseball’s Jimmy Piersall, Bubba Trammel, Bill Pulsipher, Russ Johnson, and Pete Harnisch; National Football League’s Terry Bradshaw and Barret Robbins; National Hockey League’s Pat LaFontaine; National Basketball Association’s Leon Smith, Kendall Gill, and Brian Williams; Women’s National Basketball Association’s

Chamique Holdsclaw; and Olympians Jim Shea, Wendy Williams, and Picabo Street (Crouse, 2002a; Crouse, 2002b; Jordan, 2005; Pulsipher, 2005; Saunders, 2003; Wertheim, 2003). These are just a sample of the individuals who have spoken out publicly about their ordeal with clinical depression; but, it can be surmised that many other professional athletes deal with clinical depression and depressed mood and have not publicly spoken out. Unfortunately, many barriers (for example, societal stigma of mental illness, sport norms, lack of time or availability of services, and confidentiality) impede athletes who experience depression from speaking out about it (Cogan, 2000; Etzel, Ferrante, & Pinkney, 1991; Pinkerton, Hinz, & Barrow, 1989). Also unfortunate is the fact that many of these same societal barriers also hinder professionals' recognition of the need for greater understanding, treatment, and research into depression in athletes.

Studies comparing athletes to their non-athlete counterparts have indicated that intercollegiate student-athletes tend to experience a greater incidence of psychopathology. For instance, elite athletes have been found to report greater problems with alcohol (Domas, Turrisi, Coll, & Haralson, 2007; Leichter, Meilman, Presley, & Cashin, 1998; Miller, Miller, Verhegge, Linville, & Pumariega, 2002; Nattiv, Puffer, & Green, 1997; Nelson & Wechsler, 2001) and equivalent or higher prevalence of eating disorders (Sundgot-Borgen, 1993) and disordered eating (Carter & Rudd, 2005; Petrie & Sherman, 1999). In addition, some experts suggest that student-athletes experience greater stressors and demands than non-student-athletes which may put student-athletes at a greater risk for psychopathology, including clinical depression (Etzel, Ferrante, & Pinkney, 1991; Pinkerton, Hinz, & Barrow, 1989). However, despite the fact that student-athletes seem to be at-risk for psychosocial problems, research with regard to depressive symptoms in athletes is relatively scant and has been left relatively unexamined.

A review of psychological, sociological, and education databases revealed few studies which documented depressed mood and/or depression in college athletes (Donohue et al., 2004; Mentink, 2002; Storch, Storch, Killiany, & Roberti, 2005). Fortunately, effort has been aimed at studying the association between depressed mood and the occurrence of injury in athletes (Brewer, 1993; Quinn & Fallon, 1999). This available literature will be reviewed in order to gain an understanding of depression in athletes in light of the topic of the current study and to build a basis for the urgent need for the current study.

Depression and the occurrence of injury. Research conducted on athletes to assess their overall mental health profiles has typically used a measure called the Profile of Mood States (POMS; McNair, Lorr, and Droppleman, 1971). Many studies have overwhelmingly shown elite athletes tend to score in a predictable fashion on the POMS (see LeUnes & Burger, 1998 for a review). This predictable profile, or the “iceberg profile,” characterizes athletes as individuals with high vigor and low levels of tension, anger, depression, fatigue, and confusion. These characteristic profiles are markedly different than one would expect of an individual who is at risk or experiencing a mood disturbance.

Mood disturbances have been found in athletes as a reaction to negative sport experiences. Brewer (1993) conducted four separate studies in order to test the hypothesis that experiencing a negative life event, such as injury, in a context through which one has developed a strong sense of identity, athletics, would attribute to greater depressed mood. In his first study, Brewer examined the extent to which a visualized injury experience evoked depression and the impact of athletic identity on the depression reaction. One hundred and nine sport psychology students completed the Athletic Identity Measurement Scale (AIMS; Brewer, Van Raalte, & Linder, 1993) and the Profile of Mood States Depression Scale (POMS-D). All participants

completed the AIMS at the beginning of class. The control group then completed the POMS-D while the treatment group was led through an imagery exercise in which they imagined that they had sustained a career-ending injury and then completed the POMS-D. Brewer found that depressed mood was significantly greater in the imagery/injury group. Multiple regression analysis revealed that only the interaction of athletic identity and group identification significantly predicted depressed mood suggesting that those who strongly identified with an athletic identity in the injury group reported greater levels of depression. These findings indicated that a depressed mood response in reaction to an imagined career ending injury was positively associated with a domain-specific vulnerability characteristic, or in other words, the strong identification with being an athlete. Brewer's study illuminated the interaction between athletic identity and depression when facing an injury. However, this study used students, not just athletes, and focused on an imagined experience. This design may not have revealed the true interaction of injury, athletic identity, and depression as imagery doesn't reveal a true-life reaction nor does the sample highlight the true athlete reaction.

Brewer's (1993) second study investigated whether the depressed mood reaction was specific to athletic life events or if it could be generalized to academic life events as well. Students in undergraduate psychology classes were again given the AIMS and the POM-D. Subjects were randomly assigned to two groups, the injury group and the academic failure group. The injury group was asked to respond the POMS-D in a way that "best describes how they would feel if they suffered a career-ending injury," (Brewer, 1993, p. 350). The academic failure group was asked to respond to the POMS-D in such as way that "best described how you would feel if you failed a course that prevented you from majoring in your chosen field," (Brewer, 1993, p. 350). The results revealed that individuals in the failure group reported significantly

greater depressed mood. He suggested that the greater depressed mood found among the failure group was attributed to the fact that all subjects were undergraduate students and thus all course failure group participants could internalize the imagined circumstance of failing a class.

However, only some of the injury group subjects were athletes and thus the entire group may not have been able to access the depth of the depressed reaction that may occur in an athlete. Brewer noted that the interaction effect of athletic identity and group status only approached significance ($p < .07$) which indicated that, while not statistically significant, depression was positively related to athletic identity for injury subjects ($r = .12$) and negatively associated to athletic identity for the course failure subjects ($r = -.21$). Brewer suggested that the less than dramatic findings in this study did support the specific vulnerability hypothesis but may have revealed the complexity of the student-athlete role. This study again used an imagined experience and a sample that may or may not have contained athletes. These two limitations may have clouded the results and neglected to reveal the true interaction of athletic identity, injury, and depression. To address these issues, Brewer conducted a third study with actual, rather than imagined, injuries.

Brewer's (1993) third study focused exclusively on injured athletes rehabilitating at a sports medicine clinic in Phoenix. Participants completed demographic questionnaires, the AIMS, POMS-D, BDI, Physical Self-Perception Profile global physical self-worth scale (PSPP-G), and Social and Athletic Readjustment Rating Scales (SARRS). The PSPP-G was used to measure physical self-efficacy, or the belief that one could recover from injury, and the SARRS was used to measure sport-specific stressful life events. Multiple regression analyses were conducted to determine the extent to which athletic identity, physical self-efficacy, and stressful life events played a role in predicting depression. The results indicated that athletic identity was

positively associated with depressed mood in the context of sports injury. Even after controlling for the effects of physical self-efficacy and stressful life events, the relationship between athletic identity and depressed mood in injured athletes was still significant. This study did not investigate the difference between injured and uninjured athletes to compare the depression-identity relationship (however this was investigated in Brewer's fourth study). Another shortcoming of this study may be the failure to take into account the characteristics of one's injury, such as the length of rehabilitation, the impact on sport and daily lives, the perceived severity of one's injury, and chronic/acute nature of the injury, and the impact of these characteristics on one's level of depression.

In Brewer's (1993) fourth study, he utilized the same procedure as in his third study with a sample of NCAA football players. Fifteen football players were assigned to the injured group based on their self-report, while 75 football players were assigned to the uninjured group. Only two statistically significant group differences were found. First, the injured group responded on average with scores significantly higher on the stressful life events measure, the SARRS. Second, the injured group reported significantly greater depression scores on the BDI. Regression analysis on the BDI depression scores revealed a significant overall proportion of depression variance accounted for after athletic identity, physical self-efficacy, and stressful sport-specific life events had been entered. The interaction effects did not add significant incremental validity. Brewer noted that the leading predictor of depression, the interaction of athletic identity and injury status, only approached significance ($p < .07$) in the regression analysis and thus, he conducted a separate regression analysis to explore the predictive ability of athletic identity and injury status independent of physical self-efficacy and stressful sport-life events. Only the interaction effect coefficient was significant, reflecting that athletic identity

was positively related to depression for injured athletes and negatively related to depression for uninjured athletes. Results of the POMS-D did not parallel those of the BDI as the regression equations failed to account for any significant proportion of variance in depression as measured by the POMS. Brewer hypothesized that the endorsement of somatic questions of the BDI, more so than the mood-based questions of the POMS-D, may have been more socially desirable for football players.

Brewer (1993) indicated that the findings of his four studies combined to offer support for the link between strong athletic identity and depressive reaction to a negative sport domain-specific life event, injury. Additionally, he hypothesized that these findings could generalize to other athletic-specific negative events and suggested that events such as athletic career termination, decreased role on the team, or many other domain-specific events that interfere with the athletic role could possibly be positively associated with depression.

While Brewer's studies identified the link between athletic identity and depression reaction when faced with injury, it leaves open some questions with regard to generalizability and other variables impacting the depression reaction. Brewer's studies utilized small samples of athletes and in some procedures used imagined, rather than real, circumstances. When he compared depression among injured and uninjured athletes, the sample contained only football players which may have impacted findings. Also, the variations in one's injury (time in treatment, perceived severity, impact on daily life, chronicity) were not taken into account or examined for impact on level of depression reactions. His findings, however, supported the anecdotal statements made by experts within the athletic counseling arena which suggest athletes experience greater stressors and demands in college and may be at a greater risk for psychological distress and provided a foundation for future exploration.

Quinn and Fallon (1999) explored the psychological process an injured athlete experiences when dealing with and recovering from an injury. They surveyed 136 elite athletes at four phases of injury: at onset of injury, at partial recovery, semi-recovery, and at full recovery. Using the POMS, they found athletes often reacted to an injury with significantly low levels of vigor and high levels of tension, depression, anger, fatigue, and confusion. Across the stages of recover, vigor increased as tension, depression, anger, confusion and fatigue all decreased. From onset to partial recovery, anger, depression, and confusion significantly decreased, followed by a smaller decrease between partial and semi-recovery, and then a larger decrease from semi- to full recovery. Tension was shown to steadily decrease while vigor was show to steadily increase across recovery. Results of this study suggest that athletes react to injuries with negative mood states that continually improve across recovery, although they do not follow a linear path. The authors indicated that intervening and providing the athlete with clear understanding of the injury and course of rehabilitation may decrease confusion and perhaps contribute to the improvement of mood. While this study took into account the total time of recovery for each participant, the authors did not explore the impact of the severity or time to recover on the individual's depressed mood reaction.

The results of the aforementioned studies suggest athletes are prone to depression and other negative mood states following an injury. They highlight the need for future exploration of the impact of injury as well as the impact of various characteristics of one's injury to deepen our understanding of the relationship between depression and injury.

Psychological functioning, depression, and athletes. Few studies have explored psychiatric symptoms and depressed mood in athletes. Donohue, Covassin, Lancer, Dickens, Miller, Hash, and Genet (2004) appear to be front-runners in exploring psychiatric symptoms in

this population. Donohue and his colleagues administered the Symptom Checklist-90-Revised (SCL-90-R) to a sample of college undergraduates. The SCL-90-R measures overall psychological distress as well as eight specific variables of psychiatric functioning. The authors administered this measure to NCAA student-athletes and recreational athletes and compared the results of this sample to a normative sample with no preexisting psychiatric conditions. The authors found that student-athletes did not differ from recreational athletes on any of the nine dimensions of psychiatric functioning measured by the SCL-90-R. However, when compared to the normative sample, the athletes (recreational and NCAA) reported lower levels of psychiatric distress. They suggested that this study illuminated the positive effects of exercise on mood and indicated that participation in collegiate athletics is not associated with an increased risk for psychological disturbance. However, this study may be limited through its design. Data was collected from students seeking course credit at a single university. The sample used was also quite small (72 NCAA athletes and 64 recreational athletes). Lastly, in this study's analysis, only the overall, global index of severity was used to compare athletes to the normative sample. Perhaps, if the dimensions of the SCL-90-R were analyzed individually the authors may have exposed some group differences in symptomology.

In order to examine the prevalence of psychological problems in intercollegiate student-athletes, Storch, Storch, Killiany, and Roberti (2005) compared psychosocial maladjustment of intercollegiate student-athletes and non-student-athletes at one public university in southeastern region of the United States. The authors collected data from both NCAA Division I student-athletes and non-student-athletes using the Social Anxiety Scale for Adolescents (SAS-A) and the Personality Assessment Inventory Depression, Alcohol Problems, and Nonsupport scales (Morey, 1991a). Multivariate analysis of variance (MANOVA) with the psychosocial

maladjustment instruments serving as the dependent variables, and gender and athletic status serving as the independent variables was conducted. Analysis revealed that female athletes reported significantly higher depression and social anxiety scores as compared to male athletes, and male and female non-student-athletes. Additionally, male and female student-athletes reported feeling significantly lower levels of support than their non-student-athlete counterparts. The authors suggested that their study is “among the first to suggest that elite intercollegiate female athletes experience elevated levels of depressive symptoms and social anxiety,” (Storch et al., 2005, p. 94). They postulated that female student-athletes experience greater stressors than their peers, tend to internalize criticisms creating greater distress, and have greater difficulty integrating into other peer groups elevating female athletes’ risk for and experience of depression. Goodness-of-fit analyses on clinical levels of alcohol problems, depression, levels of support, and social anxiety indicated that the proportion of female athletes reporting clinically significant scores of psychosocial maladjustment were not significantly higher than their counterparts’ proportions. However, Storch and his colleagues (2005) expressed concern for the proportions of athletes reporting clinically significant levels of problems and concluded that their study served as a much needed call for early detection and intervention to help student-athletes cope with distress. In addition, the authors invited professionals to train those working with student-athletes to detect symptoms of mental illnesses and take heed of the warning signs.

Storch and his colleagues (2005) revealed that at one university symptoms of depression and anxiety were evident in their female student-athletes. While this study called attention to a possible increased prevalence among female athletes, it failed to offer much information as to the actual experiences of the student-athletes experiencing clinical levels of depression. Mentink (2002) conducted an in-depth examination of major depression in three intercollegiate student-

athletes. Through semi-structured interviews and two additional surveys used to assess the prevalent symptoms of depression, he explored major depression from the viewpoint of the student-athletes who had suffered with the disorder during their collegiate athletic tenure. Mentink interviewed three student-athletes, a female cross-country runner at a Pacific Ten university, a male football player at a NCAA Division II school, and a male basketball player from a community college in the northwest region of the United States. The three athletes and either a parent or coach they trained under during college were interviewed. The sets of participants were given a Perceptual Gauge survey (Mentink, 2002) in order to assess the prevalent symptoms of the athlete's illness in hopes of illuminating the disparate experiences of the athletes and what was perceived by others in the athlete's life.

Mentink (2002) found the athletes experienced all of the symptoms of depression at moderate to severe levels during their athletic tenure. However, on the contrary these athletes reported performing very well academically and athletically. In fact, all three interviewees commented on how the competitive arena was their "sanctuary," (Mentink, 2002, p. 139). They reported that they were not performing up to their potential but that they were pushing through workouts and achieving very high honors in their respective sports without coaches or teammates noticing that they were clinically depressed. The athletes' abilities to mask their symptoms disabled others from perceiving a mental health problem so much so that on Mentink's Perceptual Gauge athletes reported the magnitude of their symptoms to be *fairly serious*, *serious*, and *extremely serious*, while coaches and parents were scoring the prevalence of symptoms in their athlete associates as *not at all* or *of minimal concern*. Mentink suggested that while the athletes were adept at actively masking their symptoms from adult figures in their lives, it may also be possible that the halo effect was aiding in the lack of awareness by these adults. He

indicated that the prowess, charisma, and productivity associated with athletes may have overshadowed the adults' abilities to perceive characteristics contraindicative of an athlete's role and character.

The three participants noted that something was "wrong" with them but lacked the understanding of what their constellation of symptoms was signifying. Another theme identified by Mentink (2002) was the athletes' abilities to continue to hide their symptoms even after they were able to recognize that they were experiencing major depression. The interviewees reported that they continued to hide it from friends, teammates, parents, and especially coaches for fear of looking weak and because the athlete had negative misconceptions about depression and mental illness and feared the same in others. For years, some of these athletes hid their distress from others and themselves by remaining productive and "appearing happy," (Mentink, 2002, p. 50). Without the ability to accept their own illness, two of the three athletes did not get the treatment they needed until their adult years, years after the onset of symptoms. Another theme addressed by all three interviewees was the accessibility, or lack thereof, to a sport psychologist within their athletic department. It was noted that the athletes would have felt more comfortable addressing their distress with a sport psychologist than with their coaches or their parents. Additionally, the athletes noted that resources were most likely available on campus but they were unaware of their existence. The participants, athletes and parent/coaches alike, offered the advice of opening the lines of communication to get the athlete assistance as soon as possible.

The studies reviewed above (Brewer, 1993; Donohue et al., 2004; Mentink, 2002; Storch, Storch, Killiany, & Roberti, 2005; Quinn & Fallon, 1999) revealed the presence of depressed mood and depression in student-athletes, a population considered strong, healthy, productive, and charismatic. Athletes are not immune to depression. In fact and maybe somewhat

surprising, at an institution with an athletic department clinical social worker, clinical depression was noted as the most common issue treated in athletes (J. Moshak, personal communication, February 13, 2006). Nevertheless, the systematic study of depression in student-athletes is rare. The current study seeks to extend the research on depression in this special population by studying depression in student-athletes from not just one institution but from multiple universities across the United States to explore the affective, cognitive, and physiological manifestation of depression. Also, as gifted students and student-athletes appear to be adept at masking symptoms of depression from others, associations between depression and student-athlete role behaviors will be examined. This exploration may illuminate factors to be aware of in attending to symptoms of depression in athletes. Further, student-athletes' mood will be explored in depth as injury, various injury characteristics, and gender will all be examined in relation to depressed mood.

Seeking Mental Health Services

Often times, individuals who are suffering with personal problems, including mental illness, do not seek treatment. In fact, estimates indicate that less than one-third of people who experience significant psychological distress seek help from a professional (Vogel, Wester, & Larson, 2007). Various reasons are cited for the underutilization of services. For instance, structural barriers, such as the lack of mental health insurance parity, impede treatment. Many people do not have insurance coverage to seek psychological help nor can they afford to pay out of their pocket for such services. Also, some insurance policies offer coverage of a limited number of treatment sessions and essentially this coverage may not be adequate enough to help the individual cope with and resolve their psychological problem. Societal barriers also exist. The negative stigma associated with mental illness is often cited as a barrier to seeking treatment.

People do not want to be labeled as “sick,” “weak,” “crazy,” “psycho,” or “disordered” and thus, they avoid seeking help to avoid the labels, discrimination, and isolation that can accompany the stigma (Wahl, 1999). Lastly, personal beliefs may provide barriers to treatment. For instance, studies have indicated that cultural and familial norms influence one’s attitudes toward seeking psychological help as well as the barriers one perceives as prohibiting help-seeking behaviors (Atkinson & Gim, 1989; Atkinson, Jennings, & Liongson, 1990; Hall & Tucker, 1985; Smith, 2004; Tata & Leong, 1994). Numerous barriers prevent seeking mental health services when faced with personal distress. The following literature review focuses on the stigma associated with mental illness as well as perceived barriers and attitudes toward help-seeking among medical students and student-athletes in order to gain a foundational understanding for the current study.

Stigma Associated With Mental Health

A stigma is “a mark of shame or discredit,” (Stigma, n.d.). Greeks first began to use the word when referring to bodily signs, such as brands, that were designed to reveal inferior moral or social status of an individual (Wahl, 1999). Traitors to their country, slaves, and criminals often had signs or symbols burned into them to signify that they were blemished people. People are rarely, if ever, physically branded anymore, but instead they are societally labeled (Wahl, 1999).

In a large-scale National Alliance of the Mentally Ill (NAMI) study, 1,388 individuals with psychiatric disorders/conditions, or mental health consumers as they are called, were interviewed (Wahl, 1999). Wahl found consumers were being directly and indirectly stigmatized for their sufferings with mental illnesses. The consumers reported not only being labeled by their disorders (e.g., bulimics, borderlines, schizophrenics) but they were also being devalued

and denigrated by others. The consumers reported that they “became” their illnesses to many people; a notion known as the master status of a mental illness meaning that the connotation of their mental illness intrudes into all relationships and casts doubt on a person’s abilities. Wahl found that consumers reported being directly rejected and isolated due to their illnesses, discriminated against in employment settings and housing attainment, and encouraged to lower their life standards, goals, and dreams in lieu of an easier lifestyle. Indirectly, consumers felt stigmatized by the negative comments they overheard others making about those with mental illnesses being weak and morally flawed or by the media’s portrayals of mentally ill individuals as dangerous, incompetent, and violent. The respondents in this study indicated that due to being stigmatized they found seeking treatment and adhering to treatment very difficult and they found they internalized others’ opinions of those with mental illness, impacting their self-esteem and exacerbating their condition. The stigmatization of those with mental illness is abundant and plays a role in the formulation of our attitudes toward mental illness, mental health services, and utilization of those services.

Public media has long been an avenue of promulgating opinions and truths. In fact, the unmitigated belief in what is promoted in the printed media has spawned the counter-phrase, “don’t believe everything you read.” However, we often internalize what we read and form opinions based on such information. Knowing that the print media has a strong hold on the presentation of fact and opinion and is often the frame of reference adopted by the public, Wahl, Woods, and Richards (2002) investigated the newspaper coverage of mental illness in an effort to explore the messages being sent to the public about mental illness. Articles containing the term “mental illness,” or any derivative thereof, were collected from six large newspapers, *The New York Times*, *Washington Post*, *Los Angeles Times*, *Boston Globe*, *St. Louis Post Dispatch*,

and St. Petersburg Times. Fifty articles from 1989 archives and fifty articles from 1999 archives were randomly selected from each newspaper for a total sample of 600 articles. Each article was coded for themes. Wahl and his colleagues found that while the portrayal of those with mental illnesses became significantly more positive from 1989 to 1999 (48% of the articles from 1989 were rated as negative in tone, 38% in 1999), 26% of the 1999 articles contained images of those with mental illness as violent and dangerous criminals. In comparison, only 16% of the articles in 1999 presented unfair treatment of mentally ill persons and 17% of the articles focused on success of treatment or personal success stories of those with mental illness. In addition, Wahl and his colleagues found articles from 1989 and 1999, utilized slang expressions when referring to mental illness or those with mental illness, references to people as their disorders (e.g., “schizophrenics”), and misused psychiatric terms. So, while newspaper coverage of mental illness became less negative in tone across the decade and mental illness was written about in a broader and even more positive manner, print media continued to present those with mental illnesses as violent and unproductive citizens, and to disrespect mental health consumers through the use of denigrating language, feeding into societal stigmatization of mental health consumers.

