Athletic Identity and Ego Identity Status as Predictors of Psychological Health among Intercollegiate Athletes

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WILLIAM SOTO

has been approved for

the Department of Counseling and Higher Education

and The Patton College of Education by

Christine Suniti Bhat

Professor, Counseling and Higher Education

Renée A. Middleton

Dean, The Patton College of Education

Abstract

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Athletic Identity and Ego Identity Status as Predictors of Psychological Health among Intercollegiate Athletes

Director of Dissertation: Christine S. Bhat

This investigation examined whether the independent variables of athletic identity (AIMS) and ego identity statuses of diffusion (DIFF), foreclosure (FOR), moratorium (MOR), and identity achievement (ACH) can predict psychological health outcomes among intercollegiate athletes. The dependent variable consisted of two sub-variables – psychological well-being (PW) and psychological distress (PD). Theories on identity formation were reviewed including the developmental theory of on emerging adults (Arnett, 2000). Data were collected using the Athletic Identity Measure (Brewer, VanRaalte, & Linder, 1993); the Objective Measure of Ego Identity (Adams, 2012); and Mental Health Inventory (Veit & Ware, 1983). Data were collected from (N=203) Division 1 athletes at a public university in the Mid-West. Two standard regression analyses were performed to answer the research question and to test the null hypothesis. The result of the standard regression showed MOR and ACH as significant predictors of PW and MOR and AIMS as significant predictors of PD. A negative relationship among some of the variables were also found. A post hoc backward regression was performed to assess the usefulness of the variables and to better understand the relationship between the predictor variables and the dependent variables. The results showed that all the variables are useful for future research and found DIFF to serve as a suppressor variable between AIMS and MOR when predicting PD.

Dedication

This dissertation is being dedicated to my God and Savior. I also dedicate this to my mother Saturia Soto whose prayers, pain, and suffering have made this project possible. I also dedicate this dissertation to my mentor and father figure, Fr. Joseph Tedesco (R.I.P). Finally, I dedicate this to my best friend who supported me through my entire academic experience, Robert Reeder. Thank you!

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Chapter 1: Introduction

Participation in organized sports in the United States has increased to become an integral part of our society (Proctor & Boan-Lenzo, 2010). The opportunity to participate in athletics comes in a variety of forms such as professional, intercollegiate, or at the youth, community, and school levels. Many young athletes share the dream of playing at the highest amateur level possible, college. Intercollegiate athletes are considered to be in the developmental stage of emerging adulthood (Arnett, 2001) and face significant developmental tasks and stressors. The intercollegiate athlete is subject to the forces of both ego identity and athletic identity development. This dissertation examined the relationships between the constructs of athletic identity status, ego identity development, and psychological health in intercollegiate athletes. The researcher sought to establish whether the independent variables athletic identity and the four ego identity statuses (diffusion, foreclosure, moratorium, and identity achievement) would interact in any combinations to predict changes in psychological health among intercollegiate athletes. This chapter includes the background for the study, a general discussion of the variables, statement of the problem, the research question, definition of terms, limitations, and delimitations.

Background of the Study

Because of the increase and significance given in the United States to early athletic participation, researchers have investigated the potential psychological benefits and disadvantages of early athletic experiences (Coakley, 2011; Steiner, McQuivey, Pavelski, Pitts, & Kraemer, 2000; Shehu & Moruisi, 2011; Watson & Kissinger, 2007). Through early sport socialization and the specialization of skills garnered during

childhood, young athletes begin to identify with the role of athlete at an early age (Simons, VanRheenen, & Covington, 1999). Research on athlete development and role experimentation suggests that early participation in sport can influence the process of identity formation especially in later adolescence (Miller & Kerr, 2003). Members of the family, mainly parents, often facilitate early exposure to role experimentation. It is widely accepted that these influential individuals have the greatest impact on role-learning and identity development during the most decisive periods of a young person's life (Erikson, 1968; Marcia, 1966).

According to identity researchers, it is during the process of identity exploration that the individual utilizes his or her learned individual capacity to meet the challenges of life, which ultimately serves in the formation of an identity (Arnett, 2000; Erickson, 1968; Marcia, 1966). These researchers suggested that high school and college years are considered to be the most pivotal time for adolescent identity development and formation (Arnett, 2001; Erikson, 1968). During the crucial years of adolescence, the individual is said to face developmental crises of role exploration and experimentation that must be resolved in order for them to move forward in their identity development and formation (Arnett, 2000; Erickson, 1950; Houle, Brewer, & Kluck, 2010; Marcia, 1966; Miller & Kerr, 2003). Tanner (2006) added that these developmental crises do not end with adolescence and describe a more prolonged path towards adulthood.

Arnett (2000) proposed a new period of identity exploration termed *emerging adulthood* occurring between the ages of 18-25 years. The concept of emerging adulthood is relevant to this study as it accurately represents the developmental stage of intercollegiate athletes. Arnett's work (2000) defined the experiences of this group as an

age of identity exploration, instability and feeling in-between, self-focused, and layered with great possibilities.

Individuals who are encouraged to explore roles in sport at a young age and who are socialized to understand the rigors of early specialization, often find the formation of an athletic identity central to their development well into their emerging adult years. Early adolescent exposure to sport often influences the identity formation of the individual who begins to identify more, and often exclusively, with the role of athlete (Miller & Kerr, 2003). The consequences of an exclusive athletic identity are compounded by the developmental demands faced by these individuals as they transition and adjust to college life. A developmental profile of the intercollegiate athlete can provide insights into the challenges and consequences faced by these individuals during a critical time of development and identity formation.

A developmental profile of intercollegiate athletes. According to a report issued by the United States Government Accountability Office (2007), there are approximately 370,470 college students who participate in intercollegiate sports (males = 59%, females = 41%) in the year 2006. Currently, the National College Athletic Association (2018) reported an increase in student athlete participation with a total count of 492, 000 intercollegiate athletes between the Division I, II, and III systems (NCAA.org). The college years are considered a formidable and dynamic period in the psychosocial development of young adults (Arnett, 2000; Chickering & Reisser, 1993; Erickson, 1968), which often includes the transition and adjustment to college and is known to be experienced by both intercollegiate athletes and non-athletes alike. These individuals contend with an array of issues including developing autonomy, establishing

identity, the management of relationships, and making future plans (Cornelius, 1995). However, from a young age many intercollegiate athletes are socialized in an environment in which they are presented with challenges and demands that are greatly different from their peers (Parham, 1993). These additional challenges may contribute to making adjustment to college more challenging for athletes. Additional challenges faced by college athletes include identity role conflicts, role strains, balancing academics and athletic pursuits, social isolation, burnout, managing success or the lack of success, time commitments, and career challenges (Parham, 1993; Petitpas & Buntrock, 1995). The work of several theorists in the field of identity development in general and athletic identity development in particular, are relevant to understanding identity development in intercollegiate athletes.

The work of Erik Erikson (1959, 1968) in the field of identity development is seminal. Erikson spent most of his professional life examining the nature of psychosocial development including the formation of adolescent identity in order to extract meaning about the human condition.

Based on the epigenetic principle, which include the environmental influences on genetic expression leading to behavioral aptitude during development, Erikson (1959;1968) proposed eight stages of psychosocial development distinguished by conflicts that an individual faces and must resolve. From an identity perspective, the fifth stage during which adolescents face a conflict between identity versus role confusion, is considered an important developmental period (Erikson, 1968; Marcia, 1966). Erikson (1968) defined identity as a process that fuses personality while connecting the individual to the social environment. The individual, along with the facilitative demands of parents

and society, explores and identifies with many roles such as sibling, friend, student and athlete. Erikson (1968) explained that a balance between identity and role confusion results in a successful resolution of the conflict. However, the individual must consider how to comport with the principles of that particular role and identity. Familial and social pressures strongly influence the manner in which the individual behaves during this adolescent challenge. The effects of these influences can result in identity confusion or a strong identification with one particular role over others including the role of athlete. While early writings on identity formation focused on the adolescent, Arnett (2000) proposed that identity formation continues past the age of adolescence, extending this period of moratorium to the mid-twenties and developed the classification of emerging adults.

In his research Arnett (2000) demonstrated that identity achievement rarely occurs during the period ending in high school, but instead continues past high school years. Arnett projected that identity formation begins in high school but continues during the late teen years and into the twenties, which correlates with the age of individuals in college. Identity issues among the emerging adults are apparent in the areas of love, occupation, and perceptions of the world around them (Arnett, 2000). He asserted the student's educational path is filled with questions and noted that many explorative moments in late adolescence or early adulthood are intense, engulfing and not always experienced as enjoyable. This period of exploration often leads the individual towards making commitments in important areas of life such as occupation, love and as well as establishing values and beliefs that guide future behaviors. It is possible that this period

will present with additional challenges for athletes who have developed an exclusive identification with the athletic role at an early age.

Marcia (1966) built on Erikson's ideas of crisis and commitment to a role and identity resolution by trying to determine the degree of the commitment as well as the experienced crisis. He explained that the interaction between crisis and commitment could help clarify the extent to which an individual resolves his/her identity formation conflict. Marcia (1966) suggested that adolescents are faced with establishing commitments to ego identity ideologies focusing on sexuality, politics, religion, and occupation. He identified the status outcomes that can result from the struggle of exploratory behavior towards commitment in terms of four ego identity statuses, (a) identity achieved, (b) identity diffused, (c) identity moratorium, and (d) identity foreclosed.

According to Marcia (1966) an individual with an *achieved* identity has gone through an identity crisis, explored a variety of possible identities, and through this process chose to commit to a particular identity without the help of others. Conversely, an individual with a *diffused* identity has not explored or experienced a crisis and has not committed to any particular role or identity. A person in *moratorium* finds him/herself in an active struggle of crisis and exploration with the purpose of arriving at an identity commitment. Finally, an individual with a *foreclosed* identity has not experienced a period of crisis and exploration but has prematurely committed to an identity given to him/her by a parent or person of influence in the adolescent's life (Marcia, 1966). In terms of the development of intercollegiate athletes, these influential people may also include coaches, teammates, and teachers. While identity development begins during the

adolescent years through the influence of others, the college years have a marked impact on the formation of an individual's identity (Arnett, 2000; Chickering & Reisser, 1993) Although, Erickson (1956) and Marcias (1966) focuses on adolescence the unfurling of a person's psychosocial and identity can occur after this period. Furthermore, the period of time indicated by Erickson and Marcia as "adolescence" has recently come to include individuals exiting high school and entering college (Arnett, 2000). Arnett (2000) noted that the period of moratorium has seemed to shift more towards the ages of 18 and 25 as these individuals seem to focus more on education and less on the options of marriage and work.