Corrigan, Watson, Gracia, Slopen, Rasinski, and Hall (2005) replicated the work of Wahl and his colleagues and analyzed the reporting trends in a nationwide sample of newspaper articles published in 2002. Stories containing the terms “mental,” “schizo,” or “psycho” were collected and coded for themes of dangerousness, blame, treatment and recovery, and advocacy action. A total of 3,353 articles were collected. Corrigan and colleagues found that 39% of the stories focused on dangerousness and violence and these often ended up in the front section of the paper. Few stories promoted the notion of personal or familial blame for the occurrence of mental illness (2%), instead stories addressing the biological nature (5%) and environmental

causes (10%) of mental illness were more prevalent. Twenty-six percent of the published articles addressed treatment. For instance, a slight percentage of articles presented stories on biological treatments (13%) and psychosocial treatments (14%), in addition to some presentation of recovery from mental illness (4%). Twenty percent of the articles published reflected themes of advocacy. These stories addressed the shortage of resources, inequality of care, and insurance parity. Overall, Corrigan and colleagues found the nature of the newspaper coverage in 2002 to reflect the findings of Wahl, Wood, and Richards (2002) from 1999. Coverage reflected both positive and negative stories of individuals with mental illness yet, a majority of stories and a majority of the front section stories continued to remain focused on dangerousness. Therefore, despite some positive change in the representation of those with mental illness by the print media, “the public is still being influenced with messages about mental illness and dangerousness,” (Corrigan, Watson, Gracia, Slopen, Rasinski, & Hall, 2005, p. 554) which continues to add to the negative stigma associated with mental health needs and seeking services.

As Wahl (1999) indicated individuals suffering with emotional and personal disturbances, such as depression, often feel stigmatized by society and stigmatize themselves and this tendency negatively influences help-seeking. Barney, Griffith, Jorm, and Christensen (2006) empirically studied this finding in a group of adults from an Australian community. They examined help-seeking intentions and stigmatizing beliefs associated with depression. Participants were asked to respond to measures of self- and perceived-stigmatizing responses, source-specific help-seeking intentions, and current depressive symptoms and depression experience. Barney and colleagues (2006) found that many people reported they would feel embarrassed about seeking professional psychological help. Some also believed that others, including the professionals, would view them negatively for seeking help. Regression analysis

illuminated the negative influence of self-stigmatization and perceived stigmatization on the intention to and likelihood of seeking mental health treatment for depression.

The above literature illuminates the negative impact of the stigma of mental illness on the individual. The media acts as a means for societal stigmatization to occur and only exacerbates already negative views of mental illness. In addition, the individuals who are stigmatized due to their suffering with a mental illness feel personally rejected and isolated as well as discriminated against. Due to the negative view of mental illness, these individuals appear to be less likely to seek the help they desperately need.

Perceived Barriers to Seeking Treatment

Avoidance of or resistance to seeking treatment for psychological distress is very common (Vogel, Wester, & Larson, 2007). In a review of research, Vogel, Wester, and Larson (2007) pointed to numerous factors that inhibit help-seeking. They reported, as the research above suggested, that social stigmas and social norms such as gender roles, race/ethnic norms, and age norms, are major deterrents of seeking help. Research has also shown that apprehension with regard to the counseling process, such as the need for self-disclosure and difficulties expressing difficult emotions, inhibit help-seeking as well. Lastly, Vogel, Wester, and Larson suggested one's anticipated benefits of treatment must outweigh risks to seeking treatment, such as risking vulnerability with another and overcoming perceived barriers to treatment. Considering the underutilization of psychological services and the strength of the psychological factors contributing to the underutilization, it is imperative to understand, in greater depth, the barriers individuals perceive to impact their help-seeking intentions and behaviors.

Research has shown that medical students experience depressive symptoms at rates equal to and greater than the prevalence in the general population (Givens & Tjia, 2002; Rosal,

Ockene, Ockene, Barrett, Ma, & Hebert, 1997; Tjia, Givens, & Shea, 2005). Additionally, as Rosenthal and Okie (2005) alluded to, having depressive symptoms and seeking help for depression is not only stigmatized at the societal level but is also highly stigmatized within the medical field, by those who are being trained to treat such problems. Givens and Tjia (2002) conducted a study which revealed the barriers to treatment that medical students perceive. Medical students were asked to endorse items which reflected the barriers they perceived as thwarting their personal use of mental health services. The most prevalent barrier (48% endorsed this item) was lack of time, followed by lack of confidentiality (37% endorsed), and concern that “no one will understand my problems,” (33% endorsed). Thirty percent of the students perceived the stigma of mental health care as a barrier to seeking treatment, while an additional 30% of the students endorsed feeling that their problems were not important was a barrier to help-seeking. Cost (28%), fear of unwanted interventions (26%), feeling that “using services means I am weak” (26%), fear of documentation on academic record (24%), difficulty accessing services (22%), and lack of availability of services (15%) were also endorsed. Students also endorsed concerns about the lack of sensitivity to cultural (7%) and sexual identity issues (3%). Considering that within the same populations, almost one-quarter of the medical students were deemed to be depressed, it would follow that depression may be under-treated in this population based on the magnitude of students’ endorsements of perceived barriers to mental health services.

Tjia, Givens, and Shea (2005) also explored factors associated with under-treatment of medical students’ depression. They found that among a sample of 322 medical students at a small, private U.S. medical school, 15.2% reported moderate to severe depression, as measured by the BDI. Within that group, 20.4% reported suicidal ideation. In their examination of

treatment, they found only 26.5% of depressed students were in treatment, either in counseling (6%), taking antidepressants (8%), or using a combination of both counseling and medication (12%). Regression analysis revealed that age (being 24 years or older), previous knowledge of a major depression diagnosis, and a family history of depression were all factors contributing to the increased likelihood of seeking treatment. Lastly, the authors replicated the research of perceived barriers to seeking treatment. This time around students endorsed a slightly different pattern of barriers. This sample most frequently endorsed barriers of lack of time, inadequate number of sessions offered by university-based service providers, social stigma of seeking treatment, fear that knowledge of seeking treatment would impact their career in negative manner, and fear that a diagnosis would be entered into one's educational record. Considering medical students' field of study, one might imagine that other special populations, such as athletes, who are not receiving training in psychiatric conditions, confidentiality ethics, and necessity of care for mental health issues but are experiencing great demands on their time and a high level of stress, would feel limited by similar barriers when in seeking professional psychological help.

Athletes' Attitudes and Perceived Barriers to Seeking Treatment

A great deal has been written about sport ethics which has indicated that athletes exist in a culture of "no pain, no gain" and a good competitor is a "mentally tough competitor," (Coakley, 2004). Athletes are bred in a culture in which pain is to be "shaken off." It seems then that sport culture may endorse underutilization of mental health services through its attitudes and socialized norms. As Mentink (2002) found, athletes often treat emotional distress in a manner similar to the ways in which physical distress is dealt with and emotional pain is "shaken off." Denial of emotional problems is just one means through which athletes make the

decision to not seek help for psychosocial problems and society's stigmatized and negative view of mental health problems would only exacerbate this denial.

On a college campus, intercollegiate athletic departments may serve to further endorse underutilization of services. Pinkerton, Hinz, and Barrow (1989) pointed out that athletic departments often provide an array of services that most students on a college campus must seek out on their own. By providing athletes with one-stop shopping for academic advising, physical health services, financial aid, and academic support such as tutoring and computer services, student-athletes become encapsulated and dependent on athletic department services. Additionally, Pinkerton, Hinz, and Barrow noted that within the social circles of athletes it is more socially accepted to remain reliant on these services and thus, student-athletes end up failing to seek out resources beyond the confines of the athletic department. An athlete's teammates and department contacts remain their reference group providing the athlete with a value system that endorses closed communication (within the athletic department) and a sense of being separate and unique. Perhaps, this athletic department culture endorses under-utilization of mental health services on campus and in the community. While professional practice literature hypothesizes student-athletes are underutilizing campus services and the reasons why, student-athletes' attitudes toward mental health services and utilization have not been empirically addressed in the literature to any great extent. The following review highlights findings of research on athletes' attitudes toward sport psychology consultation, the more researched avenue of student-athlete help-seeking, as well as findings of few research studies exploring athletes and mental health counseling.

Sport psychology consultation. A number of studies have investigated student-athletes' attitudes toward and preferences for sport performance-related and sport psychology issues. For

example, Martin (2005) assessed 362 high school student-athletes' and 431 collegiate student-athletes' attitudes toward sport psychology consultation. The Sport Psychology Attitudes-Revised (SPA-R) form was used to assess attitudes on four scales: Stigma Tolerance, Confidence in Sport Psychology Consulting, Personal Openness, and Cultural Preference. A multiple analysis of covariance with previous sport psychology consulting experience used as the covariate, SPA-R scale scores as dependent variables, and gender (male, female), age group (high school, college), type of sport (contact, non-contact), and interactions of each of these group effects as independent variables was performed. Martin found that males were more likely to stigmatize sport psychology consultants and prefer counselors of their own race, ethnicity, or culture than female athletes. Martin also found college-aged, non-contact sport participants reported greater confidence in and held less negatively stigmatized views toward sport psychology consultation than other groups. Martin concluded that his findings supported literature which suggested prior experience with a modality of counseling/consulting and age bettered the respondents' attitudes toward services. In addition, his findings supported the literature which suggests socialization of males in society and socialization of contact sport participants in athletic arenas contributes to their more negative attitudes toward services. Martin indicated that his findings reflected the need for greater education with regard to services and specific interventions with younger groups, males, and those in contact sports to positively influence the attitudes of these groups.

Martin, et al. (2001) examined how gender influenced athletes' and nonathletes' expectations about sport psychology consultation. The authors hypothesized that while there would be no significant difference in expectations between athletes and nonathletes, female athletes would hold significantly different expectations than would male athletes. Participants

were 111 athletes and 166 non-athletes at a Division IA institution. Tinsley's Expectations About Counseling- Brief form (EAC-B) was modified to address expectations about sport psychology consultation. Following verification of reliability of this modified instrument, the Expectations About Sport Psychology Consultation (EASPC), it was administered to the participants. Results supported the hypotheses. College sport experience did not effect the expectations about sport psychology consultation. However, gender did have an effect on expectations. Analyses revealed females had higher expectancies about personal commitment to the process and lower expectancies with regard to a consultant's expertise. Specifically, males more so than females expected consultants to be more directive with them and more capable of solving their problems quickly. Gender and athletic participation did not interact to impact expectations. While athletes did not differ from nonathletes in their expectations, the authors suggest that sport type, reason for seeking consultation, consultant's training and/or experience with sport, and office location may influence one's perceptions and expectations about consultation. The also suggest that gender role socialization appears to strongly influence males' and females' expectancies. The recommend using different approaches when educating males and females about consulting, indicating that normalizing the need to talk is very important with males.

Maniar, Curry, Sommers-Flanagan, and Walsh (2001) explored student-athletes' preferences for seeking sport performance-related assistance. Sixty Division I student-athletes were invited to imagine themselves in one of three different situations, in a performance slump, recovering from serious injury, or having a desire to perform more optimally. Three vignettes describing each situation were presented individually and followed by a set of questions addressing the athletes' willingness to seek help; specific preference for 11 different sport,

mental health, and medical professionals; and preference for type of treatment. Like Martin (2005), Maniar and his colleagues found males to be significantly less willing to seek help than females in the slump and the performance scenarios, but found no significant differences in the injury scenario. Participants reported they would most likely seek help from friends, family, and coaches over sport-titled professionals, mental health professionals, medical doctors, and clergy members. In each scenario, the participants indicated that of the professionals, they preferred sport-titled professionals over counselors or clinical psychologists. However, gender analysis indicated that males preferred clinical psychologists and clergy members significantly more than females, and females preferred sport psychologists and sport counselors significantly more than males. In terms of treatment preferences, student-athletes preferred to use medications as a last resort in treatment. Their ranked preferences are as follows: goal-setting, relaxation/imagery, talking in-depth, hypnosis, and medication. As Maniar and his colleagues showed, athletes preferred consulting with friends, family, and coaches over professionals; however, when seeking treatment from a professional they preferred sport-related professionals and consultants and sport psychology interventions over other mental and medical health professionals and interventions. These findings suggested that athletes preferred to depend on those available and close to them and focused their efforts on consulting with those whose titles indicated an understanding for athlete needs. However, where would athletes turn for emotional or mental health issues?

Professional psychological services. It appears that student-athletes are hesitant to seek sport psychology consultation due to some negative perceptions of the field. Little research, however, has focused on student-athletes' attitudes toward mental health counseling, barriers to mental health treatment, or preferences in mental health service providers. Miller & Moore

(1993) conducted what appears to be the first study of student-athlete mental health counseling expectations. Given that previous research has shown links between positive counseling expectations and persistence in counseling, perceived effectiveness, and duration in therapy (June & Smith, 1983), Miller and Moore conducted an exploratory study of athletes' and non-athletes' expectations for psychological counseling. Fifty male varsity football athletes and 50 non-student-athletes completed Tinsley's Expectations about Counseling, Brief Form (EAC-B). The EAC-B assessed various expectancies about counseling, specifically in four general areas: client attitudes and behaviors, counselor attitudes and behaviors, counselor characteristics, and counseling process and outcome. Miller and Moore analyzed the data using multivariate analysis of variance with the 17 scales within the four categories as dependent variables and athletic status as the independent variable. Unlike anecdotal reports which suggest student-athletes and non-student-athletes would have differing expectations, Miller and Moore instead found athletes did not maintain expectancies of counseling that differed from non-student-athletes. This study suggested athletic status does not influence the views held about one's need of personal commitment to therapy or personal responsibility of change in one's life. Nor does athletic status influence one's desire and expectation for their counselor to be competent, genuine, nurturing, and empathetic.

In another effort to empirically study the professional practice observation that student-athletes are unlike their non-student-athlete peers in regards to attitudes toward seeking psychological help and their expectations of counseling, Watson (2005) administered the EAC-B and the Attitudes Toward Seeking Professional Psychological Help Scale (ATSPPHS) to 267 undergraduate students at a large NCAA Division IA university in the southeastern U. S., of which 135 were intercollegiate student-athletes. Analysis revealed that student-athletes and non-

student-athletes differed significantly in their attitudes toward seeking professional help and their expectations about counseling. Student-athletes reported significantly less positive attitudes toward seeking professional psychological help. Additionally, unlike the results found by Miller and Moore (1993), student-athletes in Watson's sample reported significantly less personal commitment to counseling (i.e., motivation, openness to counseling, and responsibility for their problems and changes). They also reported significantly lower expectations of facilitative conditions of counseling, suggesting they expected less acceptance, genuineness, and trustworthiness than did non-student-athletes. Lastly, student-athletes expected their counselor or psychologist to have more expertise than non-student-athletes expected.

Overall, this study supported the claims by experts in the field of collegiate athletics that student-athletes have more negative opinions toward counseling and other help-seeking behaviors than their non-athlete peers but contradicts the findings of Miller and Moore (1993) and Martin et al. (2001) which found no difference between athletes' and nonathletes' expectancies of counseling and sport psychology consultation, respectively. Watson (2005) noted that experts have postulated athletes would be uncomfortable seeking help outside of the athletic department from those that do not understand their unique circumstances. In addition, they may feel stigmatized or may feel as though they will be "found out" if they seek help. Exacerbating their less than positive attitudes toward counseling, student-athletes expect more from their counselor than non-athletes. Watson considered this finding to be reflective of an athlete's desire to be understood and for their counselor or psychotherapist to understand their special condition as an athlete. Watson (2005) does, however, warn against generalizing these findings to all student-athletes due to the limitations of the sample to one university and the sampling of student-athletes from a single university's athletic department culture.

Watson (2006) also explored factors that influenced athletes' decisions to seek counseling services. Using qualitative methods, he examined college athletes and nonathletes' responses to an open-ended question asking for one reason why they would not seek counseling or support services for any personal problem. All participants were from a Division I, mid-major university. The four most frequent responses given by student-athletes were: no need to seek services, personal discomfort, perceptions of others, and lack of time. The four most frequent responses given by nonathletes were: perception of others, no need, personal reasons, and personal discomfort. Goodness-of-fit analysis revealed a significant difference in the athlete and nonathlete responses of time and perception of others. Athletes more often cited lack of time as a barrier to seeking treatment where nonathletes more often cited perceptions of others as a barrier. These findings support the claims made by experts that lack of time to seek out services is a main deterrent of athletes when seeking help for a psychological problem. However, the finding that perception of others is a more common concern of nonathletes is surprising as many experts believed others finding out that an athlete was in treatment was a major obstacle. Watson postulated that the increased discussion of mental health and well-being concerns due to programs such as NCAA CHAMPS/Life Skills, may have impacted the barriers perceived by student-athletes. Perhaps too, the qualitative methodology and only allowing for one response from each participant impacted the findings. Respondents were forced to create responses and they may not have fully considered the barriers that impede them from seeking treatment. These participants may also have perceived multiple, equally important barriers, but allowing only one response per participant neglects to tap into all barriers perceived and instead just allows for depiction of the first or most major barrier.

The literature focusing on the attitudes of student-athletes toward mental health services utilization is limited and findings are contradictory. Miller and Moore's (1993) and Martin and colleagues' (2001) studies revealed no differences in expectations about counseling and sport psychology consultation when comparing athletes and nonathletes; whereas, Watson (2005) found significant differences in expectations and attitudes held by athletes and nonathletes. In line with expert opinions, Watson (2006) found differences in barriers to seeking treatment when he compared athlete and nonathlete responses to an open-ended question; however, these differences were somewhat surprising. Perhaps the limitations of each of these studies are contributing to the contrasting results. Each of these studies focused on a moderately small sample from a single institution. In addition, biases inherent in the sampling for each of these studies, such as participant self-selection or cultural norms at each of the institutions, may be clouding the true results. In the case of Watson's (2006) study of barriers to treatment, perhaps the singular response impeded the full presentation of barriers to seeking treatment and thus, resulted in the surprise finding that when considering seeking help athletes appear less concerned with the perceptions of others than nonathletes.

The current study was designed to expand upon this research and investigate the attitudes held by student-athletes across the nation about seeking professional mental health services. In addition, this study will explore the barriers this nation-wide sample of athletes perceive to impact their seeking of treatment as well as preferences for various counselor characteristics should they seek treatment. This study will not only add to the scant empirical research available but aims to test the professional practice statements and hypotheses stated by so many individuals who work with athletes.

Research Questions

This study was designed to examine the manifestation of depressed mood in collegiate student-athletes as measured by the Personality Assessment Inventory (PAI; Morey, 1991a), and the relationships between depressed mood and gender, injury, and student-athlete role behaviors. Additionally, this study examined student-athletes' treatment rejection, or the "attributes and attitudes associated with an interest in personal changes of a psychological or emotional nature," (Morey, 1991b, p. 20) as measured by the PAI. Further, student-athletes' perceived barriers to seeking mental health services for personal problems and preferences when seeking psychological help were explored. As such, the following research questions were established to address these areas:

1. How much of the total variance in reported student-athlete depression scores can be explained by gender and occurrence of injury?
2. For those who reported sustaining an injury, how much of the total variance in their depression scores can be explained by perceived impact of injury, chronicity of injury (acute or chronic), and time spent recovering from injury?
3. What relationships, if any, exist between student-athletes' depression scores and Student-Athlete Role Behavior items such as one's perceived role strain, one's sense of not fulfilling his/her athletic or academic potentials, frequency of missing athletic events or academic events, use of self-destructive behaviors to cope with difficult emotions, and perception of his/her ability to mask mental health issues from coaches and teammates?
4. How much of the total variance in student-athletes' Treatment Rejection can be explained by gender and previous experiences in counseling?

5. What are the barriers to seeking psychological counseling that intercollegiate student-athletes perceive?
6. Do perceived barriers to seeking counseling and counselor preferences vary by gender?
7. What preferences do intercollegiate student-athletes have with respect to the type of practitioner, location of practitioner, racial similarity of practitioner, sport experience of practitioner, or age of practitioner if the student-athletes were to seek help for a personal psychological concern?

CHAPTER THREE

Methodology

This study involved both a pilot study and a main study. The primary purpose of pilot study was to analyze the reliability of the Attitudes About Counseling and Psychotherapy Questionnaire (AACPQ), an instrument designed for the current study and based on Fischer and Farina's (1995) shortened version of the Attitudes Toward Seeking Professional Psychological Help Scale (ATSPPHS) as well as student-athlete well-being literature. The reliability of the AACPQ was then compared to that of the ATSPPHS to determine the most effective measure for use in this study. The secondary purpose of the pilot study was to identify any potential problems with the study procedures. The main study then addressed the research questions put forth by incorporating any changes found to be necessary during the pilot study.

Pilot Study

Participants

All participants in the pilot study were NCAA Division II (D-II) intercollegiate varsity student-athletes. A total of 48 D-II student-athletes completed the web survey. Table 1 presents the demographic information for this pilot study sample. The ages of the participants ranged from 18 years of age to 24 years of age. The mean age of participants was 20.35 years ($SD = 1.31$). Seventy-seven percent ($n = 37$) of the participants were female. Almost all of the participants (97.9%, $n = 47$) reported to be single while one participant reported to live with his/her partner. Participants identifying as Anglo/Caucasian/White made up 91.7% ($n = 44$) of the sample, while the remaining 7.2% ($n = 4$) participants identified as Hispanic, African/African American/Black, or biracial. Approximately one-third (35.4%; $n = 17$) of the sample was made up of sophomore students, while just over one-quarter (27.1%, $n = 13$) were juniors, one-fifth

Table 1

Composition of Pilot Study Sample

Demographic Characteristic	<i>n</i>	%
Gender		
Female	37	77.1
Male	11	22.9
Race		
Anglo/Caucasian/White	44	91.7
Hispanic	1	2.1
African/African American/Black	1	2.1
Biracial (Native American and Anglo/Caucasian/White)	2	4.2
Academic Classification		
Freshman	6	12.5
Sophomore	17	35.4
Junior	13	27.1
Senior	10	20.8
Graduate Student	2	4.2

$N = 48$

(20.8%; $n = 10$) were seniors, and the remaining 17% of the sample was made up of freshmen (12.5%; $n = 6$) and graduate students, such as “fifth year seniors” (4.2%; $n = 2$). The sample had a mean cumulative grade point average (GPA) of 3.31 ($SD = 0.47$).

The student-athlete sample included participants from basketball, equestrian, field hockey, football, ice hockey, lacrosse, soccer, softball, swimming and diving, tennis, track and field, volleyball, and wrestling. Table 2 presents the composition of participants' sport membership. Participants reported being members of NCAA athletics for an average of 4.69 semesters ($SD = 2.19$). Within this pilot study sample, 62.5% ($n = 30$) reported being active participants in all competitions (e.g. starters or second string), while 16.7% ($n = 8$) reported to be major contributors in less than 100% and more than 50% of competitive events (e.g. third string), 16.7% ($n = 8$) reported to participate in less than 50% of competitions, and 4.2% ($n = 2$) reported to be redshirt freshman.

Table 2

Team Membership of Pilot Study Participants

Sport Team Affiliation	<i>n</i>	% ^a
Basketball	4	8.3
Equestrian	1	2.1
Field Hockey	5	10.4
Football	3	6.3
Ice Hockey	3	6.3
Lacrosse	12	25.0
Soccer	4	8.3
Softball	2	4
Swimming & Diving	1	2.1
Tennis	1	2.1
Track & Field	18	37.5
Volleyball	4	8.3
Wrestling	4	8.3

N = 48

^a Some participants were members of more than one team

Materials

In this pilot study, participants responded to items from the demographics, injury, and previous counseling experiences surveys; Attitudes About Counseling and Psychotherapy Questionnaire; Student-Athlete Role Behaviors Questionnaire; Barriers to Seeking Treatment Checklist; and Counselor Preferences survey. The complete survey contained a possible total of 68 distinct questions and a checklist consisting of 17 items for the participant to examine.

Demographics Questionnaire. The demographics questionnaire was constructed to collect background information on participants. The instrument asked participants about their age, gender, race, and relationship status. Additionally, items inquired about participants' academic years, majors, and current grade point averages (GPA). Lastly, the participants were asked to respond to items inquiring about their athletic participation. Information was collected on the current NCAA sport(s) squad for which respondents participated, their level of participation, and the length of time in semesters they had participated in their NCAA sport(s). (See Appendix A).

Injury Information. The injury experience section of the survey inquired as to the participant's experience with injury within the previous 12 months. If respondents had not been injured within the previous 12 months they would be directed to the next content area of the survey, Previous Counseling Experience information. If participants responded that they had experienced an injury within the last 12 months they were asked about their injury. Items inquired about the locale of the injury, the type of injury, the chronicity of the injury, the perceived impact of the injury, and the time spent getting treatment for their injury/injuries. (See Appendix B).

Previous Counseling Experience Information. The previous counseling experience section of the survey inquired as to whether participants had ever sought counseling or psychotherapy. If participants responded that they had not received counseling they were directed to the next content area of the survey, the Attitudes About Counseling and Psychotherapy Questionnaire. If participants responded affirmatively they would then be asked about their counseling experience. This section asked participants about the type of problem for which they sought out counseling, where they sought out counseling, who referred them to counseling, whether their experience was positive, negative or neutral, and whether their counseling experience was helpful. (See Appendix C).

Attitudes About Counseling and Psychotherapy Questionnaire. The Attitudes About Counseling and Psychotherapy Questionnaire (AACPO) was constructed by the primary researcher for the purposes of this study. This 13-item self-report instrument was based on the structure and content of the Attitudes Toward Seeking Professional Psychological Help Scale (ATSPPHS; Fischer & Farina, 1995). Nine items were adapted from the 10-item ATSPPHS and four additional items were constructed from a review of the literature and experiential data to assess the student-athletes' motivations for seeking counseling, tolerance of stigmas associated with counseling, and willingness to seek counseling. Responses to the stem are given using a five-point Likert-type scale with endpoints ranging from (1) *strongly disagree* to (5) *strongly agree*. The reliability of this instrument was assessed in this pilot study. (See Appendix D).

Student-Athlete Role Behaviors Questionnaire. The Student-Athlete Role Behaviors Questionnaire is a self-report measure constructed from a review of the literature for the purpose of this study. This 10-item instrument assessed the environment and behavior associated with being a student-athlete. This instrument surveyed conditions such as time commitment,

absenteeism, sense of performing up to one's potential in student and athlete roles, and self-destructive behaviors, all factors that have been shown to be related to depression. All items were assessed on seven-point Likert-type scales, however, the anchors of these scales varied depending on the items. Items regarding time commitment were assessed on a scale with endpoints of (1) *less than 10 hours per week* and (7) *more than 36 hours per week*. Items addressing missing athletic or academic events used a scale with anchors of (1) *never (0% of all scheduled events)* and (7) *always (100% of all scheduled events)*. Lastly, items that explored respondents' perceived role strain, fulfillment of potential, and self-destructive behaviors utilized a scale with endpoints of (1) *strongly disagree* and (7) *strongly agree*. (See Appendix E).

Barriers to Help-Seeking Checklist. The Barriers to Help-Seeking Checklist is a self-report checklist adapted (with permission) from Givens and Tjia's (2002) study of barriers preventing medical school students from seeking professional mental health services. Additional items were created from the existing literature on student-athletes and were added to Givens and Tjia's checklist for the purposes of this study. Respondents were asked to imagine they were in need of help for a personal issue and they were considering seeking help at their institution's counseling center. They were then asked to select all items they perceived to act as or would act as a barrier to seeking professional mental health services. (See Appendix F).

Counseling and Psychotherapy Preferences Questionnaire. The Counseling and Psychotherapy Preferences Questionnaire is a self-report measure adapted (with permission) from Smith (2004) for the purpose of this study. This instrument required the participants to indicate the magnitude of their preference for a number of mental health service provider characteristics. Preferences were assessed in three general categories: counselor type, counselor's location, and counselor qualities (i.e., race, gender, age, familiarity with sport). All

preferences, except age, were assessed using a five-point Likert-type scale anchored with (1) *do not prefer this characteristic* and (5) *strongly prefer this characteristic*. The preferred age range of a counselor was also assessed by presenting the respondent with age ranges (in five-year increments) from less than 20 years to over 50 years of age as well as an item that indicated the respondent had no preference for their counselor's age. (See Appendix G).

Institution Counseling Services Information. Due to the nature of this survey, precautions were taken to provide the participants with the contact information for their institution's counseling services. The participant was asked whether they would like their center's location and phone number and if they answered affirmatively they were directed to choose their institution's state and then their institution. Each D-II institution's counseling services information was provided as requested.

Procedure

Student-athletes were recruited through contact with each of the 89 NCAA D-II athletic departments. E-mail solicitations were sent to athletic department staff members, such as CHAMPS/Life Skills coordinators, athletic directors, or other staff responsible for student-athlete welfare. The e-mail sent to athletic department staff members explained the purpose, procedure, risks, and benefits of the study and requested they forward to their student-athletes an attached e-mail (see Appendix H). Student-athletes at participating institutions received an e-mail requesting their participation in the research study, explaining the research study's purpose, procedures, risks and benefits, and providing the URL link to the survey (see Appendix I). In accordance with NCAA bylaws, incentives were not offered or provided for participation in this study.

The battery of instruments was available to the participants through the University of Tennessee's (UT) web survey which utilizes mrInterview software. Upon entering the web-survey, participants were required to read the informed consent and were asked to select an "Agree to Consent" icon if they wished to participate (see Appendix J). They were then asked to input their age in years to verify they were over the age of 18 years. Participants who entered ages under the age of 18 years were exited from the survey to protect against minors participating without the consent of a parent. Participants over the age of 18 years proceeded through the survey and responded to the web-survey stems by using their computer to input their responses. Once complete, participants were logged out of the survey and data was transmitted to UT's secure, SLQ database server.

Pilot Study Results and Conclusions

AACPQ analysis. Following guidelines set forth by Lounsbury, Gibson, and Saudargas (2006), a Cronbach's alpha of .80 or greater was desired to consider the scale useful in this research project. The coefficient alpha for the entire 13-item Attitudes About Counseling and Psychotherapy Questionnaire (AACPQ) was .448. Items were sequentially removed from the reliability analysis to determine the collection of items that would result in the highest internal consistency. Table 3 presents the scale items, the Corrected-Item-Total-Correlation for each item, and estimates of coefficient alpha if the item were deleted for each reliability analysis. As seen in Table 3, the largest coefficient alpha obtained was .769 when items 7, 9, 8, 11, and then 5 were removed from the scale. The coefficient alpha could not be improved by deleting additional items.

Table 3

Corrected Item-Total Correlations and Coefficient Alpha for the Attitudes Toward Seeking Counseling and Psychotherapy Scale

Item	Entire Instrument		Without Item 7		Without Item 9		Without Item 8		Without Item 11	
	$\alpha = .450$		$\alpha = .536$		$\alpha = .615$		$\alpha = .700$		$\alpha = .735$	
	CI-TC	α if Item Deleted	CI-TC	α if Item Deleted	CI-TC	α if Item Deleted	CI-TC	α if Item Deleted	CI-TC	α if Item Deleted
1) If I were struggling with a personal problem, I would seek out professional counseling.	.314	.380	.375	.472	.424	.658	.461	.658	.463	.701
2) Psychological counseling can be beneficial to those who seek it out.	.305	.399	.315	.498	.342	.684	.322	.684	.328	.724
3) People who need counseling are weak for not being able to handle their own problems.	.323	.383	.329	.488	.357	.680	.340	.680	.318	.726
4) I would want to get psychological help if I were struggling with emotional problems, was worried, or was upset for a long period of time.	.223	.408	.317	.486	.386	.664	.427	.664	.487	.697
5) People with emotional problems are not likely to resolve their problems without help from others; it is best to seek out professional counseling.	-.062	.480	-.078	.572	-.078	.730	-.023	.730	-.017	.769
6) I would not want to walk into a counseling center for fear that others may recognize me.	.502	.306	.553	.412	.620	.626	.600	.626	.616	.669
7) If I were to seek counseling, I would want to seek help from a counselor/psychologist within the athletic department rather than at the University's counseling center.	-.240	.536	---	---	---	---	---	---	---	---
8) I would want my counselor/psychologist to have a background in sport/athletics.	-.178	.514	-.219	.608	-.318	.700	---	---	---	---
9) Persons outside of the athletic department do not understand the pressures, concerns, and unique needs I am faced with as an athlete.	-.142	.517	-.192	.615	---	---	---	---	---	---
10) I would not seek out counseling or psychotherapy because if my teammates, coaches, or staff members associated with the athletic department knew I was seeking help for mental health issues I would be treated differently.	.372	.356	.399	.462	.447	.661	.440	.661	.461	.701
11) If I were seeking psychotherapy or counseling for personal problems, I believe I could hide my need for counseling from my coach(es) and teammates so they would not know.	-.009	.470	-.038	.568	-.056	.735	-.030	.735	---	---
12) I would not want others to know that I am in counseling/therapy.	.434	.341	.461	.448	.505	.646	.520	.646	.489	.697
13) I may seek out psychological counseling in the future.	.348	.368	.429	.456	.423	.653	.484	.653	.503	.694

Note. CI-TC = Corrected Item-Total Correlation

Four of the items suggested for deletion from the scale to improve reliability, items 7, 8, 9, and 11, were constructed from a review of commentary and research on athletes. These four items specifically targeted student-athlete culture-based attitudes toward seeking counseling and were added to the nine other items which had been adapted from Fischer and Farina's (1995) Attitudes Toward Seeking Professional Psychological Help scale (ATSPPHS). The four student-athlete-based items along with one of items adapted from the ATSPPHS (Item 5) did not add to the internal consistency of the AACPQ scale, leaving a scale consisting of eight of the nine items adapted from the ATSPPHS, a previously published and validated instrument. The coefficient alpha of these remaining eight items of the AACPQ ($\alpha = .769$) is less than the desired alpha .80 (Lounsbury, Gibson, & Saudargas, 2006) and still less than the coefficient alpha obtained by Fischer and Farina (1995) in the development of the ATSPPH scale ($\alpha = .84$). Therefore, a decision was made to improve the main study by using the more rigorously designed and tested instrument, the ATSPPH scale, rather than the AACPQ which was designed for this study.

Procedure and structure of the study. The secondary purpose of the pilot study was to evaluate the effectiveness of the data collection procedure as well as the structure of the web-survey. The procedure of this study was deemed appropriate and effective and thus, was used in the main study when contacting NCAA D-I student-athletes. However, the pilot study revealed the need to slightly restructure two items of the web survey, items regarding race and squad/team membership, to aid the collection and analysis of demographic data.

The first item change altered the racial group identification demographic item. The original item allowed for multiple selections ensuring biracial or multiracial individuals could identify their accurate racial grouping; however, multiple selections were difficult to identify in the data set. The original item was made into a single selection item and a category for "bi-

racial/multi-racial” was added. When individuals selected this new “bi-racial/multi-racial” category they were directed to a multiple selection item which contained the major racial groups. At that time, respondents could accurately identify their multiple racial groups.

The second change to the survey was to alter the sport squad/team membership item. An item was added prior to the original item which inquired about team membership. The new item inquired as to whether respondents were single sport or multiple sport athletes. Respondents were then directed to the original item and asked to select the sports in which they participated. This alteration allowed for the researcher to identify with greater ease and certainty those who were multiple sport athletes.

Main Study

Participants

The participants in this study were NCAA D-IA and D-IAA intercollegiate varsity student-athletes. A total of 165 student-athletes completed the web survey. Table 4 presents the demographic composition of this sample. Of the 165 total participants, 111 (67.3%) were female. Additionally, almost all of the participants (91.5%; $n = 151$) reported to be single with regard to their relationship status. The ages of the participants ranged from 18 years of age to 26 years of age. The mean age of participants was 20.07 years ($SD = 1.48$). Participants identifying as Anglo/Caucasian/White made up 80.6% ($n = 133$) of the sample, while the remaining 14.5% ($n = 24$) participants identified as African/African American/Black, Hispanic/Latino(a), Asian/Asian American/Pacific Islander, or “Other,” wherein they could type-in their original response. Additionally, 4.9% of the sample ($n = 8$) identified themselves Multiracial/Biracial and were then given the opportunity to self-report their racial make-up. (See Table 4 breakdown of identified racial makeup).

Table 4

Composition of Main Study Sample

Demographic Characteristic	<i>n</i>	%
Gender		
Female	111	67.3
Male	54	32.7
Race		
Anglo/Caucasian/White	133	80.6
African/African American/Black	13	7.9
Biracial/Multiracial	8	4.9
Hispanic/Latino(a)	7	4.2
Asian/Asian American/Pacific Islander	2	1.2
“Other” (Self-Report: Astrophysical, Middle Eastern)	2	1.2
Biracial/Multiracial Sub-Category Self-Report		
Anglo/Caucasian/White & Hispanic/Latino(a)	3	37.5
African/African American/Black & Anglo/Caucasian/White	2	25
Anglo/Caucasian/White & Asian/Asian American/Pacific Islander	2	25
Anglo/Caucasian/White & Hispanic/Latino(a) & “Other” (Self-Report: Iranian)	1	12.5

Table 4. Continued

Demographic Characteristic	<i>n</i>	%
Relationship Status		
Single	151	91.5
Living with Partner	12	7.3
Married	1	0.6
Remarried	1	0.6
Academic Classification		
Freshman	36	21.8
Sophomore	40	24.2
Junior	47	28.5
Senior	34	20.6
Graduate Student	8	4.8

N = 165

The sample consisted of student-athletes representative of all academic classifications. Each academic year (i.e., freshman, sophomores, juniors, and seniors) was well represented in the sample. Graduate students such as “fifth year seniors” made up just 4.8% ($n = 8$) of the sample. The sample had a mean cumulative grade point average (GPA) of 3.07 ($SD = 0.59$).

The student-athlete sample was comprised of mostly student-athletes who participated in just one sport (89.7%; $n = 148$), while some (10.3%; $n = 17$) participated in multiple sports. Participants included NCAA D-I student-athletes from badminton, baseball, basketball, bowling, cross country, equestrian, field hockey, football, golf, gymnastics, ice hockey, lacrosse, rowing, soccer, softball, swimming and diving, tennis, track and field, volleyball, and wrestling. Table 5 presents the complete sport membership composition of this sample. Participants reported being a member of NCAA athletics for an average of 4.44 semesters ($SD = 2.45$). Within this sample, 64.2% ($n = 106$) reported being active participants in all competitions (e.g. starters or second string), while 12.7% ($n = 21$) reported to be major contributors in less than 100% and more than 50% of competitive events (e.g. third string), 10.3% ($n = 17$) reported to participate in less than 50% of competitions, and 9.7% ($n = 16$) reported to be redshirt freshmen. Additionally, two participants (1.2%) indicated that they had not yet begun competitions at the time they completed the survey (survey was distributed in late Fall) and thus, they were unsure of their level of participation. An additional three participants identified as “practice squad” members (1.2%; $n = 2$) and a “bull pen catcher” (0.6%; $n = 1$).

Twenty-nine, or 17.6%, of this sample of student-athletes had attended counseling prior to participating in this study. Over half of the participants with counseling experience sought services from a single practitioner (55.2%, $n = 16$) while others saw multiple practitioners. Again, over half of the sample (58.6%; $n = 17$) sought services from their University’s

Table 5

Sport/Team Membership of Main Study Sample

Sport Affiliation ^a	<i>n</i>	%
Badminton	1	0.6
Baseball	5	3.0
Basketball	10	6.1
Bowling	1	0.6
Cross Country	15	9.1
Equestrian	3	1.8
Field Hockey	5	3.0
Football	7	4.2
Golf	4	2.4
Gymnastics	2	1.2
Ice Hockey	1	0.6
Lacrosse	21	12.7
Rowing	15	9.1
Soccer	13	7.9
Softball	7	4.2
Swimming & Diving	11	6.7
Tennis	7	4.2
Track & Field	32	19.4
Volleyball	9	5.5
Wrestling	4	2.4

N = 165

^a Some participants were members of more than one team

services center, 31.0% ($n = 9$) sought services from a private practitioner, 6.9% ($n = 2$) worked with therapists at community agencies, and 3.4% ($n = 1$) sought assistance from a religious leader. Additionally, eleven individuals (37.9%) sought help from a sport psychology consultant/sport psychologist as a sole provider or in conjunction with the provision of services from other sources. Sixty-five percent ($n = 19$) of this sub-sample reported that their counseling experience was a positive experience, while 13.8% ($n = 4$) felt their counseling experience was a negative experience and 20.7% ($n = 6$) felt neutral about their experience. Additionally, 62.1% ($n = 18$) felt that counseling was helpful. However, 20.7% ($n = 6$) for the sub-sample felt it was unhelpful and 17.2% ($n = 5$) felt neutral about their experience in counseling.

Participants were also asked whether or not they had been injured in the 12 months leading up to their participation in the study. Sixty-eight percent ($n = 112$) of the student-athlete sample reported they had been injured in the preceding twelve months. On a scale with anchors of (1) *no impact* and (5) *severe impact*, injured participants reported that on a daily basis their injuries had a slight to moderate impact on their daily lives ($M = 2.88$, $SD = 1.06$). Sixty-one percent ($n = 68$) of the injuries were considered to be “chronic (e.g., long-standing or nagging)” injuries, while 39.3% ($n = 44$) of the injuries reported on were considered to be “acute (e.g., sprain, tearing your ACL)” injuries. On average, student-athletes spent between two and four months recovering from an injury ($M = 3.28$, $SD = 1.73$). Only 13.4% ($n = 15$) of the injured participants spent less than two weeks treating their injuries while 23.2% ($n = 26$) spent between two weeks and two months treating their injuries. Almost one-third (30.4%), or 34 of the injured participants, reported spending between two and four months receiving treatment for their injuries and the remaining 33% ($n = 37$) of the participants spent between four and twelve months treating their injuries.

Materials

Demographics Questionnaire. A demographics questionnaire was constructed to collect background information on the student-athletes for the purposes of the current study. This instrument was similar to the instrument presented in the pilot study (see Appendix A); however, in response to the pilot study two new items were added. The demographics information section of the survey asked participants about their age, gender, race, and relationship status. Additionally, items inquired about participants' academic years, majors, and current grade point averages (GPA). Lastly, the participants were asked to respond to items inquiring about their athletic participation. Information was also collected on the current NCAA sport(s) squad for which respondents participated, their level of participation in this sport(s), and the length of time in semesters they had participated in their NCAA sport(s). (See Appendix K).

Injury Information. The injury experience section of the survey inquired as to participants' experiences with injury within the previous 12 months. If respondents had not been injured within the previous 12 months they would be directed to the next content area of the survey, previous counseling experience information. If participants responded that they had experienced an injury within the last 12 months they were asked about their injury. Items inquired about the locale of the injury, the type of injury, the chronicity of the injury, the perceived impact of the injury, and the time spent getting treatment for their injury/injuries. (See Appendix B).

Previous Counseling Experience Information. The previous counseling experience section of the survey inquired as to whether participants had ever sought counseling or psychotherapy. If participants responded that they had not received counseling they were directed to the next content area of the survey, the Personality Assessment Inventory (Morey,

1991b) items. If participants responded affirmatively they would then be asked about their counseling experience. This section asked participants about the type of problem for which they sought out counseling, where they sought out counseling, who referred them to counseling, whether their experience was positive, negative or neutral, and whether their counseling experience was helpful. (See Appendix C).

Scales of the Personality Assessment Inventory. The Personality Assessment Inventory (PAI; Morey, 1991a) is an objective self-report measure that assesses clinical symptomology and personality characteristics in adults. The taker indicates the degree to which each item is true of them by circling one of the four responses ranging from (0) *false* to (3) *always*. Items are summed to generate subscale scores with higher scores reflecting greater symptomology. For the purposes of this study, permission was sought to reprint only two of the PAI scales in the web survey format. (See Appendix L for publishing agreement). The two scales used were the Treatment Rejection scale and the Depression scale. (See Appendix M).

The 8-item Treatment Rejection Scale (RXR) assesses “attributes and attitudes associated with an interest in personal changes of a psychological or emotional nature,” (Morey, 1991b, p. 20). This scale tapped into the test-takers’ recognition for the need to change, willingness to participate in change, willingness to accept the responsibility for their actions, and distress levels. This scale is referenced against the normative sample of community dwelling individuals rather than a sample of persons in treatment thus, typical scores represent little motivation to change. A low score ($T \leq 43$) indicates that the individual recognizes the existence of major difficulties in functioning and the need for assistance, an average score ($43T - 52T$) reflects a person who is aware of the need to make some changes, is positive about the possibility for change and accepts personal responsibility for change, a moderately high score ($53T - 62T$) reflects persons who are

satisfied with themselves and see little need for changes to their behavior, and high scores ($T \geq 63$) indicate the test-taker is someone who admits very few difficulties and has no desire to change themselves at all. These individuals are often resistant to seeking or engaging in treatment.

Reliability and validity of the Treatment Rejection (RXR) scale have been shown to be high with college students. For instance, the internal consistency reliability was moderately high (*Cronbach's Alpha* = .72) as was the test-retest reliability coefficient ($r = .73$). In addition, the RXR scale was positively correlated with convergent indices of social support seeking and negatively correlated with indices of distress such as the NEO-PI Vulnerability Scale and the Wiggins Poor Morale content scale of the MMPI suggesting an indirect, discriminant relationship between distress and treatment rejection.

The 24-item Depression scale of the PAI assesses “the symptoms and phenomenology of depressive disorders” (Morey, 1991b, p. 2), including three facets of depression, affective, cognitive, and physiological symptoms of the depression syndrome. Scores for the full Depression scale and three subscales, Affective (DEP-A), Cognitive (DEP-C), and Physiological (DEP-P) Depression, are reported. The PAI has demonstrated both reliability and validity with a census-matched normative sample, a clinical sample, and a college student sample (Morey, 1991b). When tested on the college student sample, internal consistency reliability of the full Depression Scale as indicated by Cronbach's Coefficient Alpha was high ($\alpha = .87$). The three subscales also revealed high internal consistency (DEP-C: $\alpha = .78$; DEP-A: $\alpha = .78$; DEP-P: $\alpha = .64$). The temporal stability of the Depression scale and subscale components was also considered to be high. Test-retest reliability coefficients of the Depression scale ($r = .86$) and of the three subscale (DEP-C: $r = .78$; DEP-A: $r = .83$; DEP-P: $r = .74$) revealed that over a test-

retest period of 28 days the absolute scores changed very little (Morey, 1991b). In addition, studies were conducted to establish validity of the scales and subscales. Morey (1991b) indicated that the Depression scale and subscales evinced strong appropriate convergent and divergent validity when tested against such instruments as the Beck Depression Inventory, Minnesota Multiphasic Personality Inventory, NEO-PI, and other psychological instruments.

A total Depression scale score was generated by summing all scale items scores together and calculating the representative T score. A clinically significant score ($T \geq 70$) reflects a person who is dysphoric, dissatisfied with their lives and their self, withdrawn, experiences self-doubt, is guilt-ridden, and is pessimistic (Morey, 1991b). Three subscale scores, Affective (DEP-A), Cognitive (DEP-C), and Physiological (DEP-P) Depression, were also generated by summing the identified construct items together. High scores ($T \geq 70$) on the Cognitive (DEP-C) scale are indicative of persons who “report thoughts of worthlessness, hopelessness, and personal failure. Indecisiveness and difficulties in concentration are also likely,” (Morey, 1991b, p. 15). Persons who achieve high scores on the Affective subscale (DEP-A) report feelings of sadness and anhedonia. Scoring high on the Physiological Depression subscale (DEP-P) indicates that the individual is experiencing and expressing depression in a somatic, or bodily, fashion. These persons report a sense of fatigue, and decreases in their physical functioning and activity level (Morey, 1991b).