Examining temporal sequences on the identity formation process of high school and college students, Luyckx, Klimstra, Duriez, Van Petegem, Beyers, Teppers, and Goosen (2012) found that self-esteem was a significant emotional resource for these individuals. These authors added that when an individual in identity crisis does not have confidence and self-worth, the process of exploration might thrust them into a regressed state of "chronic identity worry or rumination" (p. 168). Through this study these investigators showed that there is a mental health connection in the identity formation process and ego identity statuses proposed by Marcia (1966). Finding also indicated that the identity formation process can begin in high school (adolescence) and often progresses more intensely in college (emerging adulthood).

During the college years, individuals continue to undergo a series of developmental changes. Chickering and Reisser (1993) added to the literature on identity formation by highlighting the numerous challenges college students face. The college experience for intercollegiate athletes is similar in many ways, but also very different

from that of non-athlete students. Because of their dual roles, intercollegiate athletes often need assistance in successfully resolving developmental challenges (Hinkle, 1994). Chickering and Reisser (1993) posited a theory of vectors that offers an understanding of how the overall psychosocial and identity development forms for college students. Their theory focuses on identity as a goal of development in a diverse college population and explains how seven proposed vectors build on each other to form identity (Williams, 2007).

According to Chickering and Reisser (1993), *Establishing Identity* is the fifth vector and builds on development that occurs during vectors one through four. Similar to Erikson's fifth stage of role identity versus role confusion, these researchers theorized that individuals discover who they are through a series of tasks that must be completed during the college years. The first task involves a crisis leading towards growth and the second task is a commitment to beliefs and values. A more comprehensive review of this theory and the aforementioned theories can be found in chapter two.

Athletic identity. Theoretically, adolescents embark on a journey that follows stages of psychosocial development leading them to a position where they are to resolve the conflict of role identity versus role confusion (Chickering & Reisser, 1993; Erikson, 1966; Marcia, 1966). Brewer, Van Raalte, and Linder (1993) furthered the work on identity formation by investigating the specific self-concept measure of an athletic identity. According to Brewer et al., (1993) "athletic identity is the degree to which an individual identifies with the athlete role" (p. 237). Simons, VanRheenen, and Covington (1999) added that the extent to which an individual identifies with the athletic role is influenced strongly by parents, coaches, and teachers. Thus, during the early process of

identity formation, the individual can begin to identify more, and often exclusively, with a particular role and identity (i.e., athletic identity). Research has demonstrated that exclusivity to the athletic identity can have positive or negative effects for athletes (Brewer, 1991; Brewer et al., 1993). The effects of an exclusive identity are often encountered when an athlete participates in college sports, which might affect the psychological health in the athlete. Potential benefits of a strong athletic identity include the advancement of a salient sense of self, the founding of social networks, improvements in life skills, and increased motivation to participate in athletics (Brewer, 1991). Conversely, the potential costs to a strong athletic identity are reported as difficulties in managing emotions at the onset of injury, increased difficulties with sport-oriented career termination, and hindrance in career maturity (Brewer et al., 1993; Brewer et al., 2000). An overview of the psychological health status of intercollegiate athletes will provide further background to the college experiences of this diverse population.

Overview of intercollegiate athletes' sport participation and psychological health. More than 360,000 students participate in intercollegiate sports. Intercollegiate sports are athletic competitions between colleges and universities organized and funded by participating tertiary institutions, and through divisions, endorsed by governing conferences such as the National Collegiate Athletic Association (NCAA), the National Association of Intercollegiate Athletics (NAIA), and the American Collegiate Hockey Association (ACHA) among others. (Proctor & Boan-Lenzo, 2010). Although the aforementioned conferences encompass more than one sport there are some conferences that are sport specific such as the ACHA. Conferences are also categorized by division signifying the level of rigor and school size. Division I is considered the more elite

conferences indicating that individuals playing at this level have shown performances that are above intermediate play. Divisions I schools are better funded and can offer more scholarships to its athletes. Division II schools offer fewer scholarship opportunities and the level of difficulty and preparedness of the athletes are considered intermediate.

There is a significant body of research indicating that about 10-15% of intercollegiate athletes experience psychological distress that may warrant professional counseling (Bird, Chow, & Cooper, 2018; Hinkle, 1994; Parham, 1993; Yang, Peek-Asa, Corlette, Cheng, Foster, & Albright, 2007). The dual role of athlete and student often brings unique challenges for the individual to manage. In addition to balancing similar demands as non-athletes, college athletes also have to cope with injury (Brewer et al., 1993), role conflicts (Etzel, Watson, Visek, & Maniar, 2006), social and leisure challenges (Parham, 1993), performance demands from self and environment (Luyckx, Soenens, VanSteenkiste, Goosens & Berzonsky, 2007; Parham, 1993), and career transitions (Pearson & Petitpas, 1990). The convergence of these and other personal life events can present as emotional, physical, or developmental challenges for the intercollegiate athlete (Watson & Kissinger, 2007).