Attitudes Toward Seeking Professional Psychological Help Scale. The pilot study reflected a need to eliminate the Attitudes About Counseling and Psychotherapy Questionnaire, constructed by the primary researcher for the purposes of this study (see Appendix B), and replace it with a more established and more reliable instrument, the Attitudes Toward Seeking Professional Psychological Help Scale- Short Form (ATSPPHS; Fischer & Farina, 1995). This

10-item self-report instrument assesses the respondents' attitudes toward seeking professional psychological help for a psychological problem. (See Appendix N). The test-taker is asked to respond to each item by choosing the most accurate response to the stem on a four-point Likert-type scale ranging from (1) *disagree* to (4) *agree*. Fischer and Farina (1995) tested their scale on college students and found their scale to have a internal consistency of .84 and a test-retest reliability of .80. This instrument was intended for use in this study, however, due to a web-survey error, participants were not presented with this instrument's items. Therefore while it was this researcher's intention to include the ATSPPHS in the current study, it was not presented and utilized.

Student-Athlete Role Behaviors Questionnaire. The Student-Athlete Role Behaviors Questionnaire is a self-report measure constructed from a review of the literature for the purpose of this study (see Appendix E). This 10-item instrument assessed the environment and behavior associated with being a student-athlete. This instrument surveyed conditions such as time commitment, absenteeism, sense of not performing up to one's potential in student and athlete roles, and engaging in self-destructive behaviors, all factors that have been shown to be related to depression. All items were assessed on seven-point Likert-type scales, however, the anchors of these scales varied depending on the items. Items regarding time commitment were assessed on a scale with endpoints of (1) *less than 10 hours per week* and (7) *more than 36 hours per week*. Items addressing missing athletic or academic events used a scale with anchors of (1) *never (0% of all scheduled events)* and (7) *always (100% of all scheduled events)*. Lastly, items that explored the respondent's perceived role strain, fulfillment of potential, and self-destructive behaviors utilized a scale with endpoints of (1) *strongly disagree* and (7) *strongly agree*.

Barriers to Help-Seeking Checklist. The Barriers to Help-Seeking Checklist is a self-report checklist adapted (with permission) from Givens and Tjia's (2002) study of barriers preventing medical school students from seeking professional mental health services. Additional items were created from the existing literature on student-athletes and were added to Givens and Tjia's checklist for the purposes of this study. Respondents were asked to imagine they were in need of help for a personal issue and they were considering seeking help at their institution's counseling center. They were then asked to select all items they perceived to act as or would act as a barrier to seeking professional mental health services. (See Appendix F).

Counseling and Psychotherapy Preferences Questionnaire. The Counseling and Psychotherapy Preferences Questionnaire is a self-report measure adapted (with permission) from Smith (2004) for the purpose of this study. This instrument required the participants to indicate the magnitude of their preference for a number of mental health service provider characteristics. Preferences were assessed in three general categories: counselor type, counselor's location and/or their association with the athletic department, and counselor qualities (e.g. race, gender, age, familiarity with sport). All preferences, except age, were assessed using a five-point Likert-type scale which is anchored with (1) *do not prefer this characteristic* and (5) *strongly prefer this characteristic*. The preferred age range of a counselor was also assessed by presenting the respondent with age ranges (in five-year increments) from less than 20 years to over 50 years of age as well as an item that indicated the respondent had no preference for their counselor's age. (See Appendix G).

Institution Counseling Services Information. Due to the nature of this survey, precautions were taken to provide the participants with the contact information for their institution's counseling services. The participant was asked whether they would like their center's location

and phone number and if they answered affirmatively they were directed to choose their institution's state and then select their institution. Each DI institution's counseling services information was provided as requested.

Procedure

A purposive, convenience sample of student-athletes was recruited from their home institutions. In order to solicit student-athlete participation, each of the 197 NCAA D-IA and D-IAA athletic departments (based on NCAA Division classifications from 2005) was contacted via e-mail. An attempt was made to contact all CHAMPS/LifeSkills coordinators employed within each of the NCAA Division IA and IAA athletic departments; however, when the CHAMPS/Life Skills coordinator could not be reached or was not specified on the institution's webpage, athletic directors and/or assistant athletic directors were e-mailed. Of the 197 institutions contacted, 11 universities responded to inquires and declined to participate. The e-mail sent to the athletic department staff members (see Appendix O) explained the purpose and procedure of the study, the risks and benefits of participation, and requested they forward an attached e-mail to their student-athletes (see Appendix P). The e-mail addressed to the student-athlete again contained the purpose and procedure of the study, risks and benefits of participating, and a URL link to the informed consent page of the online survey.). In accordance with NCAA bylaws, incentives were not offered or provided for participation in this study.

The battery of instruments was available to the participants through the University of Tennessee's (UT's) web surveys which utilized mrInterview software. An informed consent was first presented (see Appendix C). The participants were instructed to completely read the consent form and if they agreed with the stated principles they were asked to click on/select the

“Agree to Consent” button. The participants were then asked to input their age in years to ensure that only student-athletes over the age of 18 years were participating. If the participant agreed to the informed consent and were over the age of 18 years, they were then directed to complete the instrument items contained on the web survey pages. Once complete, the participant was logged out of the survey and data was transmitted to UT’s secure, SLQ database server.

CHAPTER FOUR

Results

The results were analyzed using the following statistical procedures: descriptive statistical data (i.e. frequency counts, percentages, modes, means, and standard deviations) were computed on the four depression scale variables, Treatment Rejection variable, Perceived Barriers to Seeking Psychological Help measure, and Counselor Preferences measure. Inferential statistics, such as independent samples *t*-tests, one-way analysis of variance (ANOVA), and repeated measures ANOVA (RM-ANOVA), and non-parametric Chi-square statistics were computed to evaluate research questions. Lastly, bivariate correlations and stepwise multiple regressions were used to evaluate the relationships between variables and address research questions. All data were analyzed using SPSS Statistical software, version 16.0.1. This chapter reviews the statistical findings when the above analyses were conducted in this study.

Depression Analysis

A summary of descriptive statistics for the four depression variables is presented in Table 6. Table 7 presents descriptive data for the four depression scales based on gender groupings (i.e., female, male) and injury status (i.e., injured in previous 12 months, uninjured). The data in this analysis did not perfectly ascribe to assumptions of normality and homogeneity; however, data did not grossly violate these assumptions. Thus, robust parametric statistics could be utilized to evaluate the hypotheses.

Research question # 1. This research question inquired as to the amount of variance in depression that was accounted for by gender and injury. In order to determine the effects of gender, injury, and the gender and injury interaction on the four depression variables, four separate two-way ANOVAs were conducted. Each of the four depression variables was

Table 6

Student-Athlete Depression Variable Descriptive Statistics

Variable		<i>n</i>	Range	<i>M (SD)</i>
DEPT	Total Sample	165	35 – 88	49.09 (10.27)
	Females	111	35 – 88	49.14 (10.60)
	Males	54	35 – 77	48.96 (9.65)
DEP-A	Total Sample	165	39 – 99	49.71 (10.14)
	Females	111	39 – 99	49.70 (10.14)
	Males	54	39 – 74	49.72 (8.84)
DEP-C	Total Sample	165	37 – 96	49.82 (11.76)
	Females	111	37 – 96	50.11 (12.30)
	Males	54	37 – 78	49.22 (10.66)
DEP-P	Total Sample	165	35 – 72	48.58 (8.28)
	Females	111	35 – 72	48.48 (7.91)
	Males	54	35 - 72	48.80 (9.07)

Note. DEPT = Total Depression Scale. DEP-A = Affective Depression Subscale. DEP-C = Cognitive Depression Subscale. DEP-P = Physiological Depression Subscale. All scores are *T*-scores.

Table 7

Descriptive Statistics for Depression Variables as a Function of Injury Status and Gender

Variable	Injury	Total (<i>N</i> = 165)		Females (<i>n</i> = 111)		Males (<i>n</i> = 54)	
		<i>n</i>	<i>M</i> (<i>SD</i>) ^a	<i>n</i>	<i>M</i> (<i>SD</i>) ^a	<i>n</i>	<i>M</i> (<i>SD</i>) ^a
DEPT	Injured	112	49.27 (10.03)	76	48.96 (9.55)	36	49.92 (11.10)
	Healthy	53	48.70 (10.87)	35	49.54 (12.74)	18	47.06 (5.57)
DEP-A	Injured	112	50.02 (9.39)	76	49.63 (9.18)	36	50.83 (9.88)
	Healthy	53	49.06 (11.63)	35	49.86 (13.70)	18	47.50 (5.90)
DEP-C	Injured	112	50.04 (10.75)	76	50.13 (10.48)	36	49.83(11.44)
	Healthy	53	49.36 (13.76)	35	50.06 (15.73)	18	48.00(9.06)
DEP-P	Injured	112	48.51 (8.84)	76	48.18 (8.19)	36	49.19 (10.17)
	Healthy	53	48.74 (7.02)	35	49.11 (7.33)	18	48.00 (6.53)

Note. DEPT = Total Depression Scale. DEP-A = Affective Depression Subscale. DEP-C = Cognitive Depression Subscale. DEP-P = Physiological Depression Subscale.

^a All scores are T-scores.

subjected to a separate ANOVA having two levels of gender (female, male) and two levels of injury (injured, healthy). Results from these analyses are presented in Table 8. Each of these four factorial ANOVAs failed to yield any significant main effects or interactions; thus, depression was not impacted by gender or injury. Due to the lack of relationships between the variables, gender and injury would not account for the variance in the depression variables.

Research question #2. For those that experienced an injury in the 12 months preceding their participation, the impact of various characteristics of an athlete's injury on depression scores was examined. Correlations between the four depression scales and three characteristics of injury, treatment time, perceived impact of injury on daily life, and chronicity of injury, were performed. Results are presented in Table 9. Only perceived impact was significantly related to the depression variables. Perceived impact was significantly correlated with Total Depression ($r = .252, p < .01$), Affective Depression ($r = .211, p < .05$), and Physiological Depression ($r = .273, p < .01$). Perceived impact was not significantly associated with Cognitive Depression, nor were treatment time and chronicity significantly associated with any of the depression variables.

Four separate stepwise multiple regressions were performed in which treatment time, perceived impact of injury, and chronicity served as predictor variables. These characteristics were regressed on each of the four depression variables. The results of these analyses can be found in Table 10. As shown, only one of the three predictor variables, perceived impact, entered the prediction equations at a significant level. Perceived impact accounted for 6.4% ($p < .01$) of the variance in Total Depression, 4.5% ($p < .05$) of the variance in Affective Depression, and 7.5% ($p < .001$) of the variance in Physiological Depression. None of the independent variables significantly contributed to its variance of Cognitive Depression.

Table 8

Two-way (Gender x Injury Status) ANOVAs for Depression Variables

Source	Type III SS	df	MS	F	<i>p</i>
Dependent Variable: Total Depression					
Gender	18.746	1	18.746	.176	.676
Injury	41.522	1	41.522	.389	.534
Gender * Injury	94.811	1	94.811	.888	.348
Error	17197.262	161	106.815		
Total	414843.000	165			
Dependent Variable: Affective Depression					
Gender	10.674	1	10.674	.103	.749
Injury	77.227	1	77.227	.744	.390
Gender * Injury	101.275	1	101.275	.976	.325
Error	16711.470	161	103.798		
Total	424560.000	165			
Dependent Variable: Cognitive Depression					
Gender	44.361	1	44.361	.316	.575
Injury	29.102	1	29.102	.207	.650
Gender * Injury	24.737	1	24.737	.176	.675
Error	22627.570	161	140.544		
Total	432202.000	165			
Dependent Variable: Physiological Depression					
Gender	.087	1	.087	.001	.972
Injury	.559	1	.559	.008	.929
Gender * Injury	36.091	1	36.091	.519	.472
Error	11200.603	161	69.569		
Total	400674.000	165			

Table 9

Correlations of Depression Variables and Injury Characteristics

Variable	1	2	3	4	5	6	7
(1) Total Depression	-----	.910**	.901**	.804**	-.086	.039	.252**
(2) Affective Depression		-----	.831**	.560**	-.088	.090	.211*
(3) Cognitive Depression			-----	.536**	-.131	.021	.170
(4) Physiological Depression				-----	-.009	-.006	.273**
(5) Injury Chronicity					-----	-.267**	-.242*
(6) Injury Treatment Time						-----	.344**
(7) Perceived Impact							-----

* $p \leq 0.05$. ** $p \leq 0.01$

Table 10

Results of Stepwise Multiple Regression Analyses for Injury Characteristics Predicting Depression Variables

Step	Variable	B	SE B	β	R ²
Dependent Variable: Total Depression					
1	Perceived Impact	2.401	.878	.252**	.064
Dependent Variable: Affective Depression					
1	Perceived Impact	1.881	.829	.211*	.045
Dependent Variable: Physiological Depression					
1	Perceived Impact	2.289	.769	.273**	.075

* $p < .05$. ** $p < .01$

Research question #3. The relationship between depression scores and various student-athlete role behaviors was assessed. Means and standard deviations for each of the Student-Athlete Role Behavior items are presented in Table 11. Pearson Product Moment Correlations were calculated for each of the four depression variables and the eight role behavior items from the Student-Athlete Role Behavior Questionnaire. These correlations are presented in Table 12.

As is shown in Table 12, all correlations between Total Depression and the Student-Athlete Role Behavior items are significant. Total Depression was significantly correlated with putting effort into sports but not into life ($r = .44, p < .001$), engaging in self-destructive behaviors ($r = .40, p < .001$), feeling able to mask mental health issues from coaches and

Table 11

Means and Standard Deviations for Student-Athlete Role Behavior Items

Variable Name: Item Stem	<i>M</i>	<i>SD</i>
Skipping academic events: How often do you miss or skip academic- related events? ^a	1.85	.867
Skipping athletic events: How often do you miss or skip athletic-related events? ^a	1.23	.591
Role Strain: My participation in intercollegiate sports imposes a great deal of structure on my life and I feel I do not have any “free time” to take care of personal tasks. ^b	4.42	1.708
Effort in sport but not in life: I put the most effort into my practices and sports competitions but other aspects of my life are suffering. ^b	3.75	1.699
Self-destructive behaviors: I have been engaging in self-destructive behaviors (e.g. binge drinking, drug use, physical or verbal altercations, self-mutilation or cutting) to cope with my emotions. ^b	4.27	1.920
Academic Potential: I do not feel as though I am performing up to my academic potential. ^b	1.81	1.434
Athletic Potential: I do not feel as though I am performing up to my athletic potential. ^b	4.37	2.016
Ability to mask mental health issue: If I were struggling with an emotional problem such as depression, I believe I could hide it from my coach and teammates so they wouldn't know. ^b	4.35	2.020

^a Item used 7-point Likert scale with anchors of *Never (0% of all scheduled)* and *Always*

(100% of all scheduled events). ^b Items used 7-point Likert Scale with anchors of *Strongly Disagree* to *Strongly Agree*

Table 12

Intercorrelations of Depression Variables and Student-Athlete Role Behavior Items

	5	6	7	8	9	10	11	12
(1) Total Depression	0.23**	0.18*	0.28**	0.44**	0.35**	0.40**	0.34**	0.36**
(2) Affective Dep.	0.19*	0.17*	0.28**	0.41**	0.30**	0.39**	0.26**	0.37**
(3) Cognitive Dep.	0.20**	0.15	0.26**	0.43**	0.32**	0.40**	0.36**	0.32**
(4) Physiological Dep.	0.21**	0.13	0.18*	0.30**	0.26**	0.23**	0.24**	0.25**
(5) Skip academic events	----	0.29**	0.05	0.20**	0.08	0.25**	0.33**	0.15
(6) Skip athletic events		----	-0.03	0.02	0.10	-0.01	-0.11	0.02
(7) Role strain			----	0.58**	0.21**	0.13	0.32**	0.26**
(8) Effort in sports but not in life				----	0.28**	0.25**	0.50**	0.25**
(9) Athletic potential					----	0.23**	0.35**	0.15
(10) Self-destructive behaviors						----	0.27**	0.27**
(11) Academic potential							----	0.24**
(12) Ability to mask mental health issue								----

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

teammates ($r = .36, p < .001$), and feeling as though one is not living up to either his/her athletic potential ($r = .35, p < .001$) or his/her academic potential ($r = .34, p < .001$). Significant relationships were also found between Total Depression and role strain or feeling as though sport imposes such great structure on one's life that personal tasks are unattended ($r = .28, p < .001$), and skipping academic events ($r = .23, p < .001$) and athletic events ($r = .18, p < .05$).

Affective Depression was significantly related to each of the role behaviors as well. Affective Depression was significantly associated with feeling as though one puts effort into sport but not life ($r = .41, p < .001$), engaging in self-destructive behaviors ($r = .39, p < .001$), and ability to mask mental health issues ($r = .37, p < .001$). Affective Depression was also significantly related with feeling as though one is not living up to one's athletic potential ($r = .30, p < .001$) and one's academic potential ($r = .26, p < .001$) as well as the feeling of role strain ($r = .26, p < .001$). Lastly, significant relationships were also found between Affective Depression and skipping academic and athletic events ($r = .19, p < .05$ and $r = .17, p < .05$, respectively).

Cognitive Depression was significantly related to all role items except for skipping athletic events ($r = .15, p > .05$). Cognitive Depression was significantly correlated with feeling as though one puts effort into sport but not into life ($r = .43, p < .001$), engaging in self-destructive behaviors ($r = .40, p < .001$), not living up to one's academic potential ($r = .36, p < .001$), ability to mask mental health issues from others ($r = .32, p < .001$), and not living up to one's athletic potential ($r = .32, p < .001$). Significant relationships were also found between cognitive depression and skipping academic events ($r = .20, p < .001$).

Physiological Depression was significantly correlated with all role items except skipping athletic events ($r = .13, p > .05$). Physiological Depression was significantly associated with

putting effort into sport but not into life ($r = .30, p < .001$), not living up to one's athletic potential ($r = .26, p < .001$), and ability to mask mental health issue from others ($r = .25, p < .001$). Significant relationships were also found between Physiological Depression and not living up to one's academic potential ($r = .24, p < .001$), engaging in self-destructive behaviors ($r = .23, p < .001$), skipping academic events ($r = .21$), and feelings of role strain ($r = .18, p < .05$).

In order to understand the relative concurrent impact of the student-athletes' behaviors on depression, four separate regressions were performed, one for each of the four depression scales. Each of the eight role items was regressed on the four depression scales in a separate regression analysis. Table 13 presents the results of these items regressed on Total Depression. As seen in Table 13, when regressing behavior items on Total Depression, effort in sports but not in life, self-destructive behaviors, ability to mask mental health issues from others, not living up to athletic potential, and skipping athletic events all contribute to account for 38% of the variance in total depression. Skipping academic events, role strain and not living up to one's academic potential did not significantly add to the model.

Table 14 presents the results when the role behavior items are regressed on Affective Depression. Effort in sport but not in life, self-destructive behaviors, ability to mask mental health issues from others, and skipping athletic events accounted for 32.5% of variance in Affective Depression. Skipping academic events, role strain, and feelings of not living up to athletic and academic potentials did not significantly add to the prediction model.

Results for the stepwise regression for role behaviors and Cognitive Depression can be seen in Table 15. Effort in sport but not in life, self-destructive behaviors, feeling of not living up to one's athletic potential, and ability to mask mental health issues from others accounted for 31.9% of variance in Cognitive Depression. Skipping academic and athletic events, role strain,

Table 13

Results of Stepwise Multiple Regression for Student-Athlete Role Behaviors Predicting
Total Depression

Step	Variable	B	SE B	β
1	Effort in Sports But Not in Life	2.682	.424	.444***
2	Effort in Sports But Not in Life	2.223	.416	.368***
	Self-destructive Behaviors	2.171	.492	.303***
3	Effort in Sports But Not in Life	1.976	.414	.327***
	Self-destructive Behaviors	1.843	.493	.257***
	Ability to Mask Mental Health Issues	1.051	.350	.207**
4	Effort in Sports But Not in Life	1.719	.417	.284***
	Self-destructive Behaviors	1.634	.490	.228***
	Ability to Mask Mental Health Issues	1.007	.344	.198**
	Not Living Up to Athletic Potential	.978	.361	.183**
5	Effort in Sports But Not in Life	1.727	.411	.286***
	Self-destructive Behaviors	1.680	.482	.235***
	Ability to Mask Mental Health Issues	.989	.339	.195**
	Not Living Up to Athletic Potential	.891	.358	.166*
	Skipping Athletic Events	2.700	1.097	.155*

Note. $R^2 = .20$ for Step 1; $\Delta R^2 = .09$ for Step 2, $\Delta R^2 = .04$ for Step 3, $\Delta R^2 = .03$ for Step 4, $\Delta R^2 = .02$ for Step 5, all $ps < .05$.

* $p < .05$. ** $p < .01$. *** $p \leq .001$.

Table 14

Results of Stepwise Multiple Regression for Student-Athlete Role Behaviors Predicting
Affective Depression

Step	Variable	B	SE B	β
1	Effort in Sports But Not in Life	2.417	.427	.405**
2	Effort in Sports But Not in Life	1.962	.419	.329**
	Self-destructive Behaviors	2.149	.497	.304**
3	Effort in Sports But Not in Life	1.689	.415	.283**
	Self-destructive Behaviors	1.787	.494	.253**
	Ability to Mask Mental Health Issues	1.161	.351	.231**
4	Effort in Sports But Not in Life	1.674	.408	.281**
	Self-destructive Behaviors	1.816	.486	.257**
	Ability to Mask Mental Health Issues	1.138	.345	.227**
	Skipping Athletic Events	2.820	1.115	.164*

Note. $R^2 = .17$ for Step 1; $\Delta R^2 = .09$ for Step 2, $\Delta R^2 = .05$ for Step 3, $\Delta R^2 = .03$ for Step 4, all $ps < .05$.

* $p < .05$. ** $p \leq .001$

Table 15

Results of Stepwise Multiple Regression for Student-Athlete Role Behaviors Predicting
Cognitive Depression

Step	Variable	B	SE B	B
1	Effort in Sports But Not in Life	2.963	.490	.428**
2	Effort in Sports But Not in Life	2.421	.479	.350**
	Self-destructive Behaviors	2.562	.567	.312**
3	Effort in Sports But Not in Life	2.145	.486	.310**
	Self-destructive Behaviors	2.333	.568	.286**
	Athletic Potential	1.008	.428	.165*
4	Effort in Sports But Not in Life	1.948	.489	.281**
	Self-destructive Behaviors	2.064	.574	.252**
	Athletic Potential	.964	.424	.157*
	Ability to Mask Mental Health Issues	.891	.403	.153*

Note. $R^2 = .18$ for Step 1; $\Delta R^2 = .09$ for Step 2, $\Delta R^2 = .02$ for Step 3, $\Delta R^2 = .02$ for Step 4, all $ps < .05$.

* $p < .05$. ** $p \leq .001$

and feeling of not living up to one's academic potential did not significantly add to the prediction model.

Table 16 presents the results from the stepwise regression analysis which regressed role behavior items on Physiological Depression. Effort in sport but not in life, not living up to one's athletic potential, and ability to mask mental health issues from other accounted for 14.8% of the variance in Physiological Depression. Skipping athletic and athletic events, role strain, and self-destructive behaviors did not significantly add to the model.

Table 16

Results of Stepwise Multiple Regression for Student-Athlete Role Behaviors Predicting Physiological Depression

Step	Variable	B	SE B	B
1	Effort in Sports But Not in Life	1.461	.364	.300***
2	Effort in Sports But Not in Life	1.203	.374	.247**
	Athletic Potential	.803	.331	.186*
3	Effort in Sports But Not in Life	1.016	.379	.208**
	Athletic Potential	.743	.329	.172**
	Ability to Mask Mental Health Issues	.685	.309	.167*

Note. $R^2 = .09$ for Step 1; $\Delta R^2 = .03$ for Step 2, $\Delta R^2 = .03$ for Step 3, all $ps < .05$.

* $p < .05$. ** $p < .01$, *** $p < .001$

Seeking Mental Health Services Analysis

Attitudes About Seeking Professional Mental Health Services

Student-athletes reported scores on the Treatment Rejection scale which ranged from 1.00 to 72.00. The mean Treatment Rejection score was 54.95 with a standard deviation of 11.58. Female participants' scores ranged from 26.00 to 72.00 with a mean of 55.32 and standard deviation of 10.56. Male participants' scores ranged from 1.00 to 70.00 with a mean score of 54.19 and a standard deviation of 13.52.

Research question #4. This research question inquired as to how much of the total variance in Treatment Rejection can be explained by gender and previous counseling experience. To address this question, a two-way ANOVA was first conducted using Treatment Rejection scores as the dependent variable and gender and previous counseling experience as the independent variables to determine whether any significant main effects or an interaction of the two variables existed. There was no significant main effect for gender, $F(1, 161) = .288, p = .592$. There was, however, a significant main effect for previous counseling experience, $F(1, 161) = 11.155, p < .001$, indicating that those with previous counseling experience ($M = 47.69, SD = 10.92$) reported significantly less treatment rejection than did those without previous counseling experience ($M = 56.50, SD = 11.16$), $t(163) = 3.875, p < .001$. The interaction of gender and counseling experiences was not significant, $F(1, 161) = .036, p = .850$.

Gender and previous counseling experience were next regressed on Treatment Rejection scores in a stepwise regression analysis to determine the variance explained by either variable. Of these two predictor variables, only previous counseling experience significantly accounted for variance in Treatment Rejection ($\beta = -.290, p < .001$). Previous counseling experience accounted for 8.4% of the variance in Treatment Rejection scores.

Perceived Barriers to Seeking Treatment

Research questions #5 and #6. These two research questions examined collegiate student-athletes perceived barriers to seeking psychological counseling and how these perceived barriers varied by gender. The frequencies, percentages, and within-group rank orders for the total student-athlete sample as well as for male and female student-athlete groups are presented in Table 17. As can be seen in this table, the total student-athlete population cited the following as the four most frequently cited perceived barriers to seeking professional psychological help: (1) lack of time to use services (58.2%), (2) fear of being stigmatized (viewed with prejudice) as mentally unhealthy (41.8%), (3) fear that others will view me as weak for needing outside help (41.8%), and (4) fear that teammates will find out I am using services (40.6%).

When analyzed according to gender, the frequency of self-reported perceived barriers to seeking help was similar but did slightly differ for male and female student-athletes. For example, the four most frequently cited barriers among male student-athletes were: (1) lack of time to use services (50.0%), (2) fear that others will view me as weak for needing outside help (44.4%), (3) fear that teammates will find out I am using services (42.6%) and (4) lack of knowledge of services offered (42.6%). Female student-athletes, on the other hand, cited (1) lack of time to use services (62.2%), (2) fear of being stigmatized (viewed with prejudice) as mentally unhealthy (44.1%), (3) fear that athletic department staff will know that I am using services (44.1%), and (4) services not available during my free time (42.8%) with greatest frequency. Pearson chi-square tests of independence on each of the barriers items as a function of gender, revealed that male and female student-athletes' frequency proportions significantly differed on three of the barrier items: (1) fear that the Athletic Department staff will know I am

Table 17

Frequency, Percentage, and Within-Group Rank Order of Student-Athletes' Perceived Barriers to Seeking Psychological Help

Barrier	Total Sample (<i>N</i> = 165)			Males (<i>n</i> = 54)			Females (<i>n</i> = 111)		
	<i>n</i>	%	Rank	<i>n</i>	%	Rank	<i>n</i>	%	Rank
Lack of time to use services	96	58.2	1	27	50.0	1	69	62.2	1
Fear of being stigmatized (viewed with prejudice) as mentally unhealthy	69	41.8	2	20	37.0	4	49	44.1	2
Fear that others will view me as weak for needing outside help	69	41.8	2	24	44.4	2	45	40.5	4
Fear that teammates will find out I am using services	67	40.6	3	23	42.6	3	44	39.6	5
Lack of knowledge of services offered	62	37.6	4	23	42.6	3	39	35.1	7
Services are not available during my free time	62	37.6	4	15	27.8	7	47	42.8	3
Fear that the Athletic Department staff will know I am using services	62	37.6	4	13	24.1	8	49	44.1	2
Fear that coaches or athletic trainers will have access to my records	52	31.5	5	11	20.4	12	41	36.9	6
Fear that the person I meet with will not understand what it is like to be a student-athlete	52	31.5	5	18	33.3	6	34	30.6	9

Table 17. Continued.

Barrier	<i>n</i>	%	Rank	<i>n</i>	%	Rank	<i>n</i>	%	Rank
Fear that someone will recognize me as a student-athlete when I go into a counseling center	48	29.1	6	10	18.5	13	38	34.4	8
Lack of confidentiality	45	27.3	7	13	24.1	8	32	28.8	10
Fear that a diagnosis will be entered on my school record	41	24.8	8	9	16.7	11	32	28.8	10
Difficulties in finding/accessing services	38	23.0	9	13	24.1	8	25	22.5	11
Fear that using services will impact negatively on my career in some way	34	20.6	10	12	22.2	9	22	19.8	12
Belief that “no one will understand my problems”	31	18.8	11	10	18.5	10	21	18.9	13
Lack of availability of services	30	18.2	12	8	14.8	16	22	19.8	12
Fear that the Dean’s office will know I am using services	19	11.5	13	3	5.6	12	16	14.4	14

using services, $\chi^2(1, N = 165) = 6.238, p = .013$, (2) fear that coaches or athletic trainers will have access to my records, $\chi^2(1, N = 165) = 4.619, p = .032$, and (3) fear that someone will recognize me as a student-athlete when I go into a counseling center, $\chi^2(1, N = 165) = 4.350, p = .037$. For each barrier item, female student-athletes cited the barrier significantly more often than male student-athletes.

Preferences for Various Counselor Characteristics

Research Question #7. This research question explored what preferences intercollegiate student-athletes held with respect to an individual from whom they might consider seeking help for a personal problem. These questions surveyed preference for categories including: (a) the type of counselor, (b) the location of the professional practitioner, (c) the sport familiarity of the practitioner, (d) the racial similarity of the practitioner to the client, (e) gender of the practitioner, and (f) the age range of the practitioner.

Analyses of data investigating preferences for type of counselor, location of professional practitioner, and practitioner's familiarity with sport were performed using repeated measures analysis of variance (*RM-ANOVA*). The *RM-ANOVA* examined within-group preference differences for the levels within each category: the eleven counselor types, three locations, and four levels of sport familiarity. A priori, paired comparisons of main effects were conducted to determine the order in which the various levels within each category were preferred. Central tendencies were utilized to explore student-athlete's preferences for practitioner's similar racial or ethnic background and gender of practitioner as these items were single, Likert-type items. *T*-tests were also used to examine gender group preference differences for male and female therapists. Lastly, frequencies and percentages were used to analyze data investigating student-

athletes' preferences for practitioner's age range as this single, Likert-type item provided age groupings and required the respondent to choose the range they most preferred.

The results of the *RM-ANOVA* test for preference revealed a significant counselor type effect, indicating the group's strength of preference differed across the eleven counselor types (Wilks' Lambda = .284, $F(10, 155) = 39.122$, $p < .001$). Table 18 presents the mean differences in strength of preference across the eleven counselor types. Pairwise comparison of mean differences revealed groupings of counselor types that were significantly different from other counselor types; however, due to overlapping means, clear cut rankings could not be determined.

Analysis revealed that when facing a personal problem student-athletes most preferred to seek help from a friend ($M = 4.04$), indicated by the mean preference score for this type of counselor being significantly different from all others. Next, student-athletes equally preferred to seek help from a family member ($M = 3.86$) or a sport psychology consultant ($M = 3.63$). Thirdly, student-athletes preferred to seek help from a professional counselor within an athletic department ($M = 3.32$), a professional counselor at their university's counseling center ($M = 3.13$), or a professional counselor in a community agency or private practice ($M = 3.12$).

The results of the *RM-ANOVA* test for preference revealed a significant location effect, which indicated that the group's strength of preference differed across the three locations (Wilks' Lambda = .946 $F(2, 163) = 4.681$, $p = .011$). Pairwise comparisons of mean differences indicated student-athletes most preferred to seek help from a professional practitioner who is located on their college campus ($M = 3.09$). The next preferred set of locations for seeking help were off-campus ($M = 2.81$) or within their university's athletic department buildings ($M = 2.81$); these two locations were equally preferred.

Table 18

Student-Athlete's Preference Means and Mean Differences Across Counselor Types

Counselor Type	Mean	2	3	4	5	6	7	8	9	10	11
1. Friend	4.04	.206*	.412*	.721*	.909*	.927*	1.15*	1.552*	1.673*	1.758*	1.861*
2. Family member	3.84	—	.206	.515*	.703*	.721*	.939*	1.345*	1.467*	1.552*	1.655*
3. Sport psychology consultant	3.63		—	.309*	.497*	.515*	.733*	1.139*	1.261*	1.345*	1.448*
4. Professional counselor within the athletic department	3.32			—	.188	.206	.424*	.830*	.952*	1.036*	1.139*
5. Professional counselor at the university's counseling center	3.13				—	.018	.236	.642*	.764*	.848*	.952*
6. Professional counselor in a community agency or private practice	3.12					—	.218	.624*	.745*	.830*	.933*
7. Health care professional	2.90						—	.406*	.527*	.612*	.715*
8. Religious leader	2.49							—	.121	.206	.309*
9. Other University staff member associated with the athletic department	2.37								—	.085	.188*
10. Professor	2.28									—	.103
11. Other university staff member (not associated with the athletic department)	2.18										—

$N = 165$. * $p < .05$ level

The results of the *RM-ANOVA* for preference revealed a significant sport familiarity effect, which indicated that the group's strength of preference differed across the four levels of practitioner familiarity with sport (Wilks' Lambda = .903, $F(3, 162) = 5.796$, $p = .001$). Pairwise comparison of mean differences indicated that three levels of practitioner familiarity with sport were most strongly preferred by student-athletes, yet these categories were not statistically significant from one another or in other words, the three levels were equally the most preferred. Student-athletes most strongly preferred to seek psychological help for a personal problem from a practitioner whose familiarity with sport can be categorized as having knowledge of sports ($M = 4.00$), having participated in any sport at the collegiate level ($M = 3.90$), or having had participated in the respondent's sport at one time ($M = 3.89$). Student-athletes would then prefer to seek help from a practitioner with experience participating in any sport at one time ($M = 3.75$). The mean preference score for this level of practitioner sport familiarity was significantly different from the previous grouping.

This Likert-type item assessed one's strength of preference for seeking professional psychological help from a professional practitioner with a racial or ethnic background similar to respondent. The mean score was 3.13 ($SD = 1.045$) and the modal response was 3 (*no opinion on this characteristic*).

These two Likert-type items assessed strength of preference for seeking professional psychological help from both a male and female professional practitioner. Across the entire sample of student-athletes, the mean score for seeking help from a female practitioner was 3.32 ($SD = 1.012$) and the modal response was 3 (*no opinion on this characteristic*). Across the entire sample of student-athletes, the mean score for seeking help from a male practitioner was 2.74 ($SD = .999$) and the modal response was 3 (*no opinion on this characteristic*).

Further analysis was conducted to explore respondent gender effects. Results revealed that when the student-athlete group is divided as a function of gender, the preference for a male or female practitioner differs. For instance, female student-athletes ($M = 3.51, SD = .943$) have a significantly stronger preference than male student-athletes ($M = 2.93, SD = 1.043$) for seeking help from a female practitioner, $t(163) = -3.501, p = .001$. Likewise, male student-athletes ($M = 2.96, SD = 1.009$) reported significantly stronger preference for seeking help from a male therapist than did female student-athletes ($M = 2.63, SD = .981$), $t(163) = 2.004, p = .048$.

Student-athletes' pattern of preferences for the age range of the professional practitioner from whom they might seek help for a personal problem was explored. This analysis utilized frequencies and percentages of responses to determine the preferred age range of practitioner from whom a student-athlete may consider seeking help. Complete results for this analysis are presented in Table 19. These results indicated that over one-fourth (26.1%, $n = 43$) of athletes had no preference for the age of their potential practitioner. On the other hand, 22.4% ($n = 37$) preferred to seek help from a practitioner between the age of 26 and 30 years, while another 21.2% ($n = 35$) of the sample preferred a practitioner between the ages of 31 and 35 years.

Table 19

Frequency and Percentage of Endorsed Preference for Age of Professional Practitioner

	<i>n</i>	%
I do not have a preference	43	26.1
Between 26 – 30 years of age	37	22.4
Between 31 – 35 years of age	35	21.2
Between 36 – 40 years of age	16	9.7
Between 41 – 45 years of age	14	8.5
Between 20 – 25 years of age	11	6.7
Between 46 – 50 years of age	6	3.6
Over 50 years of age	3	1.8

N = 165

CHAPTER FIVE

Discussion

Student-athletes are thought to experience greater stressors and demands in their daily lives than those experienced by non-student-athletes (Pinkerton, Hinz, & Barrow, 1989). Some experts propose that because of the greater stressors and demands student-athletes are at greater risk for psychopathology (Etzel, Ferrante, & Pinkney, 1991; Pinkerton, Hinz, & Barrow, 1989). Inherent in the role of a student-athlete, these individuals balance competitive academic schedules with the rigors of athletic competition. Athletic demands are typically composed of 20 or more hours each week of physically and mentally taxing participation. Student-athletes often feel isolated from their peers (Pinkerton, Hinz, & Barrow, 1989) and feel less support than non-athlete counterparts (Storch, Storch, Killiany, & Roberti, 2005). Researchers have found that student-athletes tend to use and misuse alcohol with greater frequencies than general population students (Doumas, Turrisi, Coll, & Haralson, 2007; Leichliter, Meilman, Presly, & Cashin, 1998; Miller, Miller, Verhegge, Linville, & Pumariega, 2002; Nelson & Weschler, 2001) and experience eating disorders and disordered eating with greater prevalence (Carter & Rudd, 2005; Petrie & Sherman, 1999; Sundgot-Borgen, 1994). Depression, however, has been studied to a much lesser degree.

A great deal of research has been conducted on the collegiate student-athlete population; however, few studies have investigated depressed mood and clinical depression among student-athletes (Brewer, 1993; Donohue et al., 2004; Mentink, 2002; Quinn & Fallon, 1999; Storch, Storch, Killiany, & Roberti, 2005). Even fewer researchers have explored the tendency for student-athletes to underutilize mental health services on campuses and in their community and the reasons they may be reluctant to seek treatment for mental health needs. Thus, the purposes

of this project were twofold. The first purpose of this project was to explore depressed mood and its manifestation among collegiate student-athletes. The second purpose of this study was to examine the attitudes student-athletes hold with regard to seeking mental health services, the barriers they perceive as thwarting their effort to seeking services, and counselor preferences should they choose to seek mental health services. This chapter includes the discussion of the research questions that guided this study, conclusions, and presentation of recommendations for university counseling centers and athletic department staff members including coaches and advisors.

Depression Among Student-Athletes

On average, the student-athletes in this study reported overall depression scores that reflect “a person with few complaints about unhappiness or distress. Such individuals are typically seen as stable, self-confident, active, and relaxed,” (Morey, 1991b, p. 14). The range of scores indicated that some, albeit few, individuals scored within the range of scores considered indicative of a greater likelihood of major depression ($T > 80$). This indicates that, on average, the student-athletes in this study were not evincing depression and suggests that clinical depression was not a frequent occurrence among these student-athletes.

Impact of Gender and Injury on Depression

Depression is believed to be prevalent in women at rates that are two to three times that of rates found among men (American Psychiatric Association, 2000). In addition, in a study focusing solely on collegiate student-athletes, Storch and his colleagues (2005) found female athletes reported higher levels of social anxiety and depression than male athletes and male and female nonathletes. Thus, it was expected that gender would impact the extent of reported depression. In addition, as Brewer’s (1993) and Quinn and Fallon’s (1999) studies indicated the

occurrence of injury is associated with mood disturbances and depressed mood. Therefore, it was also expected that those with injuries would experience more depressed mood than healthy individuals. Unexpectedly, in the present study neither gender nor the occurrence of injury impacted scores on depression scales.

The lack of gender differences in depression scores is surprising due to the greater reported prevalence of depression among women (American Psychiatric Association, 2000) as well as the greater representation of women seeking mental health services (Russo & Sobel, 1981). One possible explanation for the lack of gender difference in depression may be found in the way in which athletes are socialized. Athletes are often socialized to follow an unwritten but well known “sport ethic.” The “sport ethic” is described by Coakley (2004) to be “a set of norms that many people in power and performance sports have accepted as dominant criteria for defining what it means to be an athlete and to successfully claim an identity as an athlete,” (p.168). Coakley delineates four core norms that athletes must ascribe to and they include: (a) “an athlete must make sacrifices for the game” (p. 168), (b) “an athlete strives for distinction” (p. 168), (c) “an athlete accepts risks and plays through pain” (p. 168), and (d) “an athlete accepts no limits in the pursuit of possibilities” (p. 168). These norms highlight the need for an athlete to remain powerful, strong, resilient, persistent, productive, and in control. It may be that the lack of gender differences in depression is underscored by athletes - males and females - ascribing to the norm of a healthy, happy, in control person. Research into the relationship between depression, gender, and ascription to sport norms is necessary to explore this theory.

Another possible explanation for the lack of gender effect on depression scores may be that student-athletes manifest depression differently than the general public. Silverstein (2002) proposed that the prevalence differences in men and women are due to the fact that women

exhibit and experience greater somatic depression than men but they equally experience pure depression. He purported that gender differences in the types of depression reported created higher prevalence of depression in women. Similar to four previous studies investigating this gender difference, Silverstein found females exhibited higher rates of somatic depression (i.e., symptoms of fatigue, body pain, appetite disturbance, and sleep disturbance) as compared to males who exhibited a more pure depression. Silverstein suggested that males and females are equal in endogenous, or pure depression, but that the greater rate of somatic depression reported by women is the cause for higher prevalence of depression among women. Perhaps the lack of gender difference in the current study is the result of a unique manifestation of physiological symptoms among female student-athletes. It may be that female student-athletes do not exhibit or perhaps do not recognize the somatic symptoms of depression that the community-dwelling women in Silverstein's study expressed. Perhaps, student-athletes rationalize away the symptoms of fatigue, pain, sleep disturbance, and appetite disturbance as the result of their participation in sport training and competition, thus, equalizing the difference in level of depression reported by male and female student-athletes. Further research is necessary to investigate this possible explanation.

One last possible explanation for the lack of gender differences in depression in the present study is that this may be reflective of an actual, equal prevalence of depression in men and women. Salokangas, Vaahtera, Pacriev, Sohlman, and Lehtinen (2002) purported that gender differences in depressive symptoms are merely an artifact of measurement instruments rather than a true effect of gender. These authors reported that a number of studies have reported no gender difference in depression (Romanoski et al., 1992; Wilhelm & Parker, 1989; Salokangas et al., 1996, as cited in Salokangas, Vaahtera, Pacriev, Sohlman, & Lehtinen (2002)

and suggested that gender differences are because depression measures contain questions “that are related more to female gender than to depression itself” (Salokangas, Vaahtera, Pacriev, Sohlman, & Lehtinen, 2002, p.216). The authors administered the BDI and the Depression Scale (DEPS) to a community sample of adults and found the BDI and DEPS behaved differently in males and females. They reported that while the two measures were highly correlated ($r = .815$), there were no gender differences in DEPS depression scores but differences that approached significance on the BDI ($p = .051$). Additionally, they found that many of the BDI items produced higher scores for females, particularly on items about sadness, crying, and sex drive, while the DEPS produced just one item on which women scored higher, an item about feeling blue. These authors suggested that sadness is a gender-bound emotional reaction as it is more commonly experienced and more easily identified by women. Additionally, the authors indicated women experience more limbic activation during transient sadness making women more biologically predisposed to sadness. They propose that the endorsement of sadness items is not necessarily a reflection of depression but more so a reflection of gender socialization. They also propose that crying is a gender-bound emotional reaction and more acceptable in female gender role socialization, making endorsement of crying also a reflection of a gender-bound emotional reaction and not of depression. Lastly, they suggest that the endorsement of loss of interest in sex and lowered sex drive is evidence of the biopsychosocial difference in sex drive and sex interest in men and women. Thus, they conclude that the higher prevalence of depression found among women is in fact a result of the overstatement of depression in females due to the gender-bias of the depression measures. With this argument, it could be possible that the PAI (Morey, 1991a), a well-researched and thoroughly constructed instrument, is assessing depression in a non-gender-biased fashion by including equal numbers of cognitive and

physiological items in addition to affective items and eliciting a true equality in depression scores among male and female athletes.

With respect to the surprising finding that the occurrence of injury did not have an impact on one's depression scores, an explanation for this may lie with the findings of Quinn and Fallon (1999). Studying injury across four phases on injury (i.e., upon injury, at partial recovery, at semi-recovery, and at full recovery), Quinn and Fallon found that negative emotional states decrease as one progresses through the phases of injury. Perhaps the design of the current study, creating two distinct groupings of injured and healthy respondents by asking the respondent whether or not they had been injured within the previous 12 months, impacted the findings. The survey design neglected to take into account the emotional variability that occurs across the experience of recovering from an injury. This study categorized as injured all athletes who experienced an injury, whether that athlete fully recovered or had just incurred the injury. Those individuals who were injured within the previous year but had already recovered from injury and those student-athletes who were responding to the survey at the onset of injury were very likely experiencing different levels of depressed mood (Quinn & Fallon, 1999); however, this study's design could not account for such differences. Further research exploring depression across the stages of recovery may better account for how injury impacts depressed mood in athletes.

Injuries vary in severity, duration of treatment and recovery, and impact on life. As such, depression was explored in light of characteristics of an injury such as whether the injury was acute or chronic, the duration of treatment for the injury, and the perceived impact of the injury on the injured person's life. Whether an injury was acute or chronic and the time spent treating an injury were not significantly associated with and failed to account for variance in depression scores. Only the respondents' perceptions of the impact their injuries had on their daily lives

accounted for any of the variance in depression. These findings suggest that the facts of an injury, the type of injury or the length of time treating the injury, do not impact mood as much as the perception of severity and dealing with the injury on a moment-to-moment basis.

The association between perceived impact and depression is supported by Brewer's (1993) finding that depression was also related to reports of increased life stress in injured athletes and Rosal, Ockene, Ockene, Barret, Ma, and Hebert's (1997) finding of a strong, significant positive relationship between increased perceived stress and depression in medical students. In fact, Rosal and his colleagues found that perceived stress was a predictor of depression in medical students. Increased life stress may be created in injured athletes by the factors associated with dealing with an injury during every day activities. Some of the daily activities that might be impaired in an athlete are transportation (e.g. moving around on crutches, organizing rides if one's ability to drive has been impaired), one's ability to write or type (e.g. impaired note-taking and test-taking, increased time taken to complete assignments), coping with pain, and even increased time constraints because of treatment time in addition to attending athletic events like practice and competitions. Perceiving an injury to have greater impact may be associated with the inconvenience created by an injury as well as the actual medical severity of an injury, the location of an injury (e.g. one's dominant hand, back or neck injuries), or even the forced use of medical supports such as crutches, casts, or wheelchairs. Further research is necessary to explore these characteristics as they were not explored in the present study.

Relationship Between Depression and Student-Athlete Role Behaviors

Student-athletes appear to be adept at masking their emotional problems and mental health issues from teammates, coaches, and parents (Mentink, 2002). Fans are often extremely shocked to learn an athlete has struggled with depression or other mental health issues (Crouse,

2002b) because this does not fit with our perceptions of athletes. Mentink (2002) revealed that student-athletes' depression can be extremely severe yet remain unidentified by others as the depressed student-athlete remains engaged with others and continues to perform athletically and academically. The present study explored a variety of student-athlete behaviors that might act as cues of an outward expression of student-athletes' depression.