College athletes are considered a high-risk subgroup on college campuses across the United States (Etzel et al., 2006). According to these investigators, some of the risks associated with sport participation are alcohol abuse, eating disorders, stress over injuries and athletic performances, overtraining, exhaustion, and lack of sleep, which correlate closely with depression. Voelker (2004) reported that a combination of loss of sleep and substance abuse is a recipe for clinical depression. Although the evidence suggests that

college athletes are at greater risk for depression (Brewer, 1993; Yang et al., 2007), few studies have examined rates of depression among intercollegiate athletes. The few investigations comparing the rates of psychological issues between athletes and non-athletes suggested that college athletes experience high rates of psychopathological symptoms (Brewer, 1993; Proctor & Boan-Lenzo, 2010). When compared to non-athletes intercollegiate athletes reported more problems with alcohol (Hinkle, 1996) and were at greater risk for disordered eating (Bird, Chow, & Copper, 2018; Storch, Storch, Killiany, & Roberti, 2005).

Statement of the Problem

Prior research indicates that collegiate athletes face developmental crises similar to other college students (Parham, 1993). These crises are further compounded and influenced by the strength of the individual's athletic identity and the stressors associated with participation in collegiate athletics (Brewer et al., 1993; Parham, 1993). Additionally, the process of role experimentation and commitments in a variety of life domains can stimulate the psychological experiences of these individuals (Luyckx et al., 2012; Marcia, 1966; Miller, 2003). Research indicates that collegiate athletes experience psychological challenges or distress during these years of psychological development (Murray, 1997). However, the relationships between ego identity, athletic identity, and psychological health and well-being in intercollegiate athletes have not been explored in previous research.

Research on college athletes suggests that participation in intercollegiate athletics may hinder the college athlete's ability to accomplish the formidable developmental tasks that people at this age must master (Murray, 1997). Initially, the individual moves from a

position of dependence upon parents and other important adult figures towards a position of relative independence while developing competence in different areas (Arnett, 2001). The emerging adult is challenged to make decisions that relate to purpose and meaning, career and occupational paths, making and maintaining meaningful relationships, while identifying and adjusting to personal values, ideologies, and beliefs regarding occupation, politics, religion, love, sexuality, and trust (Marcia, 1966). As students, many people have faced the pressures to overcome these challenges in personal ways. However, most have not had to do so with the additional pressure of participation in intercollegiate athletics. The added responsibilities that come with athletic participation can slow and often hinder the ability of the college athlete to meet developmental demands in college (Parham, 1993). However, it is important to note that the timely accomplishment and mastery of the developmental tasks during this age may not be hindered solely by participation in intercollegiate athletics.

Other factors impacting this progress may include early life socialization experiences in sport (Coakley, 2011), psychologically controlling parents (Luyckx, Soenens, Vansteenkiste, Goosssens, & Berzonsky, 2007), which could lead to the underdevelopment of agency and ego strengths in overcoming life obstacles (Côté & Levine, 2002; Erikson 1956)). Notably, the athlete may not handle life events such as injury and personal loss, which may lead to maladjustments, personal dissatisfaction, and numerous psychological problems including psychological distress (Brewer, et al., 1993). While many researchers have suggested these negative outcomes have been overgeneralized, none has explored how these distinctive challenges might influence an intercollegiate athlete's overall emotional well-being.

Aim of Study

The aim of this study was to examine if there was a predictive relationship between the variables athletic identity (degree and strength) and the ego identity statuses of diffusion, foreclosed, moratorium, and identity achievement and psychological health outcomes in intercollegiate athletes. The following research question guided this investigation:

Research Question

Can the independent variables athletic identity and ego identity statuses of diffusion, foreclosure, moratorium, and identity achievement predict psychological health outcomes among intercollegiate athletes?

Hypothesis

There is a predictive relationship between the independent variables athletic identity and the ego identity statuses of diffusion, foreclosure, moratorium, and identity achievement and the dependent variable psychological health.

Null Hypothesis

There is no predictive relationship between the independent variables athletic identity and the ego identity statuses of diffusion, foreclosure, moratorium, and identity achievement and the dependent variable psychological health.

Significance

By examining the relationships between athletic identity, ego identity, and psychological health among intercollegiate athletes, this study will augment existing knowledge about the developmental and psychological challenges faced by this population. The findings are likely to be of interest to those invested in successful

outcomes and experiences for intercollegiate athletes. Findings could help inform programming and services for intercollegiate athletes.

Limitations

There are several limitations in this study. First, because the sample was drawn from only one university and only included Olympic sports, generalizability of the findings to other universities and conferences is limited due to the specific profile of the sample population. The university approached for this study has a variety of conferences (i.e., NCAA & ACHA) and divisions for different sports but all the teams sampled were from a Division I system. The main difference between these classifications is funding and the financial gap between conferences can have varying effects on teams and athletes who participate at the intercollegiate level.

After a comparison of the universities in the Mid-American Conference (MAC) to the university athletic program used in this study it was determined to be similar to the other universities in regard to demographics and sports offered. Thus, the university selected for this study is a good representation of the other universities within the MAC.

Second, the survey design of the study required self-report from participants which can be subject to inaccuracies due to social desirability. Finally, the researcher was dependent on cooperating coaches at the institution to encourage participation and completion of the survey that took 30-35 minutes to complete.

Delimitations

A delimitation of this investigation is the decision to sample athletes at a university where access to the population was made readily available the investigator. The original data collections plan was to sample athletes from other schools within the

MAC. This plan was changed due to limitations encountered early in the process. After a close look at the changes the investigator and the research committee agreed delimiting the study to athletes at a single university would provide a sample adequate for the purpose of this study. The amendment was approved by the Institutional Review Board (IRB) (Appendix C). The results of this proposed study can only be generalizable to the athletes who participated at the university where the data were collected.