The findings demonstrated that depression was significantly correlated with each of the eight role behaviors presented: skipping athletic and academic events, not taking care of personal tasks because of role strain, putting effort into sport but not into life, engaging in self-destructive behaviors to cope with difficult emotions, not living up to one's academic or athletic potential, and feeling able to hide emotional problems from coaches and teammates. Depression was highly correlated with putting effort into sports but not into life and feeling able to mask mental health issues from teammates and coaches. It appears that these two highly significant correlations are indicating that student-athletes feel able to mask their symptoms and are doing so by actively participating in sport but allowing their outside life to suffer. This finding was supported by Mentink's study in which participants identified their sport arena as their "sanctuary" (2002, p. 139). His participants also indicated that they were adept at hiding their symptoms from others, a fact highlighted by a survey of coaches' and parents' perceptions of their student-athlete's depression. Student-athletes reported their symptoms to be fairly serious to serious but parents and coaches reported their symptoms to be not at all a concern or of minimal concern. The completely disparate view of the student-athlete's struggle with depression is a testament to the athletes' ability to continue to engage in their life in ways that completely masked their symptoms from others. This finding is somewhat concerning in light of

the desire and the need to identify problems in college students and direct them to the help they might need.

One outward expression of depression that may be observed in those with depressed mood is engaging in self-destructive behaviors. A strong correlation between depression and engaging in self-destructive behaviors to cope with emotions was found in the current sample. One of the behaviors presented within the content of the self-destructive behavior item was binge drinking. This finding is supported by Miller, Miller, Verhegge, Linville, and Pumariega's (2002) study in which they revealed a strong association between misuse of alcohol and self-reported depression among collegiate student-athletes. These authors suggested that student-athletes with psychiatric symptoms abuse alcohol at higher rates to self-medicate and cope with their mood disturbances. Self-mutilation, such as cutting, burning, and biting, without the intent of suicide was also presented as an example of self-destructive behaviors in the present study. Self-injury and self-harm have been linked to symptoms of depression and anxiety in nonclinical populations (Andover, Pepper, Ryabchenko, Orrico, & Gibb, 2005) and are often reported to be coping mechanisms used to deal with difficult emotions. Another component of the self-destructive behavior item was the inclusion of physical or verbal altercations. In the diagnosis of major depression, the DSM-IV-TR (American Psychiatric Association, 2000) notes that in children and adolescents, irritable mood may be more characteristic than depressed mood. Irritability combined with psychomotor agitation may contribute to antisocial behaviors such as physical or verbal altercations. This finding seems to support a potential link between depression and behaviors such as fighting. However, this study did not expound on these types of self-destructive behaviors; thus, the preceding comments are not conclusions. What can be concluded from these findings is that the employment of self-destructive behaviors to cope with

difficult emotions is associated with depressed mood in athletes and may serve as a cue to the presence of distress in an athlete's life.

Another outward expression of depression may be skipping academic and athletic events. Both skipping academic and skipping athletic events were reported to occur infrequently, but both were significantly correlated with depression (academic correlations being higher than athletic correlations). Academic standards are increasing for student-athletes and penalties are being charged to institutions' programs when student-athletes do not meet academic standards set forth by the National Collegiate Athletic Association (NCAA, n.d.- a). Undergraduates not attending to academic tasks is not an uncommon event; however, this study suggests that there may be a relationship between skipping out on academic tasks and depressed mood for some. Skipping athletic events appears to occur even more infrequently than does skipping academic events, most likely because one's place on his/her squad and, for some, scholarship funds may be at risk if one does not attend athletic-related events. Nevertheless, the correlation between skipping athletic events and depression indicates that attention must be paid to this behavior as it may be an outward expression of one's depressed mood.

Depression was also highly correlated with the feeling that one is not living up to his/her athletic potential and slightly less highly correlated with not living up to one's academic potential. This finding is supported by Mentink's (2002) study in which his participants identified that they participated in their sport and performed well in their classes despite their clinical depression, but felt they were not living up to their potential. This suggests that while student-athletes with depressed mood may continue to excel in their sport and actively participate in training and competition, a cue to their depressed state may be seen outwardly in their less-than-optimal performance or, even more so, in their internalized perception of their

performance. This also may be true for their academic performance. Student-athletes may be meeting or even exceeding the academic standards but they may not be excelling as they and others know they are capable. Coaches and athletic academic advisors must work to build rapport with their student-athletes so performance and perceived potential in the athletic and academic arenas can be discussed openly and honestly in hopes that if a student-athlete is struggling with depression this may be revealed in these relationships.

Coaches, teammates, and significant others in a student-athlete's life may be able to identify depressed mood in the student-athlete by attending to cues other than the symptoms of depression. Multiple regression analysis revealed that putting effort into sport but not into life, self-destructive behaviors, ability to mask mental health issues, not living up to one's athletic potential, and skipping athletic events all contributed to account for 38% of the variance in depression. This indicates that student-athletes are actively participating in sport but neglecting life and are confident in their ability to hide any mental health issues from their closest athletic department connections, making it very difficult and highly unlikely for those closely associated with an athlete to identify depression in them. However, it seems that athletes who are experiencing depressed mood are displaying some other cues to their depression. Coaches, teammates, athletic department staff, and parents might benefit from attending to the athlete's life outside of sport and assessing the degree to which outside roles and duties are being neglected. Additionally, those in an athlete's life must attend to self-destructive behaviors the athlete is engaging in such as binge drinking, fighting with others, and self-injury as well as attend to skipping athletic program events. In some, these behaviors may be calling attention to an internal struggle with depression. Additionally, building rapport and individual relationships with athletes may help coaches and athletic department staff members recognize the athlete's

disappointment in his/her performances as this appears to help identify those with depressed mood.

Seeking Help for Psychological Problems

Student-Athletes' Attitudes Toward Treatment

Student-athletes scores on the Treatment Rejection scale of the PAI (Morey, 1991a) suggested these student-athletes are “generally satisfied with themselves as they are and see little need for major changes in their behavior,” (Morey, 1991b, p. 20). This is not indicative of major resistance to seeking treatment, but this does suggest there may be little motivation for entering into treatment. This finding is supported by Watson’s (2005) finding that student-athletes reported to have lower personal commitment to counseling than non-athletes. Watson found student-athletes to have less motivation to enter counseling, less openness to the counseling process, and feel less responsible for making change in their lives. Student-athletes’ reluctance to enter into a counseling relationship may be due to cultural norms established among athletes conditioning them to remain self-reliant and resilient (Etzel, Ferrante, & Pinkney, 1991). Also, the “win-at-all-cost” philosophy that many athletes live by may be prohibiting athletes from recognizing and admitting that they need help. Admitting that one needs to change and needs to seek help for this change would be admitting weakness thereby damaging self-confidence and self-efficacy in the athlete’s ability to perform (Etzel, Ferrante, & Pinkney, 1991).

Surprisingly, female and male athletes did not differ in their treatment rejection. This is surprising as many studies have found females hold more positive attitudes toward counseling and are more open and willing to seek out mental health services (Ang, Lim, Tan, & Yau, 2004; Gonzalez, Alegria, & Prihoda, 2005; Russo & Sobel, 1981). Ang, Lim, Tan, and Yau (2004) found that femininity more than gender alone increased one’s attitudes toward professional

psychological help as well as openness to actually seek out counseling. This suggests that gender role socialization plays a part in the development of attitudes about mental health services. The lack of gender effects in the present study may be due to the socialization of female athletes to align with sport norms thus instilling in them more masculine qualities such as emotional restrictiveness, valuing of competition and power, and self-reliance. The adoption of more masculine qualities may impact the female athletes' willingness and openness to counseling thus eliminating the gender effect seen in so many studies of men and women in various community samples.

Another possible explanation for the lack of gender differences in treatment rejection scores may be found in the efforts of programs such as the NCAA's CHAMPS/Lifeskills (Challenging Athletes' Minds for Personal Success) program. The CHAMPS program is focused on enhancing the overall well-being of athletes (NCAA, n.d.c). CHAMPS programs are often aimed at educating student-athletes about issues that impact their well-being and campus resources to address these issues. Additionally, the mental health of student-athletes has become a more addressed topic by the NCAA and individual institutions. In 2005, the NCAA created a subcommittee of the task force on the future of the NCAA Division I athlete dedicated to student-athlete well-being including their mental health (NCAA, 2006). Additionally, Division I programs, such as the University of Tennessee, Ohio State University, and University of Oklahoma, have hired mental health practitioners to assist student-athletes with mental health issues. Perhaps, the increased positive attention being paid to mental health issues has helped both males and females adopt more positive attitudes toward mental health services.

Analysis of treatment rejection among athletes also revealed that student-athletes with previous counseling experience reported lower treatment rejection scores indicating a more

positive perception of seeking treatment, more acceptance of personal responsibility for change, and openness to the possible need to change. This finding is supported by Martin's (2005) finding that student-athletes who had previously sought sport psychology services had more positive attitudes toward sport psychology consultation. It is also supported by literature which suggests that students who had sought counseling in the past held more positive attitudes about counseling and were more likely to seek out counseling if they were experiencing a problem (Clary & Fristad, 1987; Dearing, Maddux, & Tangney, 2005; Halgin, Weaver, Edell, & Spencer, 1987; Kahn & Williams, 2003). This finding suggests that by having experienced a positive relationship with a mental health provider, the student-athlete has already overcome many of the barriers to seeking treatment and experienced the benefits of the services. The previous experience lowers one's inhibition and illuminates the potential for help in the future. The finding that previous counseling services impacts one's attitudes toward counseling is not surprising; however, it highlights the need for educating those who have not yet entered into therapy about the process and benefits to reduce stigma and increase positive perceptions (Vogel, Wester, & Larson, 2007).

Student-Athletes' Perceived Barriers to Seeking Professional Psychological Help

To understand some of the possible reasons for the purported underutilization of mental health services by collegiate student-athletes (Etzel, Ferrante, & Pinkney, 1991; Pinkerton, Hinz, & Barrow, 1989; Watson, 2006), the barriers which student-athletes perceive to thwart their seeking of professional psychological help were explored. Results revealed that the most commonly perceived barriers to seeking treatment can be grouped into three categories. The three barrier categories are accessibility barriers (e.g. lack of time, lack of knowledge of services, and services not available during free time), stigma barriers (e.g. being viewed as mentally

unhealthy, others finding out about using services), and feeling as though the person they would meet with would not understand their role and what it is like to be a student-athlete.

Accessibility barriers to seeking psychological help. Time constraints were among the top barriers reported by student-athletes in this study. Lack of time to seek services was the chief barrier to not seeking treatment and the services not being available during the student-athletes' free time ranked fourth among perceived barriers to seeking treatment. This finding is confirmed by Watson's (2006) study of student-athletes in which time was found to be the fourth most prominent reason for not seeking counseling. The great frequency with which student-athletes endorsed the perception that their ability to seek services was limited due to a "lack of time to use services" and because "services [are] not available during [student-athletes'] free time" supports the claims of university staff members who work closely with student-athletes suggesting student-athletes operate with limited flexibility in their daily schedules which impedes them from utilizing campus resources (Jordan & Denson, 1990; Etzel, Ferrante, & Pinkney, 1991; Watson, 2006). On top of their requirements as students, which may entail at least 12 hours of coursework a week, study time, group meetings, tutoring, and test preparation, student-athletes are managing over 20 hours a week of sport-related practice time, injury treatments, travel, and games/matches. This dawn to after dusk schedule leaves little opportunity to seek psychological treatment, particularly if services are only offered during regular business hours as these hours of a student-athlete's life are typically jam-packed with student and athlete role obligations. The findings of Watson (2006) and this current study reinforce the notion that time constraints serve as a very important barrier to seeking psychological services and highlight the importance of making these services available to student-athletes in light of their demanding schedules, time constraints, and needs.

Another accessibility barrier to seeking psychological services often reported by student-athletes was the lack of knowledge of services offered. This is consistent with Givens and Tjia's (2002) finding that medical students often cited lack of knowledge of services as a barrier to seeking treatment. Mentink's (2002) student-athlete interviewees also reported lacking knowledge of campus resources through which they might have treated their depression. Smith (2004) found that the college women she interviewed felt that lack of advertising of campus counseling services acted as a barrier to their seeking treatment. Her participants stated that if advertisements existed they were often unattractive and uninformative of services. Additionally, university athletic departments have been described as closed-systems within their university settings (Etzel, Ferrante, & Pinkney, 1991). These departments act as separate business and resource entities for athletes at the university. Services offered throughout the rest of the university community (e.g. tutoring, academic advising, medical practitioners) are typically based within the confines of the athletic department and it has been suggested that such a system fosters in athletes an ignorance to outside services and a apathy for seeking services on their own (Watson, 2006). Student-athletes' lack of knowledge of campus resources may be an effect of such a closed system that provides so many necessary resources to student-athletes (Pinkerton, Hinz, & Barrow, 1989). Offering counseling services within athletic department confines may increase awareness and use of services. However, counseling centers might also establish relationships with athletic department staff and gain the support of coaches to positively promote the services available (Watson, 2006). Outreach services to student-athletes could also increase attention to issues and awareness of campus resources (Jordan & Denson, 1991). Additionally, it appears necessary for college counseling centers to improve their advertising throughout campuses to promote services to all students.

Stigma as a barrier to seeking psychological help. This study revealed that student-athletes avoided seeking counseling due to the societal stigma associated with being considered mentally unhealthy or weak if seeking counseling, as well as sport-specific stigmas such as having teammates, coaches, or other athletic department staff finding out about one's need for or use of counseling. There is an extremely strong social stigma attached to the notion of being "mentally ill" and, therefore, seeking treatment or counseling aids in indirectly stigmatizing the consumer of services as they are often labeled as "mentally ill" despite their diagnosis, or lack thereof (Wahl, 1999). Vogel, Wester, and Larson (2007) reported that the stigma was, in fact, greater for seeking treatment than it was for actually being diagnosed with a mental illness. Seeking psychological treatment will be avoided as long as the risks outweigh the benefits (Vogel, Wester, & Larson, 2007) and it appears that this finding suggests being stigmatized by others is a great risk to student-athletes.

Student-athletes appeared to be greatly concerned with the perceptions of others and this acted as a strong perceived barrier to seeking treatment. Student-athletes are certainly praised and recognized for their performance; however, more negative viewers see them as privileged, pampered, indolent, unmanageable, unintelligent, incompetent, and primarily motivated to attend school for sports (Etzel, Ferrante, & Pinkney, 1991). Etzel et al. suggest that this negative view of student-athletes as a group may keep student-athletes from addressing their problems. While student-athletes may be more compelled to seek help from coaches, teammates, and athletic staff (Maniar, Curry, Sommers-Flanagan, & Walsh, 2001; Selby, Weinstein, & Bird, 1990), student-athletes appear to see these same individuals as barriers to seeking professional psychological help. Perhaps, the "sport ethic" and cultural norms are preventing student-athletes from seeking help. Denial of emotional problems and reliance on the team system reinforce the athlete to

resist seeking help (Pinkerton, Hinz, & Barrow, 1989). In addition, taking the risk of violating the unwritten code of athletics, student-athletes also risk being recognized entering counseling centers. This visibility could have negative effects on privacy and confidentiality as well as have an adverse effect on teammates' perceptions of the athlete's performance and coach's confidence in the athlete. The risks, again, must outweigh the benefits for an individual to seek help for psychological problems (Vogel, Wester, & Larson, 2007). The barriers related to stigmatization are strong for individuals in need of psychological help (Barney, Griffith, Jorm, & Christensen 2006; Givens & Tjia, 2002; Wahl, 1999) and these appear to be preventing student-athletes from entering into treatment that they may need, particularly on college campuses where there is a possibility of one's peers finding out that mental health services are being sought.

Not being understood as a barrier to seeking psychological help. Over one-third of student-athletes reported the fear that the person they met with would not understand what it is like to be a student-athlete acted as a barrier for them seeking help from a mental health practitioner. This was corroborated by a similar finding among medical students in which they reported a concern that no one would understand their problems (Givens & Tjia, 2002). In addition, Maniar and his colleagues (2001) found that when seeking help for sport-related issues such as a performance enhancement, performance slumps, or injury recovery, student-athletes were more likely to turn to friends, family, and coaches than they were to seek help from a professional. Student-athletes desire dependence on those in their in-group, those that are closest to them. Student-athletes often feel isolated from the general population (Parham, 1993), face a unique set of demands and challenges, and are treated as a special population on campuses (Jordan & Denson, 1990; Pinkerton, Hinz, & Barrow, 1989). Student-athletes' fear of not being understood seems to reflect their desire not to have to explain their complex day-to-day

existences or the intricacies of their sport, so that they can be free to focus on the issue troubling them. This is supported by Watson's (2005) finding that student-athletes had greater expectations than nonathletes of counselors being knowledgeable and competent. Fears of not being understood prevent student-athletes from seeking services; thus, attention must be paid to alleviating this fear with education as well as the employment of well-trained, sport-culturally-competent practitioners to address the issues of student-athletes (Ward, Sandstedt, Cox, & Beck, 2005).

Preferences When Seeking Professional Psychological Help

Counselor type. The findings related to counselor preferences indicated that the student-athletes had clear preferences when asked from whom they would seek out if they were coping with a personal problem. Athletes most preferred seeking help for a personal problem from a friend. Next, athletes preferred to seek help from family members or a sport psychology consultant. Student-athlete then preferred to seek help from a professional counselor within an athletic department, or at the university's counseling center, or in a community agency or private practice. This finding is consistent with other sport-related studies that found student-athletes preferred to seek help from family members, friends, and coaches when dealing with sport-related issues (Maniar, Curry, Sommers-Flanagan, & Walsh, 2001; Selby, Weinstein, & Bird, 1990). This finding suggests that student-athletes prefer to seek help from those with whom they have close relationships and emotional closeness (Maniar, Curry, Sommers-Flanagan, & Walsh, 2001). Just as in the current study, Maniar and his colleagues found student-athletes preferred to seek help from sport-titled professionals over clinical psychologists and counselors. This finding suggests that student-athletes prefer help providers who have the potential to understand the athlete's complex role as well as sport-related issues. This is also consistent with this study's

participants' frequent endorsement of fear of not being understood as a barrier to seeking treatment as well as Watson's (2005) discovery that student-athletes hold higher expectations for counselors to be knowledgeable and competent. This finding suggests a need to educate student-athletes about the counseling process and the benefits of seeking help from mental health service providers in order to alleviate student-athlete sole reliance on sport-titled professionals and their avoidance of mental health clinicians. Additionally, it seems essential for universities, or at least athletic departments, to hire sport-culturally competent practitioners to work with student-athletes dealing with mental health issues (Ward, Sandstedt, Cox, & Beck, 2005).

Practitioner location. Student-athletes preferred to seek help from professional practitioners located on their college campuses. They next preferred to seek help from professional practitioners located off-campus or with their university athletic department buildings. This finding in conjunction with the perceived barriers reported by student-athletes indicates that while student athletes are leery of seeking help from campus counseling centers, perhaps due their fear of being recognized by peers, they are even more reluctant to seek help from resources within the athletic department. Preferring campus resources over athletic department resources may be due to one's fear of coaches, teammates, and athletic department staff, such as athletic trainers, becoming aware of the fact that mental health services are being sought. The lesser preference for off-campus services may be due to accessibility of these services as transportation may be an issue for students.

Practitioner's familiarity with sport. Student-athletes preferred to seek help from professional mental health practitioners that had (a) knowledge of sports, (b) participated in any collegiate sport, or (c) participated in the respondent's sport at one time. They preferred practitioners with these characteristics over a practitioner that had participated in any sport at any

time. As Watson (2005) attested, student-athletes expect their counselors to be knowledgeable and competent; this appears to include knowledge of the student-athlete role and collegiate sports in general and the respondent's sport specifically. This finding is supported by the participants' perceptions that feeling as though they would not be understood acted a barrier to seeking services.

Practitioner's race/ethnicity and gender. Overall, student-athletes reported to have a neutral opinion as to whether or not their counselor was racially/ethnically similar to them. The majority of participants in this study were Anglo/White and other racial data could not be used for analysis due to corruption of this data; therefore, interpretations are put forth with great caution. Many studies have shown that individuals, particularly ethnic minorities, prefer a counselor of the same racial/ethnic background (Atkinson, 1983; Smith, 2004; Sanchez & Atkinson, 1983). However, as the current study's sample was comprised of mostly Anglo participants, it is possible that the majority racial/ethnic status of the group is contributing to the lack of opinion about racial similarity of one's counselor.

Overall, the student-athletes in this sample reported to have neutral opinions about whether their counselor was the same gender. However, when analysis was conducted as a function of gender, females had a significantly stronger preference for seeking treatment from a female counselor and males had a significantly stronger preference for seeking treatment from a male counselor. The finding that potential clients preferred counselors of similar gender is potentially explained by the college students' needs to be understood.

Practitioner age. Student-athletes most often endorsed that they had no preference as to the age of a practitioner they would seek help from for a personal problem. However, when student-athletes endorsed specific age categories, they most often preferred to seek help from

practitioners that were closer in age to themselves. Student-athletes preferred to seek treatment from practitioners who were 26 to 30 years of age and then 31 to 35 years of age. This finding, in conjunction with the lack of preference for counselors who were 20 to 25 years old, suggests that student-athletes desire to seek treatment from individuals who are older than they are but still close enough in age to understand their journey as college-aged students. This finding is supported by Smith's (2004) finding that African American women preferred to seek help from women older than themselves but not old enough to be "out of touch with the realities of their lives as young adults" (p. 113).

Conclusions

Based on the findings of this study, the following conclusions were drawn about the manifestation of depressed mood in athletes as well as athletes' attitudes toward, perceived barriers to, and preferences for professional mental health services.

1. Overall, student-athletes in this study reported depression scores indicative of individuals experiencing very little mood disturbance.
2. In this sample of student-athletes, depression did not vary as a function of gender or injury status (i.e., injured within the previous 12 months or healthy).
3. There were strong, significant associations between depression and skipping academic and athletic events, not taking care of personal tasks because of role strain, putting effort into sport but not into life, self-destructive behaviors, feeling as though one is not living up to one's academic or athletic potential, and feeling able to mask mental health problems from coaches and teammates. Additionally, putting effort into life but not into sport, self-destructive behaviors, ability to mask mental health issues, not living up to one's athletic potential, and skipping athletic events combined to explain 38% of the

variance in student-athletes' depression scores. This indicates that these student-athlete role behaviors may be serving as cues to the existence of depressed mood among athletes.

4. Overall, student-athletes were slightly resistant to seeking treatment as their mean PAI Treatment Rejection scale scores indicated individuals who were generally content with themselves and saw little need for changes in their lives. Attitudes about seeking treatment did not vary as a function of gender but did vary as a function of previous counseling experience with those who had sought prior counseling expressing more willingness and openness to seeking treatment.
5. There were various barriers that hindered student-athletes' seeking of professional psychological services. The most frequently cited barriers were lack of time, lack of knowledge about services, services not available during the student-athletes' free time, fear of being stigmatized as crazy or weak for seeking services, fear of being recognized by peers, teammates, coaches, and athletic department staff, and fear that the practitioner would not understand what it is like to be a student-athlete.
6. Perceived barriers to seeking psychological services varied slightly as a function of gender. Analysis revealed that females tended to endorse (a) fear that Athletic Department staff will know I am using services, (b) fear that coaches or athletic trainers will have access to my records, and (c) fear that someone will recognize me as a student-athlete when I go into the counseling center with greater frequency than males.
7. Should student-athletes decide to seek help for a personal problem they preferred to seek help from friends, then family members or a sport psychology consultant, and then a professional counselor in the athletic department, on-campus, or off-campus. They preferred that their practitioner be located on-campus and then preferred to seek help

from a practitioner in the athletic department or off-campus. Student-athletes preferred a practitioner with knowledge of sport, participation in college sport, or participation in the athletes' sport over someone with participation in any sport at some time. Student-athletes reported general neutrality with regard to the practitioner's gender or race; however, when analyzed as a function of gender, each gender had higher preference for a counselor of their gender. Lastly, most student-athletes did not have a preference for a practitioner's age but of those who did report an age preference. Those with a preference, most highly preferred a practitioner between 26 and 35 years old; they were practitioners close enough in age to understand their experiences but not too close in age that they had yet to move beyond their college days.