Definitions of Terms

Adolescence. Adolescence is the period occurring from childhood to late teens ranging between the ages of 10 - 18 (Arnett, 2000).

Emerging adult. A period of development occurring from late teens to through middle twenties (18 - 25). Individuals do not view themselves as adolescents and many do not see themselves as entirely adult (Arnett, 2001).

Athletic identity. "The degree of importance, strength and exclusivity attached to the athletic role maintained by the athlete and influenced by the environment" (Cieslak, 2005, p. 39).

Identity foreclosure. *"*An individual who has failed to thoughtfully investigate other available roles and has prematurely committed to a socially given role" (Marcia, 1966, p. 551).

Identity moratorium. "An individual who is currently experiencing the consciousness of an identity crisis and is actively exploring but has not yet arrived at his or her own self-defined commitments to a role" (Marcia, 1966, p. 551).

Identity achieved. An individual who experienced moratorium and has made considerable exploration before identifying and making ideological commitments (Marica, 1966).

Identity diffused. An individual who has not explored alternatives and has failed to establish ideological commitments (Marcia, 1966).

Psychological health. For the purpose of this investigation, psychological health is defined as the presence or absence of positive or negative mental health states including anxiety, depression, loss of behavioral and emotional control, life satisfaction, positive affect, and overall well-being (Veit & Ware, 1983).

Summary

This chapter contained an overview of the background information of this study. The statement of the problem, research question, null hypothesis, and the independent and dependent variables were introduced. The limitation and delimitations of this study were discussed and the key terms and definitions were listed. A brief discussion of the theoretical framework on identity formation, athletic identity, and psychological health were provided. An in depth discussion of the theoretical framework and above listed topics will be presented in chapter two.

Chapter 2: Literature Review

Introduction

In this chapter, the profile of the intercollegiate athlete is expanded. The chapter begins with the theoretical foundations of identity development driving this investigation. Aspects of early sport participation and socialization leading up to participation in college athletics are explained. The intercollegiate population is further defined along with a summary of the challenges faced by intercollegiate athletes. The literature connecting identity formation (athletic and personal) as predictors of psychological health is reviewed. The chapter concludes with a summary of the literature on the variables relevant to this investigation.

Theoretical Framework on Identity Development

Identity theories (Erikson, 1968; Marcia, 1966), emerging adulthood theory (Arnett, 2000, 2004), and vector theory (Chickering & Reisser, 1993) help in understanding identity formation among intercollegiate athletes. Various academic disciplines use the construct of identity. The disciplines of psychology and sociology have used the construct to understand the concept of self (Berzonsky & Adams, 1999; Kroger, 1993; Marcia, 1966; Mead, 1934). For over a half century, the early theoretical works of Erikson (1959, 1963, 1968) have influenced research on adolescent identity development within the field of psychology. Erikson's work has inspired countless researchers to form a well-established line of investigation on the construct of identity, which some propose began with the doctoral work of James Marcia in 1966 (Adams, 2012). Projections from Erikson's writings have not only set the foundations of this research paradigm, but have resulted in further theoretical and practical investigations for

understanding the possible stages of psychosocial development as well as the formation of identity, behavior, and personal competence (Arnett, 2000, 2001, 2004; Chickering & Reisser, 1993; Danish, 1983; Kroger, 1993; Marcia et al., 1993; Newman & Newman, 1976). Influenced by Erikson's work, Arnett's (2000) conception of the theory of *Emerging Adulthood* added to the literature of identity formation beyond adolescence, which is important to this investigation. This study expands the research on identity development and formation as applied to a subpopulation in society: the intercollegiate athlete.

Erik Erikson and identity development. The epigenetic principle is central to Erikson's theory of psychosocial development and explains that development is successive and defined by stages. Organisms that grow, begin with a base plan and from this plan, different parts arise at their own unique time in their ascendancy to form a working whole. Erikson (1959) proposed that humans develop through the arranged unfurling of personalities in eight stages. Successes or failures of the psychosocial tasks encountered at each stage determine the progress towards the development of the functioning person. Erikson (1959) called these psychosocial tasks crises, which suggests a turning point for the individual.

The eight stages of psychosocial development proposed by Erikson (1959) include trust versus mistrust (first year of life), autonomy versus shame (ages two to three), initiative versus guilt (ages four through six), industry versus inferiority (ages six until puberty), identity versus role confusion (adolescent years), intimacy versus isolation (early adulthood), generativity versus stagnation (middle adulthood), and integrity versus despair (aging years). As a young person advances through each stage social demands

are placed on him/her. The individual applies effort to adjust to the imposed environmental demands, which Erikson (1968) later explained is marked by heightened vulnerability and potential. The effort applied towards these tasks produces tension and prompts the person to act using the skills and attitudes acquired in previous stages. Perna (1991) referred to the skills and attitudes that emerge within the individual as ego qualities because of the interface between the developed competencies of the individual and societal pressures. These qualities are polarized as achieved or not achieved.

Successful achievement means the individual hurdled through the specific tasks of the stage by resolving the crisis. Resolving the task encourages happiness and demonstrates the likelihood that the individual will successfully complete ensuing developmental tasks. Failure to achieve and acquire the skills necessary to resolve the crisis at any stage can result in unhappiness, disapproval by society, and difficulties in completing future tasks (Erikson, 1959, 1963, 1968). Because the stages of Erikson's models occur in a predetermined order and are not considered hierarchical, the individual does not have to resolve the crisis successfully in one stage before moving onto the next stage. However, Erikson (1959) recognized that poor resolution of a task at one stage can materialize itself as confusion in later stages of development. This situation can be especially problematic at stage five of Erikson's model.