Recommendations

Recommendations for Athletic Department Staff Members

1. Recruit and hire staff members who are aware of the importance of attending to student-athletes' mental health and well-being and be outwardly and positively supportive of seeking help when it is desired or necessary.
2. Develop rapport and individual relationships with athletes so that you can attend to maladaptive behaviors (e.g., skipping athletic and academic events, self-destructive behaviors, putting effort into sport but neglecting outside tasks,) and thoughts (e.g., disparity between perceived potential and actual performance in athletics and academics, feeling strain of balancing sport and life) as potential cues to an athlete-experiencing depressed mood.
3. Address maladaptive behaviors and thought processes. Do not devalue their importance or rationalize away the importance and severity of any maladaptive behaviors or thought

processes. Involve others, when appropriate, to help you assess and treat these individuals.

4. Foster an environment that supports seeking help for issues of mental health and well-being by developing relationships with campus resource providers, promoting positive communication about services, and diminishing negative stereotypes and stigmas with regard to seeking services.
5. Provide counseling services to student-athletes in a location that protects their privacy and confidentiality from athletic department staff members.
6. If a practitioner is hired by the athletic department, it is imperative to set and promote firm boundaries around confidentiality of an athlete's use of services and the content of such services. Confidentiality is necessary to build trust between the counselor and client, however, in athletic arenas information about an athlete is often freely passed between medical staff and coaches for the good of the athlete. Confidentiality and privacy must be promoted with clients and particularly with athletic staff as they may expect to be kept informed about their athletes.

Recommendations for University Counseling Centers

1. Promote services throughout campus, particularly in areas frequented by student-athletes. Advertising services should employ various media outlets to advertize services (e.g., campus newspapers, websites, campus radio, bulletin boards, online social networking sites), be attractive, express competent understanding of athletes' needs, and destigmatize the counseling process and need.
2. Expand business hours to serve student-athletes who cannot attend typical session times.

3. Create liaison relationships with the organizations that serve student-athletes such as athletic training rooms, coaches, and athletic advising centers. Promote the benefits of utilizing services, the awareness of barriers to seeking treatment, and destigmatize the counseling process.
4. Provide outreach presentations to sport teams that introduce services to student-athletes and express the practitioners' understanding of student-athletes' challenges, demands, and needs.
5. Educate student-athletes and athletic department staff members about the biological, psychological, and social causes of mental health issues, as well as the signs and symptoms of mental health issues to increase awareness and decrease stigma associated with mental health problems.
6. Employ practitioners who understand the needs of student-athletes and are culturally competent to serve the student-athlete populations (see Ward, Sandstedt, Cox, & Beck, 2005 for athlete-counseling competencies).

Study Limitations

1. Because the participants were recruited from a NCAA Division IA and IAA institutions the findings of this study cannot be generalized to all collegiate student-athletes. Nor can the findings be generalized to high-school student-athletes or professional athletes.
2. The student-athletes were recruited from each Division IA and IAA institution; however, the participant recruiting process was such that it was impossible to ascertain which institutions participated and did not permit for calculation of response rates. The culture and services provided at each institution could have impacted the results and analysis of this may have added to the findings.

3. This study contained unequal sample sizes with respect to gender and race/ethnicity. Females outnumbered males two to one, while 81% of the sample was Anglo/Caucasian/White. It is possible that more equal representation with respect to gender and racial/ethnic groupings may have altered the findings and/or added to the richness of the analysis.
4. Corruption of the data file eliminated the ability to analyze data related to race and sport type (e.g. contact vs. non-contact, team vs. individual sport). Analysis based on racial groupings and sport type may have enriched the findings of this study.
5. The instruments used in this study, with the exception of the PAI, were constructed or adapted for the purposes of this study. The use of instruments that were not validated prior to use in this study may have impacted the findings of this study.

Future Research

1. Design and conduct a study in which a nationwide sample of student-athletes can be compared to a nationwide sample of non-athletes in order to examine differences in prevalence, levels, and manifestation of depression, as well as attitudes toward and perceived barriers to seeking treatment.
2. Conduct a replication study with NCAA Division II and Division III athletes, high school athletes, and professional athletes.
3. Expand the current design to more thoroughly examine the association between depressed mood and self-destructive behaviors. Incorporate into the design the use of measures to assess in greater depth: alcohol use/misuse, self-injury, and physical and/or verbal altercations as well as other unlawful behaviors. Additionally, utilize standardized

assessments and/or multiple assessments to assess frequency, duration, severity and consequences of such behaviors.

4. Expand the current design to incorporate measures that assess compliance with sport norms as well as athletic identity in order to further explore the possible reasons behind the lack of gender differences found in the current study.
5. Incorporate into the current design, items which assess the phase of injury, as well as medical descriptions of severity, location, and implements needed to support the individual following an injury to further examine the impact of injury on depressed mood.
6. Expand the current design to utilize standardized assessments of student-athlete role behaviors and/or multiple items to assess these areas.
7. Expand the current design to utilize a self-report versus other-report type of assessment, such as the Perceptual Gauge Survey used by Mentink (2002), to further assess one's ability to mask symptoms of depression.
8. Conduct qualitative studies to explore the manifestation of depressed mood among athletes, their experience of depression as a student-athlete, athletes' attitudes toward seeking professional psychological help, athletes' perceived barriers to seeking help, and athletes' counselor preferences.

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APPENDICES

APPENDIX A

Demographics Questionnaire

What is your age? _____

What is your gender?

- Male
- Female

What is your marital status?

- Single
- Living with partner
- Married
- Separated
- Divorced
- Remarried

With which racial group do you identify?

- Multiracial/Biracial
- African/African American/Black
- Anglo/Caucasian/White
- Asian/Asian American/Pacific Islander
- Hispanic/Latina(o)
- Native American
- Other (please specify):

To which racial group or groups (e.g. multiracial, biracial) do you identify?

- African/African American/Black
- Anglo/Caucasian/White
- Asian/Asian American/Pacific Islander
- Hispanic/Latina(o)
- Native American
- Other (please specify) :

What is your academic classification?

- Freshman
- Sophomore
- Junior
- Senior
- Graduate

What is your academic major? Please do not use acronyms or abbreviations for your major. Please type "undeclared" if you are unsure or have not committed to a major area.

What is your cumulative grade point average (G.P.A) at this time? Please use a 0 to 4.0 scale and estimate, if necessary. _____

Are you a single sport participant at the NCAA intercollegiate level or do you play more than one sport for your college/university?

- Single Sport
- Multiple Sports

In which sport(s) do you participate in at the NCAA intercollegiate varsity level? Please check all sports you have participated in at the intercollegiate level.

- | | | |
|----------------------------------------|-------------------------------------|------------------------------------------------|
| <input type="checkbox"/> Archery | <input type="checkbox"/> Golf | <input type="checkbox"/> Synchronized Swimming |
| <input type="checkbox"/> Badminton | <input type="checkbox"/> Gymnastics | <input type="checkbox"/> Swimming/Diving |
| <input type="checkbox"/> Baseball | <input type="checkbox"/> Ice Hockey | <input type="checkbox"/> Team Handball |
| <input type="checkbox"/> Basketball | <input type="checkbox"/> Lacrosse | <input type="checkbox"/> Tennis |
| <input type="checkbox"/> Bowling | <input type="checkbox"/> Rifle | <input type="checkbox"/> Track, Indoor |
| <input type="checkbox"/> Cross Country | <input type="checkbox"/> Rowing | <input type="checkbox"/> Track, Outdoor |
| <input type="checkbox"/> Equestrian | <input type="checkbox"/> Sailing | <input type="checkbox"/> Volleyball |
| <input type="checkbox"/> Fencing | <input type="checkbox"/> Skiing | <input type="checkbox"/> Water Polo |
| <input type="checkbox"/> Field Hockey | <input type="checkbox"/> Soccer | <input type="checkbox"/> Wrestling |
| <input type="checkbox"/> Football | <input type="checkbox"/> Softball | |
| | <input type="checkbox"/> Squash | |

How many semesters (count Fall & Spring semesters only) have you been a member of this squad, including the current semester? If you are a member of multiple sport squads please answer this item based on the squad you have been a member of the longest. _____

How would you describe your role on this team? If you are a member of multiple squads please answer this item based on the squad you have been a member of the longest.

- Active participant in 100% of matches for which you are available (e.g. a "starter," "2nd string")
- Participant in less than 100% but more than 50% of matches (e.g. major contributor, perhaps "3rd string")
- Participant in less than 50% of matches (e.g. contributor)
- Other (specify): _____

APPENDIX B

Injury Information

Have you been injured during the last 12 months? An injury is a bodily event which required you to seek some form of medical or athletic training assistance.

- Yes
- No

If participant answered “Yes” to the above item, they were directed to the following questions. If they answered “No”, they were directed to the next content area.

On what part(s) of your body were you injured? Check all that apply.

- | | |
|-------------------------------------|---------------------------------------------------|
| <input type="checkbox"/> Head | <input type="checkbox"/> Hand |
| <input type="checkbox"/> Neck | <input type="checkbox"/> Chest |
| <input type="checkbox"/> Face | <input type="checkbox"/> Torso/Stomach/Ribs/Abs |
| <input type="checkbox"/> Upper back | <input type="checkbox"/> Hips/Pelvis |
| <input type="checkbox"/> Lower back | <input type="checkbox"/> Leg (upper or lower leg) |
| <input type="checkbox"/> Arm | <input type="checkbox"/> Knee |
| <input type="checkbox"/> Shoulder | <input type="checkbox"/> Ankle |
| <input type="checkbox"/> Elbow | <input type="checkbox"/> Foot |
| <input type="checkbox"/> Wrist | <input type="checkbox"/> Other (please specify): |

What type(s) of injury/injuries did you sustain? Check all that apply.

- Bone Injury
- Nerve Injury
- Muscle Injury
- Tendon Injury
- Ligament Injury
- Flesh injury (e.g. sustaining a cut)
- Organ Injury (e.g. concussion)
- Other (please specify):

My injury/injuries were:

- Chronic (e.g. long-standing back pain)
- Acute (e.g. spraining an ankle, tearing your ACL)
- Other (please specify) :

Overall, how much of an impact did you perceive your injury/injuries to have on your daily functioning? If you had multiple injuries, please take into account all of your injuries and rate the impact they had on your life during the last 12 months.

- No Impact at all
- Slight Impact
- Moderate Impact
- Somewhat Severe Impact

Severe Impact

How much time did you spend getting treatment for your physical injury (a single injury or multiple injuries) during the past year? Select one.

- Less than two weeks
- 2 weeks & 1 day to 2 months
- 2 months & 1 day to 4 months
- 4 months & 1 day to 6 months
- 6 months & 1 day to 8 months
- 8 months & 1 day to 10 months
- 10 months & 1 day to 12 months

APPENDIX C

Previous Counseling Experience Information

Have you ever sought out counseling or psychotherapy?

- Yes
- No

If participant answered “Yes” to the above item, they were directed to the following questions. If they answered “No”, they were directed to the next content area.

For what type of problem did you seek counseling?

- Academic
- Personal
- Social
- Sport Performance
- Other (please specify) : _____

Where did you go to seek counseling? (Check all that apply)

- University Counseling Center
- Community Agency
- Private practitioner
- Physician
- Religious Leader
- Sport Psychologist/Sport Psychology Consultant
- Other (please specify) : _____

Was your most recent counseling experience:

- Positive
- Negative
- Neutral

Was your most recent counseling experience:

- Helpful
- Unhelpful
- Neutral

Who recommended that you seek counseling (check all that apply)?

- Self-referred
- Family
- Friend
- Religious Leader
- Physician
- University Staff Member (please specify):
- Other (please specify):

APPENDIX D

Attitudes About Counseling & Psychotherapy Questionnaire

Please respond to each of the following questions by clicking on the statement which most accurately describes the way you feel about the statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. If I were struggling with a personal problem, I would seek out professional counseling.	<input type="radio"/>				
2. Psychological counseling can be beneficial to those who seek it out.	<input type="radio"/>				
3. People who need counseling are weak for not being able to handle their own problems.	<input type="radio"/>				
4. I would want to get psychological help if I were struggling with emotional problems, was worried, or was upset for a long period of time.	<input type="radio"/>				
5. People with emotional problems are not likely to resolve their problems without help from others; it is best to seek out professional counseling.	<input type="radio"/>				
6. I would not want to walk into a counseling center for fear that others may recognize me.	<input type="radio"/>				
7. If I were to seek counseling, I would want to seek help from a counselor/psychologist within the athletic department rather than at the University's counseling center.	<input type="radio"/>				
8. I would want my counselor/psychologist to have a background in sport/athletics.	<input type="radio"/>				

9. Persons outside of the athletic department do not understand the pressures, concerns, and unique needs I am faced with as an athlete.
10. I would not seek out counseling or psychotherapy because if my teammates, coaches, or staff members associated with the athletic department knew I was seeking help for mental health issues I would be treated differently.
11. If I were seeking psychotherapy or counseling for personal problems, I believe I could hide my need for counseling from my coach(es) and teammates so they would not know.
12. I would not want others to know that I am in counseling/therapy.
13. I may seek out psychological counseling in the future.

	Never (0% of all scheduled)	Infrequently (approx. 10% of all scheduled events)	Somewhat Infrequently (approx. 25% of all scheduled events)	Some (approx. half of all scheduled events)	Somewhat Often (approx. 75% of all scheduled events)	Often (approx. 90% of all scheduled events)	Always (100% of all scheduled events)
How often do you miss or skip academic-related events, appointments, or meetings (e.g. class, academic advising appointments, study hall, tutoring, etc.)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often do you miss or skip athletic events, appointments, or meetings?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

APPENDIX F

Barriers to Seeking Counseling Questionnaire
(Adapted from Givens & Tjia, 2002)

Have any of the following prevented you from using the counseling services at your University?

Check (✓) all that apply.

- Lack of availability of services
- Lack of time to use services
- Services are not available during my free time
- Difficulties in finding/accessing services
- Lack of confidentiality
- Fear that a diagnosis will be entered on my school record
- Fear that the Dean's office will know I am using services
- Fear that the Athletic Department staff will know I am using services
- Fear of being stigmatized as mental unhealthy
- Fear that using services will impact negatively on my career in some way
- Fear that using services will impact negatively on my status on my team (e.g. status as a team captain, level of participation, playing time)
- Fear that coaches or athletic trainers will have access to my records
- Belief that "no one will understand my problems"
- Fear that the person I meet with will not understand what it is like to be a student-athlete
- Fear that someone will recognize me as a student-athlete
- Fear that teammates will find out I am using services
- Fear that others will view me as weak for needing outside help
- Lack of knowledge of services offered
- Other (please specify):
- Other (please specify):

APPENDIX G

Counseling & Psychotherapy Preferences Questionnaire

Imagine you were in need of help for a personal issue and you decided to seek help. For each item, please indicate the statement which most accurately reflects the strength of your preference for each type of help provider.

	Do not prefer this characteristic	Very slight preference for this characteristic	No opinion on this characteristic	Somewhat prefer this characteristic	Strongly prefer this characteristic
Professional counselor at the University's Counseling Center	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional counselor in a community agency or private practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional counselor within the Athletic Department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sport Psychology Consultant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Religious Leader	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health Care Professional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other University Staff Member (not a member of the Athletic Department)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other University Staff

Member who is associated
with the University Athletic
Department

<input type="radio"/>				
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Family Member

<input type="radio"/>				
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Friend

<input type="radio"/>				
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Are there any other types of help providers from whom you would strongly prefer to seek help?

- Yes (Please Specify):
- No

Imagine you were in need of help for a personal issue and you decided to seek help from a mental health professional. For each item, please indicate the statement which most accurately reflects the strength of your preference for each characteristic in your help provider.

	Do not prefer this characteristic	Very slight preference for this characteristic	No opinion on this characteristic	Somewhat prefer this characteristic	Strongly prefer this characteristic
Counselor/Therapist whose racial/ethnic background is similar to yours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Male counselor/therapist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Female counselor/therapist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Counselor /Therapist who is not associated with the athletic department at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Counselor /Therapist whose office is within the athletic department building(s)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Counselor/Therapist who is located off-campus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Counselor/Therapist who is located on your college campus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Counselor/Therapist who has knowledge of sports	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Counselor/Therapist who has participated in any sport at one time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Counselor/Therapist who has participated in your sport at one time

-

Counselor/Therapist who has participated in any sport at the collegiate level

-

Are there any other characteristics you would prefer in the help providers from whom you would strongly prefer to seek help?

- Yes (Please specify):
- No

If you were to seek counseling for a personal problem, which age category would best reflect the age of the professional mental health provider from whom you would prefer to seek help?

- Less than 20 years of age
- Between 20-25 years of age
- Between 26-30 years of age
- Between 31-35 years of age
- Between 36-40 years of age
- Between 41-45 years of age
- Between 46-50 years of age
- Over 50 years of age
- I don't have a preference

APPENDIX H

E-mail Sent to Division II Athletic Department Staff Members for Pilot Study

Dear _____,

I am e-mailing you to request your assistance in an exciting and beneficial research study focusing on the well-being of student-athletes! I am a counseling psychology doctoral student at the University of Tennessee and I am conducting my dissertation research study to explore the ways in which intercollegiate student-athletes manifest depressed mood. Additionally, I am researching their attitudes toward seeking psychological help if they so choose, the barriers they perceive as thwarting their efforts to seek psychological counseling, and preferences they hold for counselors should they seek counseling. Student-athletes will be asked to respond to questions that pertain to their demographics, attitudes, behaviors, and feelings. Responding to these items should take no more than 10-15 minutes.

I received approval to conduct this study from the University of Tennessee's Research Compliance Office and I am recruiting student-athletes from NCAA universities and colleges across the country. I am e-mailing a nationwide sample of athletic department staff members associated with their school's CHAMPS/LifeSkills program or those who are associated with programs aimed to enhance the well-being of athletes. I am hoping you will assist me by simply forwarding the following description to the student-athletes at your university and allow them to decide whether or not they choose to volunteer to participate. There are no requirements for participation other than (1.) the participant is an NCAA intercollegiate student-athlete and (2.) the participant is 18 years of age or older (the survey will ask for their age and will not allow minors to proceed).

The athletes who decide to participate in this study will be asked to follow a direct URL link which will take them to the secured web survey. They will be required to read and agree to the terms set forth in the study's informed consent agreement and respond to the items as honestly as they can. They will not be asked to identify themselves in any way! Their participation is completely voluntary and in accordance with NCAA bylaws, they will not receive any incentives for participating.

Please feel free to contact me at [e-mail address] with any questions or concerns. If you do not have any questions or concerns and you are willing to assist in recruiting student-athletes from your University, please forward the following e-mail segment to your student-athletes [if you wish, you may cut/delete this message addressed to you and add your own message on top of the message addressed to the student-athletes (below)]. I appreciate your time and assistance in this matter! Thank you!

Sincerely,

Renée L. López

University of Tennessee

Counseling Psychology, Ph. D. Candidate

Knoxville, TN 37996

Faculty Advisor: Jacob Levy, Ph. D.

University of Tennessee

Counseling Psychology Program

Knoxville, TN 37996

PLEASE FORWARD THE FOLLOWING MESSAGE TO YOUR STUDENT-ATHLETES.
THANK YOU!! (See Appendix I).

APPENDIX I

E-mail Sent to Division II Student-Athletes for Pilot Study

Dear Student-athlete,

I am e-mailing you to request your assistance in an exciting and beneficial study! I am a counseling psychology doctoral student at the University of Tennessee, Knoxville and I am conducting a research study which will explore the ways in which intercollegiate student-athletes manifest depressed moods as well as student-athletes' attitudes toward seeking psychological help, the barriers student-athletes perceive as thwarting their efforts to seek psychological counseling, and preferences student-athletes hold for counselors should they seek counseling. The data from this study will be used to provide specific recommendations to mental health professionals, college and university athletic departments, and university counseling centers on how to better serve the mental health and wellness needs of intercollegiate student-athletes.

I am recruiting student-athletes from NCAA universities and colleges across the country (18 years of age and older) and I am hoping that you will voluntarily participate in my study. Your participation will take approximately 10-15 minutes of your time. You will respond to survey items that pertain to your demographics, well-being, sport-related behaviors, and attitudes about mental health counseling. You WILL NOT be asked to identify yourself in any way. Your participation is completely VOLUNTARY but is greatly appreciated.

If you choose to participate:

1. Click on the link below and you will be directed to the secure on-line survey.
2. Respond to the items as honestly as you can.
3. You will not receive any personalized feedback on your responses nor will you receive any mental health diagnosis; that is NOT the purpose of this study.

However, if you would like to speak to a counselor you can follow links to your campus counseling center's contact information. Again, this survey is not designed to diagnosis anyone with mental health issues.

If you are willing to participate, PLEASE CLICK (or copy and paste into your internet browser) on the following link to enter the survey:

<http://survey.utk.edu/mrIWeb/mrIWeb.dll?I.Project=DEPRESSIONHELPSE>

Please feel free to contact me at [e-mail address] with any questions or concerns. I appreciate your time and your assistance in helping me to complete my requirements for my Ph.D. in counseling psychology! Thank you and best of luck with all of your endeavors!

Sincerely,

Renée L. López

University of Tennessee

Counseling Psychology Program

Knoxville, TN 37996

Faculty Advisor: Jacob Levy, Ph. D.

University of Tennessee

Counseling Psychology Program

Knoxville, TN 37996

APPENDIX J

Informed Consent Form

Depressed Mood in Student-Athletes and Their Attitudes Toward, Perceived Barriers to, and Preferences for Seeking Professional Psychological Help

I would like to invite you to participate in a study concerning the ways in which collegiate student-athletes manifest depressed mood. This study will also explore student-athletes' attitudes toward seeking psychological counseling, barriers to seeking psychological counseling, and counselor preferences. Student-athletes from across the nation are being invited to participate in this study in an attempt to explore these topics from a broad perspective. The data from this study will be used to provide specific recommendations to mental health professionals, college and university athletic departments, and university counseling centers on how to better serve the mental health and wellness needs of intercollegiate student-athletes.

What does it mean if I participate?

If you choose to participate, you will be asked to log on to a secure website and respond to items which will address your personal well-being and your opinions regarding mental health counseling. You will be responding to items which ask for personal responses and opinions. You WILL NOT be identifying yourself, by name or other identification items (e.g. social security number), on any of these items. It is estimated that it will take you between 15 and 30 minutes to complete these items. The data collected through your participation will be analyzed and summarized by the primary investigator (Renée L. López) for the purpose of completing her dissertation project required by the Ph.D. degree program in Counseling Psychology at the University of Tennessee, Knoxville.

If you choose to participate in this study, your participation involves answering questions about your personal experiences and opinions. Therefore, there should be no risk or discomfort on your part. You may, however, choose to withdraw from the study at anytime without penalty.

Your participation in this study is in no way meant to provide you with a mental health diagnosis or counseling. You will not receive personalized feedback from your responses on these questionnaires. Should you have questions with regard to your mental health and well-being please seek services at your University's Student Counseling Services Center. If you do not know the location of your university's counseling center, please seek this information out through your university's online or phone directory or through your athletic trainer. Should you need help during non-business hours, please contact your local emergency services at 911 in a life-threatening situation, call 1-800-SUICIDE to discuss your concerns with a trained hotline listener, locate local referrals by searching the government section of your local phonebook, or contact your athletic training staff. (Information regarding your university's counseling services can be provided to you at the end of this survey)

What are the benefits of participating in this study?