From an identity development perspective, stage five is a key period for all individuals (Erikson, 1968). Erikson (1950) described identity formation as a normative event occurring within adolescence. He was the first to discuss the idea of an *institutionalized moratorium* of the identity stage, which argued that, historically, industrialized cultures provided young people with a structured manner to delay adult

responsibilities in order to take time to develop their adult identity (Erikson, 1958). He argued that during stage five, adolescents are able to experiment with various roles and encounters conflicts that challenge the process towards identity formation.

Arnett (2001) defined adolescence as a period of change occurring from childhood to adulthood. In most cultures, adolescence is marked by the beginning of puberty; however, the result of the transition from childhood to adulthood is inconsistent from one culture to the next. The inconsistency is mainly due to the differing perceptions of the social and psychological maturity that defines adulthood (Adams, Munro, Doherty, Munro, Edwards, & Petersen, 2001). Erikson (1968) later discussed ways in which momentous identity formation can occur after adolescence. Erikson (1958) noted that as individuals age they become aware of important changes in identity that might have been missed during adolescence.

Erikson (1958) stated that adolescence marks the "final establishment of a dominant positive ego identity" (p. 306). Marcia (1980) argued that while the end of this period is marked by the achievement of a positive psychosocial position, the formation of a positive identity may never end for some individuals. For many in this scenario the future becomes a part of a life plan. In other words, the state of having a future to work towards becomes a permanent fixture in a person's identity. Maturing youth become concerned with who and what they are in the eyes of significant others such as parents, teachers, coaches, and peers. They compare this external view of themselves with the internal observation of who they have come to understand they are while trying to connect their roles, skills, and dreams with the ideological and occupational models before them (p. 307). Some may reach a positive identity and find a role that fits with

their newly integrated self. Individuals who do not achieve this positive state may become confused about what roles are important to them and acceptable to others in society. Based on this quandary, Erikson defined stage five as the polarity between identity and role confusion.

Erikson (1963) described the danger of this stage as role confusion and the successful negotiation of this stage as fidelity. Fidelity represents the virtue and faith that the individual is able to comport to society's standards despite his/her imperfections and is able to contribute to the larger community (Boeree, 2006). It takes the form of role exploration and experimentation that can lead the individual to integrate these identities into the adult world (Côté, 1997; Côté, & Levine, 1988). However, while the period holds great opportunities for the emotional and intellectual growth of the adolescent, the portrayal of a confused adolescent is disturbing (Adams & Gullotta, 1983).

Adams and Gullota (1983) explained when the adolescent is not able to disembark from the journey at a positive self-identification, the individual tends to perceive decision making as threatening and divergent. The inability to make decisions that help resolve the psychosocial crisis creates a sense of isolation, which can later be related to feelings of shame, lack of pride, and the perception of feeling manipulated by others (p. 187). The process of self-identification and identity integration can be facilitated by important figures in the life of the young person.

In their discussion of parental psychological control and identity formation, Luyckx, et al. (2007) asserted that psychologically controlling parents might pressure the young person to fulfill the parents' personal needs and standards despite the needs and values of the adolescent. Consequently, the adolescent is less in touch with his/her

intrapersonal self, which may keep the individual from making personal commitments. Erikson (1968) reflected this estrangement and confusion best in his example of Biff's remark in Arthur Miller's *Death of a Salesman:* "I just can't take hold, Mom; I can't take hold of some kind of life" (p. 131). The confusion experienced by the adolescent has repercussions for his/her integration into society and for the continued development of a positive ego.

Erikson (1958) warned that adolescents can also develop a negative ego identity when trying to resolve the crisis presented at this stage without boundaries developed with parents or significant others. Individuals can establish socially objectionable identifications with criminal or antisocial groups. Erikson (1968) stated adolescents are still looking for an opportunity to conform to some kind of subculture, follow a trustworthy person, and form some kind of fidelity despite their potential for delinquency. All too often society treats this individual as an inferior person with values that are not acceptable. Researchers explain the parents of these adolescents are often overly concerned with social status and prominence over positive social involvement and meaningful relationships (Adams & Gulotta, 1983; Erikson, 1968). This idea suggests that when an adolescents becomes delinquent it is because families or society has failed them but it is still possible to help individual them.

While some doubt and confusion is necessary for resolution of the psychosocial crisis at this stage, a proper balance between identity and identity confusion can result in what Feist and Feist (1998) described as (a) an establishment of faith in an ideological belief, (b) freedom within the adolescent to decide on proper comportment at this stage, (c) confidence and trust in peers and adults who can influence the individual's goals and

aspirations, and ultimately, (d) an occupational choice of personal interest to the adolescent. Vleioras and Bosma, (2005) asserted that working through identity concerns that result in personal commitments is related to psychological well-being. As will be seen in the discussion on ego identity status (Marcia, 1967), the behavior and ideologies of parents can have tremendous impact on the future ideological and occupational commitments made by emerging adults. Erikson provided the opportunity for exploration on the topic of development and identity, but with certain limitations.

Erikson's theory of psychosocial development is characterized by classifications and descriptions defined by an elusive developmental timeline. His descriptions of identity formation are enlightening, but fail to provide a definition for the construct (Adams, 2011). In terms of identity formation, scholars have noted a "lengthening of adolescence" as well as an increase in the various patterns of role transitions (Tanner, 2006). As an alternative, Erikson provides an entry point to identity in terms of understanding one's conscious sense of self, and one's unconscious motivation to continue to resolve and develop a positive ego identity, and one's ability to preserve inner solidarity within a group's ideals and identity (Erikson, 1963).

Marcia (1966) builds on Erikson's theory, and offers some empirical evidence of the process of identity formation and status through the operationalization of the identity formation process and of the terms exploration and commitment. Additionally, with the recent conception of the *emerging adulthood* theory Arnett (2000) suggested a new developmental period has surfaced. It is important to this examination to link emerging adulthood with the preceding period of adolescence, as this is currently the manner in which human development is understood.

Emerging adulthood. Tanner (2006) posited that one of the strengths of Arnett's (2000) theory on emerging adulthood is the incorporation of psychological (i.e., identity formation) and sociological (i.e., demographic and work instability) features while focusing on the role of cultural conditions (e.g., industrialization) that shape the emerging adult. The developmental process toward adulthood is different today than it was 50 years ago. Côté (2000) observed the deinstitutionalization of this process and argued that individualization has increased. This suggests that today, life tasks require individuals to rely on their own self-sufficiency and that coming of age has more to do with learning how to stand alone and being capable of making decisions independently of others (Arnett, 2000). Arnett (2004) argued that emerging adults between the ages of 18 and 25 explore the possibilities open to them in love and work. During this time, these individuals also move towards making lasting life choices (Arnett). The liberty to explore marks this period with excitement and high hopes, but is also a period of anxiety and uncertainty, as many are not sure where their exploration may lead (Arnett, 2004). This period defined by Arnett includes college age athletes. Therefore, his theory is important in understanding the intercollegiate athletes' experiences.

Emerging adulthood (ages 18 – 25) is not an extension of adolescence as it is a much freer time from parental control and filled with independent exploration (Arnett, 2004). It is also not considered "young adulthood" as the term implies having reached an early period of adulthood, which historically is defined by social markers such as marriage and parenthood (Arnett, 2000). Emerging adulthood is a new term developed in part by the observed rise in the typical ages of when American people get married and

become parents (Arnett, 2004). The 1970's showed a striking shift in the age most Americans got married (21 for women; 23 for men), but by the year 2000 the shift was dramatic where the typical age of marriage was 25 for women and 27 for men (Arnett, 2004).

Arnett (2004) argued that one reason for the drastic change in the typical age of marriage is due to young people's focus on attaining a college education in order to find a desirable occupation. Arnett indicated the rate of residential changes in America occur mostly between the ages of 20 and 24, which influence plans in regards to love, work and education (2004). Thus, Arnett (2000, 2004) concluded that the period between 18 and 25 years of age has changed from being a time of settling down into adult roles (i.e., marriage, long term work) to a period of unsettledness, instability, and exploration.

Over the past decade, Arnett (2004) identified five main features that defined emerging adulthood as a distinct developmental period. He defined it as an age of identity exploration (love and work), instability, self-focus, feeling in-between, and the age of possibilities.

Developmental researchers in the field of psychology generally accept Erikson's (1950) assertion that identity exploration and formation are tasks to be completed in adolescence. However, in 1968, Erikson eluded to a period in between adolescence and young adulthood when he discussed how industrialized societies granted young people a "prolonged adolescence" for extended identity exploration. Arnett (2000) asserts that Erikson distinguished a period of identity exploration that encompassed both adolescence and young adulthood but not a firm description of either. Arnett further states this was "a period in which adult commitments and responsibilities are delayed while the role of

experimentation that began in adolescence continues and in fact intensifies" (p. 470). The time extension given to these young individuals provides room for identity exploration in numerous roles and life opportunities, which gradually leads to lasting decisions.

Arnett (2000) reported the focus of identity issues among emerging adults concern the areas of love, work, and ideology, which are the three pillars of Erikson's (1950, 1968) theory. Arnett (2000) found emerging adults explore love more seriously than adolescents, as the focus is less recreational and more on exploring potential emotional and physical intimacy. This coincides with one of Erikson's later stages he termed intimacy vs isolation. Both Arnett (2000) and Erikson (1959) asserted that it was important for these individuals to know who they had become in order to know who they would like to commit to long-term.

In regards to work and educational experiences, emerging adults are focused on preparation for adult roles in these areas (Arnett, 2000). When deciding educational pursuits and desirable work opportunities, emerging adults expressed needing to know who they were in terms of what they enjoyed doing and what they did well (Arnett, 2004). Emerging adults consider how their work experiences will contribute to jobs they may have as adults (Arnett, 2000). Arnett added that explorations in both love and work/education are not limited to preparation for adult roles. These explorations are often in part for the sake of exploring a broad range of life experiences before accepting the limits of adult responsibilities (2000). Their worldviews also play a role in the exploration in these areas.

In forming a worldview, emerging adults discuss issues about values and religious beliefs because deciding what they believe helps define who they are, and how their views are similar to or different from their parents' views (Arnett, 2004). Emerging adults entering college often have a worldview adopted from their parents during childhood and adolescence (Arnett, 2000). The college experience allows for exploration of different worldviews and emerging adults often leave college with a view different from when they entered college (Arnett, 2000). Arnett reported that individuals who do not attend college still considered the development of a worldview as central to their identity formation.