Your participation will contribute to the body of knowledge on the mental health and well-being of collegiate student-athletes. This information will be beneficial to mental health professionals, athletic department staff members and administrators, and university student counseling services centers. Additionally, the data will help provide a foundation for further research on the mental health experiences of student-athletes. Your identity will in no way be revealed to anyone or tracked in any way. The American Psychological Association ethical guidelines require the researcher to maintain research participant's anonymity and confidentiality.

Who can I contact if I have a question?

You may direct any questions regarding your participation in this study to the researcher: Renée L. López at [e-mail address], or to Dr. Jacob Levy at [e-mail address and phone number]. You may also contact the University of Tennessee, Knoxville's Office of Research Compliance Services at (865) 974- 3466.

I have read and understand the above explanation of this research project being conducted by Renée L. López and I voluntarily agree to participate in this study. My selection of the “Agree to Consent” icon and my answering of the survey items will act as my implied consent.

- **Agree to Consent**
- **Do Not Agree to Consent**

APPENDIX K

Demographics Questionnaire for Main Study

What is your age? _____

What is your gender?

- Male
- Female

What is your marital status?

- Single
- Living with partner
- Married
- Separated
- Divorced
- Remarried

With which racial group do you identify? (Select one)

- Multiracial/Biracial
- African/African American/Black
- Anglo/Caucasian/White
- Asian/Asian American/Pacific Islander
- Hispanic/Latina(o)
- Native American
- Other (please specify):

If participant responded with “Multiracial/Biracial,” they were directed to the following question. If they did not repond with “Multiracial/Biracial” they were directed to the academic classification item.

To which racial group or groups (e.g. multiracial, biracial) do you identify?

- African/African American/Black
- Anglo/Caucasian/White
- Asian/Asian American/Pacific Islander
- Hispanic/Latina(o)
- Native American
- Other (please specify): _____

What is your academic classification?

- Freshman
- Sophomore
- Junior
- Senior
- Graduate

What is your academic major? Please do not use acronyms or abbreviations for your major. Please type "undeclared" if you are unsure or have not committed to a major area.

What is your cumulative grade point average (G.P.A) at this time? Please use a 0 to 4.0 scale and estimate, if necessary. _____

Are you a single sport participant at the NCAA intercollegiate level or do you play more than one sport for your college/university?

- Single Sport
- Multiple Sports

In which sport(s) do you participate in at the NCAA intercollegiate varsity level? Please check all sports you have participated in at the intercollegiate level.

- | | | |
|----------------------------------------|-------------------------------------|------------------------------------------------|
| <input type="checkbox"/> Archery | <input type="checkbox"/> Golf | <input type="checkbox"/> Synchronized Swimming |
| <input type="checkbox"/> Badminton | <input type="checkbox"/> Gymnastics | <input type="checkbox"/> Swimming/Diving |
| <input type="checkbox"/> Baseball | <input type="checkbox"/> Ice Hockey | <input type="checkbox"/> Team Handball |
| <input type="checkbox"/> Basketball | <input type="checkbox"/> Lacrosse | <input type="checkbox"/> Tennis |
| <input type="checkbox"/> Bowling | <input type="checkbox"/> Rifle | <input type="checkbox"/> Track, Indoor |
| <input type="checkbox"/> Cross Country | <input type="checkbox"/> Rowing | <input type="checkbox"/> Track, Outdoor |
| <input type="checkbox"/> Equestrian | <input type="checkbox"/> Sailing | <input type="checkbox"/> Volleyball |
| <input type="checkbox"/> Fencing | <input type="checkbox"/> Skiing | <input type="checkbox"/> Water Polo |
| <input type="checkbox"/> Field Hockey | <input type="checkbox"/> Soccer | <input type="checkbox"/> Wrestling |
| <input type="checkbox"/> Football | <input type="checkbox"/> Softball | |
| | <input type="checkbox"/> Squash | |

How many semesters (count Fall & Spring semesters only) have you been a member of this squad, including the current semester? If you are a member of multiple sport squads please answer this item based on the squad you have been a member of the longest. _____

How would you describe your role on this team? If you are a member of multiple squads please answer this item based on the squad you have been a member of the longest.

- Active participant in 100% of matches for which you are available (e.g. a "starter," "2nd string")
- Participant in less than 100% but more than 50% of matches (e.g. major contributor, perhaps "3rd string")
- Participant in less than 50% of matches (e.g. contributor)
- Other (specify):

APPENDIX L

Permission to Use and Modify Personality Assessment Inventory (Morey, 1991a) Scale Items

PAR
Psychological
Assessment
Resources

INCORPORATED

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LUTZ, FLORIDA 33549

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Fax: (813) 968-2598

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LICENSE AGREEMENT

THIS AGREEMENT, made this March 29, 2006, by and between Psychological Assessment Resources, Inc., a Florida Corporation, with its principal offices located at 16204 North Florida Avenue, Lutz, Florida 33549, hereinafter referred to as PAR, and Ms. Renee Lorraine Lopez, with her principal offices located at The University of Tennessee, Knoxville, 308 Austin Peay Building, 1404 Circle Drive, Knoxville, TN 37996, hereinafter referred to as Licensee.

1) RECITALS

PAR has developed and holds all copyrights and distribution rights to certain psychological tests and related materials as listed in Schedule A, hereinafter called "Test". The Test consists of PAR's items, scoring keys, scales, profiles, standard-score conversion tables, norms tables, interpretive information, and related materials created, prepared, devised, and combined by PAR for the administration, scoring, reporting, and analysis of the Test, and includes the words, symbols, numbers, and letters used to represent the Test. Licensee desires to develop automated procedures for the secure and encrypted administration of the Test through Licensee's secure internet assessment website. The access to Licensee's website will be by invitation only in connection with Licensee's research study titled, *The manifestation of depression in student-athletes and their attitudes toward, barriers to, and preferences for seeking professional psychological help* and to subjects for this research purpose only (the "Limited Purpose(s)"). Unless permitted to do so by a separate license agreement, Licensee only has the right to use the Test for the Limited Purpose described above.

In consideration of the mutual covenants and promises expressed herein and other good and valuable considerations, it is agreed as follows:

2) LICENSE

PAR hereby grants to Licensee, subject to the terms of this Agreement, a non-transferable, non-exclusive license to place the Test on Licensee's Website for the Limited Purpose described in Section 1 above.

Licensee agrees to hold secure and treat as proprietary all information transferred to it from PAR. Licensee shall carefully control the use of the Test for the Limited Purpose described in this Agreement. Licensee's use of the Test will be under the supervision or in consultation with a qualified psychologist or other qualified individual and consistent with the then current edition of the Standards for Educational and Psychological Testing published by the American Psychological Association.

3) TERMS AND TERMINATION

The initial term of this Agreement shall extend from September 1, 2006 through November 30, 2006, and may be extended only by mutual agreement of the parties. Notwithstanding any other provision of this Agreement, this Agreement may be terminated if any of the following events occur:

- (a) Termination is mutually agreed to by the parties.
- (b) Licensee defaults in the performance of any of its duties hereunder.

On the effective date of expiration or termination of this Agreement pursuant to subsections (a) and (b) above, all rights in this Agreement revert to PAR. Computer software programs written by or for Licensee remain the property of Licensee. Licensee warrants that upon expiration or termination of this Agreement under subsections (a) and (b) above, and except as set forth in any separate license agreement relating thereto, all portions of the Test licensed hereunder shall be removed from Licensee's Website. Failure to cease all uses of the Test shall constitute copyright infringement.

4) TERMINATION RIGHTS

In the event of termination pursuant to paragraph 3 above for any reason, PAR shall not be liable to Licensee for compensation, reimbursement or damages for any purpose, on account of any expenditures, investments, leases or commitments made or for any other reason whatsoever based upon or growing out of this Agreement.

5) CONDITIONS OF USE

PAR shall have the right to review, test, and approve that portion of Licensee's Website which includes the Test. Following PAR's approval of that portion of

Licensee's Website containing the Test, the manner in which the Test appears on such Website shall not be changed in any material way without prior approval of PAR.

The computer programs developed by Licensee and used in any phase of administration and scoring of the Test shall be fully tested by Licensee and shall be encrypted and reasonably protected from access, intrusion and changes by persons who are not authorized agents of Licensee. In addition to the foregoing, Licensee shall exert all reasonable commercial efforts to prevent the Programs, and any accompanying code for the administration of the Test from being accessed, viewed or copied by others. Licensee warrants the accuracy of such scoring and reporting.

6) PROPRIETARY RIGHTS

PAR is the owner of all right, title and interest in the Test. Licensee shall acquire no right or interest in the Test, by virtue of this Agreement or by virtue of the use of the Test, except the right to use the Test in accordance with the provisions of this Agreement. Licensee shall not modify or revise the Test in any manner without written approval by PAR. All uses of the Test by Licensee shall inure to the benefit of PAR. Licensee agrees not to challenge or otherwise interfere with the validity of the Test or PAR's ownership of them.

7) ROYALTIES

Licensee agrees to pay PAR a royalty fee for 150 administrations of the Test and copyrighted materials contained therein. Licensee will also provide PAR with an itemized accounting of all administrations of each Test administered by Licensee during the term of this agreement. Licensee shall pay to PAR Two Hundred Fifty Dollars (\$250.00) as an initial license fee which is due and payable upon the signing of this License Agreement.

8) ACCOUNTING

Licensee shall develop secure computerized accounting methods acceptable to PAR. Such accounting methods must include an electronic counting mechanism which will accurately record the number of administrations of each Test used. Licensee will keep accurate financial records of all transactions relating to the use of the Test, and PAR shall have the right to examine the software and records of Licensee pertaining to the use of the Test. Licensee will make such software and records accessible to PAR or its nominee during normal working hours upon not less than five (5) business days' prior written notice. Licensee shall retain such software and records for at least one year from the date this Agreement expires or the effective termination date.

The Website shall contain the following copyright notice:

“Adapted and reproduced by special permission of the Publisher, Psychological Assessment Resources, Inc., 16204 North Florida Avenue, Lutz, Florida 33549 from the Personality Assessment Inventory by Leslie C. Morey, Ph.D., Copyright 1991. Further reproduction is prohibited without permission of PAR.”

9) INDEMNITY

Licensee agrees to indemnify PAR and hold PAR harmless against any claim or demand or against any recovery in any suit (including taxes of any kind, reasonable attorney's fees, litigation costs, and other related expenses) that may be:

- (a) brought by or against PAR, arising or alleged to have arisen out of the use of the Test by Licensee;
- (b) sustained or incurred by PAR, arising or alleged to have arisen in any way from the breach of any of Licensee's obligations hereunder; or
- (c) incurred by PAR in any litigation to enforce this Agreement, including litigation against Licensee.

10) ASSIGNMENT

Licensee shall not assign this Agreement or any license, power, privilege, right, or immunity, or delegate any duty, responsibility, or obligation hereunder, without the prior written consent of PAR. Any assignment by PAR of its rights in the Test shall be made subject to this Agreement.

11) GOVERNING LAW

This Agreement shall be construed according to the laws of the State of Florida of the United States of America. Venue for any legal action relative to this Agreement shall be in the appropriate state court in Hillsborough County, Florida, or in the United States District Court for the Middle District of Florida, Tampa division. Licensee agrees that, in any action relating to this Agreement, the Circuit Court in Hillsborough County, Florida or the United States District Court for the Middle District of Florida, Tampa Division, has personal jurisdiction over Licensee, and that Licensee waives any argument it may otherwise have against the exercise of those courts' personal jurisdiction over Licensee.

12) SEVERABILITY

If any provision of this Agreement shall, to any extent, be invalid and unenforceable such provision shall be deemed not to be part of this Agreement, and the parties agree to remain bound by all remaining provisions.

13) EQUITABLE RELIEF

Licensee acknowledges that irreparable damage would result from unauthorized use of the Test and further agrees that PAR would have no adequate remedy at law to redress such a breach. Therefore, Licensee agrees that, in the event of such a breach, specific performance and/or injunctive relief, without the necessity of a bond, shall be awarded by a Court of competent jurisdiction.

14) ENTIRE AGREEMENT OF THE PARTIES

This instrument embodies the whole Agreement of the parties. There are no promises, terms, conditions, or obligations for the Test licensed hereunder other than those contained herein; and this Agreement shall supersede all previous communications, representations, or agreements, either written or verbal, between the parties hereto, with the exception of any prior agreements that have not previously been terminated by written consent of both parties or by one party if the terms of the agreement allow. This Agreement may be changed only by an agreement in writing signed by both parties.

15) NOTICES AND MODIFICATIONS

Any notice required or permitted to be given under this Agreement shall be sufficient if in writing and if sent by certified or registered mail postage prepaid to the addresses first herein above written or to such addresses as either party may from time to time amend in writing. No letter, telegram, or communication passing between the parties hereto covering any matter during this contract, or periods thereafter, shall be deemed a part of this Agreement unless it is distinctly stated in such letter, telegram, or communication that it is to constitute a part of this Agreement and is to be attached as a right to this Agreement and is signed by both parties hereto.

16) SUCCESSORS AND ASSIGNS

Subject to the limitations on assignments as provided in Section 13, this Agreement shall be binding on the successors and assigns of the parties hereto.

17) PARAGRAPH HEADINGS

The paragraph headings contained in this Agreement are inserted only for convenience and they are not to be construed as part of this Agreement.

18) AUTHORIZATION AND REPRESENTATION

Each party represents to the others that it has been authorized to execute and deliver this Agreement through the persons signing on its behalf.

IN WITNESS WHEREOF, the parties have executed this Agreement in duplicate on the date first herein above written.

PSYCHOLOGICAL ASSESSMENT
RESOURCES, INC.

WITNESS: _____

By: _____

R. BOB SMITH III, PH.D.

Title: CHAIRMAN AND CEO

RENEE LORRAINE LOPEZ

WITNESS: _____

By: _____

Title: _____

SIGNATURE OF PROFESSOR REQUIRED:

I hereby agree to supervise this student's use of these materials. I also certify that I am qualified to use and interpret the results of these tests as recommended in the *Standards for Educational and Psychological Testing*, and I assume full responsibility for the proper use of all materials used per this Agreement.

BY: _____

Printed Name: _____

SCHEDULE A

The Test licensed to Licensee pursuant to the above license consist of PAR's items, scoring keys, scales, profiles, standard-score conversion tables, norms tables, and related materials created, prepared, devised, and combined by PAR for the administration, scoring, reporting, and analysis of the Test, and include the words, symbols, numbers, and letters used to represent the Test. However, PAR and Licensee acknowledge and agree that Licensee may use only the PAR items and scoring information for the Test as appropriate for the Limited Purpose. The Test referred to in the body of this Agreement is defined as follows:

- 1) Personality Assessment Inventory (PAI)
 - Item Booklet
 - Answer Sheet

32 Items in the Depression and Treatment Rejection Scales Only

APPENDIX M

Personality Assessment Inventory (Morey, 1991a)

Please respond to the statements as it most accurately reflects your experience. False of you (F), Somewhat true of you (ST), Mostly true of you (MT), or Very true of you (VT).

Treatment Rejection Scale

I have some inner struggles that cause problems for me.	F	ST	MT	VT
I need to make some important changes in my life.	F	ST	MT	VT
I need to change some things about myself, even if it hurts.	F	ST	MT	VT
I need some help to deal with important problems.	F	ST	MT	VT
I need some help to deal with important problems.	F	ST	MT	VT
I am curious why I behave the way I do.	F	ST	MT	VT
I'm comfortable with myself the way I am.	F	ST	MT	VT
Many of my problems are my own doing.	F	ST	MT	VT
I can solve my problems by myself.	F	ST	MT	VT

Depression Scale

Subscale	Item	F	ST	MT	VT
DEP-A	Much of the time I'm sad for no real reason.	F	ST	MT	VT
DEP-C	I feel that I've let everyone down.	F	ST	MT	VT
DEP-P	I hardly have any energy.	F	ST	MT	VT
DEP-A	I've forgotten what it's like to feel happy.	F	ST	MT	VT
DEP-C	Sometimes I think I'm worthless.	F	ST	MT	VT
DEP-P	I have no trouble falling asleep.	F	ST	MT	VT
DEP-A	Everything seems like a big effort.	F	ST	MT	VT
DEP-C	I don't feel like trying anymore.	F	ST	MT	VT
DEP-P	I rarely have trouble sleeping.	F	ST	MT	VT
DEP-A	Nothing seems to give me much pleasure	F	ST	MT	VT
DEP-C	I can't seem to concentrate very well.	F	ST	MT	VT
DEP-P	I've been moving more slowly than usual.	F	ST	MT	VT
DEP-A	I've lost interest in the things I used to enjoy.	F	ST	MT	VT
DEP-C	No matter what I do, nothing works.	F	ST	MT	VT
DEP-P	I often wake up very early in the morning and can't get back to sleep.	F	ST	MT	VT
DEP-A	I have no interest in life.	F	ST	MT	VT
DEP-C	I think good things will happen to me in the future.	F	ST	MT	VT
DEP-P	I have a good appetite.	F	ST	MT	VT
DEP-A	Lately, I've been happy much of the time.	F	ST	MT	VT
DEP-C	I have something worthwhile to contribute.	F	ST	MT	VT
DEP-P	I often wake up in the middle of the night.	F	ST	MT	VT
DEP-A	I'm almost always a happy and positive person.	F	ST	MT	VT

DEP-C	I'm pretty successful at what I do.	F	ST	MT	VT
DEP-P	I have little interest in sex.	F	ST	MT	VT

APPENDIX N

Attitude Toward Seeking Professional Psychological Help Scale (Fischer & Farina, 1995)

		Disagree	Somewhat Disagree	Somewhat Agree	Agree
1	If I believed I was having a mental breakdown, my first inclination would be to get professional attention.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	The idea of talking about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	If I were experiencing a serious emotional crisis at this point in my life, I would be confident that I could find relief in psychotherapy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	There is something admirable in the attitude of a person who is willing to cope with her or her conflicts and fears without resorting to professional help.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	I would want to get psychological help if I were worried or upset for a long period of time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	I might want to have psychological counseling in the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	A person with an emotional problem is not likely to solve it alone; he or she is likely to solve it with professional help.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	Considering the time and expense involved in psychotherapy, it would have doubtful value for a person like me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	A person should work out his or her own problems; getting psychological counseling would be a last resort.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	Personal and emotional troubles, like many things, tend to work out by themselves.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

APPENDIX O

E-mail Sent to Division IA and IAA Athletic Department Staff Members for Main Study

Dear _____,

I am e-mailing you to request your assistance in an exciting and beneficial research study focusing on the well-being of student-athletes! I am a counseling psychology doctoral student at the University of Tennessee and I am conducting my dissertation research study to explore the ways in which intercollegiate student-athletes manifest depressed mood. Additionally, I am researching their attitudes toward seeking psychological help if they so choose, the barriers they perceive as thwarting their efforts to seek psychological counseling, and preferences they hold for counselors should they seek counseling. Student-athletes will be asked to respond to questions that pertain to their demographics, attitudes, behaviors, and feelings. Responding to these items should take no more than 15-30 minutes (time will depend on the student's rate of reading, rate of response, and number of items required to answer).

I received approval to conduct this study from the University of Tennessee's Research Compliance Office and I am recruiting student-athletes from NCAA universities and colleges across the country. I am e-mailing a nationwide sample of athletic department staff members associated with their school's CHAMPS/LifeSkills program or those associated with programs aimed to enhance the well-being of athletes. I am hoping you will assist me by simply forwarding the following description to the student-athletes at your university and allowing them to decide whether or not they choose to volunteer to participate. There are no requirements for participation other than (1.) the participant is an NCAA intercollegiate student-athlete and (2.) the participant is 18 years of age or older (the survey will ask for their age and will not allow minors to proceed).

The athletes who decide to participate in this study will be asked to follow a direct URL link which will take them to the secured web survey. They will be required to read and agree to the terms set forth in the study's informed consent agreement and respond to the items as honestly as they can. They will not be asked to identify themselves in any way! Their participation is completely voluntary and in accordance with NCAA bylaws, they will not receive any incentives for participating.

Please feel free to contact me at [e-mail address] with any questions or concerns. If you do not have any questions or concerns and you are willing to assist in recruiting student-athletes from your University, please forward the following e-mail segment to your student-athletes [if you wish, you may cut/delete this message addressed to you and add your own message on top of the message addressed to the student-athletes (below)]. I appreciate your time and assistance in this matter! Thank you!

Sincerely,

Renée L. López

University of Tennessee

Counseling Psychology Program

Knoxville, TN 37996

Faculty Advisor: Jacob Levy, Ph. D.

University of Tennessee

Counseling Psychology Program

Knoxville, TN 37996

APPENDIX P

E-mail Sent to Division IA and IAA Student-Athlete for Main Study

Dear Student-athlete,

I am e-mailing you to request your assistance in an exciting and beneficial study! I am a counseling psychology doctoral student at the University of Tennessee, Knoxville and I am conducting a research study which will explore the ways in which intercollegiate student-athletes manifest depressed moods as well as student-athletes' attitudes toward seeking psychological help, the barriers student-athletes perceive as thwarting their efforts to seek psychological counseling, and preferences student-athletes hold for counselors should they seek counseling. The data from this study will be used to provide specific recommendations to mental health professionals, college and university athletic departments, and university counseling centers on how to better serve the mental health and wellness needs of intercollegiate student-athletes.

I am recruiting student-athletes from NCAA universities and colleges across the country (18 years of age and older) and I am hoping that you will voluntarily participate in my study. Your participation will take approximately 15-30 minutes of your time (time will depend on your rate of response and number of items to which you respond). You will respond to survey items that pertain to your demographics, well-being, sport-related behaviors, and attitudes about mental health counseling. You WILL NOT be asked to identify yourself in any way. Your participation is completely VOLUNTARY but is greatly appreciated!

If you choose to participate:

1. Click on the link below and you will be directed to the secure on-line survey.
2. Respond to the items as honestly as you can.

3. You will not receive any personalized feedback on your responses nor will you receive any mental health diagnosis; that is NOT the purpose of this study.

However, if you would like to speak to a counselor you can follow links to your campus counseling center's contact information. Again, this survey is not designed to diagnosis anyone with mental health issues.

If you are willing to participate, PLEASE CLICK (or copy and paste into your internet browser) on the following link to enter the survey:

<http://survey.utk.edu/mrIWeb/mrIWeb.dll?I.Project=DEPRESSIONHELPSE>

Please feel free to contact me at [e-mail address] with any questions or concerns. I appreciate your time and your assistance in helping me to complete my requirements for my Ph.D. in counseling psychology! Thank you and best of luck with all of your endeavors!

Sincerely,

Renée L. López

University of Tennessee

Counseling Psychology Program

Knoxville, TN 37996

Faculty Advisor: Jacob Levy, Ph. D.

University of Tennessee

Counseling Psychology Program

Knoxville, TN 37996

VITA

Renée Lorraine López was born and raised in northern Virginia. She attended both Marshall Road Elementary in Vienna, Virginia and Fairview Elementary in Burke, Virginia. She graduated from James W. Robinson Secondary School in Fairfax, Virginia and went on to attend the University of Virginia as a student-athlete. Renée graduated from the University of Virginia with a Bachelor of Arts degree in Psychology in 1999. After graduation, she was hired by a defense contracting firm where she spent two years supporting warship construction for the United States Navy's Destroyer program. In 2001, Renée enrolled in the University of Tennessee's doctoral program in Counseling Psychology. After completing all coursework, Renée moved to College Station, Texas, where she spent the 2006 -2007 academic year completing her APA-accredited internship at Texas A&M University's Student Counseling Services Center. As an intern, Renée specialized in counseling student-athletes with mental health issues, treating eating disorders, treating anxiety disorders, and treating individuals with substance abuse issues. Since 2008, Renée and her husband have resided in Colorado. While finishing her dissertation, Renée volunteered as a hotline listener for Moving to End Sexual Assault, a rape crisis and advocacy group in Boulder, Colorado.