Arnett (2004) also noted identity issues in response to questions about what makes a person an adult, expectations for the future, and relationship with parents. In a recent longitudinal study that explored the relationships between psychological control (i.e., love withdrawal and guilt) and dimensions of identity formation among emerging adults, Luyckx et al. (2007) found that when emerging adults perceived their parents as psychologically controlling, self-initiated identity formation was hindered. These researchers also found an association between the representation of a psychologically controlling parent and the inability of the emerging adult to establish identity commitments during the first two years in college. Parental influence can be prominent even during a time of unprecedented freedom for exploration. These authors reported that developmental and psychological impairments might be related to the ongoing relationship with the individual's parents. The psychologically controlling parent seems to disrupt the search for autonomy, which may impact the formation of identity and how the emerging adult feels about him or herself.

These findings support research on the development of a foreclosed athletic identity. When an individual exclusively and prematurely commits to a given role or identity without the exploration of other alternatives they are considered to have a foreclosed identity (Marcia, 1966). Researchers have suggested that the empirical link between identity foreclosure and athletic participation involves characteristics found in the athletic environment including the influential relationships in this environment (Adler & Adler, 1991; Petitpas, Danish, Murphy, & McKelvain, 1992).

Psychologically controlling parents of an athlete may be influential in this environment. Such parents are not concerned with the personal needs and values of the individual and use intrusive techniques to pressure their child to meet their own personal needs and values (Luyckx et al., 2007). These researchers further stated that when a psychologically controlling parent encounters an emerging adult exploring a different alternative, they increase the use of psychological control in an attempt to pressure the individual to make a commitment to their wishes and desires (2007). This scenario is evidenced in athletes who are committed to playing a sport that was forced upon them by a parent. The research on athletes with foreclosed identities has shown that in many instances these individuals remain stagnant in their cognitive and emotional development, including occupational maturity (Adams, 2011; Cornelius, 1995; Pearson & Petitpas, 1990). Brewer and Petitpas (2017) added that a foreclosed identity in athletes has been linked to alcohol and drug abuse, burnout, and issues with identity transitions. These authors noted that sport participation keeps the athlete in this status as their need for "relatedness and competency" are met through active participation (p. 119). Researchers have also reported negative consequences of a foreclosed identity among athletes as

interruption in social development (Parham, 1993) and difficulties conceiving other identities (Adler & Adler, 1991; Brewer & Petitpas, 2017).

While identity exploration for emerging adulthood can be a period of freedom from parental control and exploration of life options for many, it is a period that can be filled with uncertainty (Arnett, 2000). Arnett (2000, 2004) argued that emerging adults largely explore identity without the help of family. However, a parent or environment may have influenced an individual who has not had the chance to explore on his or her own.

Schwartz, Côté, and Arnett (2005) investigated the relationship of individualization and agency to the process of identity formation in emerging adults.

They define agency in terms of identity formation as:

> a sense of responsibility for one's life course, the belief that one is in control of one's decision and is responsible for their outcomes, and the confidence that one would be able to overcome obstacles that impedes in one's progress along one's chosen life course. (p. 207)

The definition of agency seems to provide an approach to identity formation that is free, deliberate and self-directed. Athletes forced to play a sport or socialized early into sport might take a path towards identity formation that is less agentic in manner and less individualistic. Emirbayer and Mische (1998) contend that social structure (i.e., intercollegiate sports or parents) might either facilitate or impede attempts from the individual to behave in an agentic manner. If blocked from behaving deliberately towards the moratorium of identity development, Schwartz et al., (2005) suggested these "individuals might take a passive approach to their individualization and overall

development by accepting what they term a default individualization, which is a path that is dictated by circumstances and impulse" (p. 204). They posited that developmental individualization is necessary for the deliberate growth of the emerging adult through extensive exploration of available alternatives in an agentic manner (2005).

The concept of agency and developmental individualization has implications for athletes forced to focus on one particular role at the expense of other roles. It can be theorized that athletes who do not act in an agentic manner and actively do not explore available roles and identity alternatives might not be prepared to address problems and decisions when transitioning into adulthood. For many emerging adults the shifting choices in love and work make emerging adulthood an intense and unstable period of life, which is why Arnett (2004) defines it as an age of instability. Athletes in this situation might find this period of instability more challenging to navigate.

Arnett (2000) described that the emerging adult experience instability because this group has the highest rates of residential transitions when compared to other groups. Their demographic diversity begins as early as 18 years of age when some move away to attend college while others choose to move out in order to become independent (2000). Emerging adults who attend residential colleges move from dormitory to dormitory and eventually to an apartment after the first year. According to the National Center for Education (2004) many of these individuals leave college after one or two years, which also requires a residential change. Goldscheider and Goldscheider (1994) reported that about 40% of individuals who are considered emerging adults, temporarily move back home. Many move out of their parent's home to different parts of the country, while others move to another part of the world to pursue an education or work. Many move to

cohabitate with a romantic partner, which often requires residential change (Michael, Gagnon, Laumann, & Kolata, 1995). Arnett (2004) explained that emerging adults have a wider scope of activities to engage in because they are not constrained to adult role requirements, which makes it hard to predict where they will end up. This is a period of semi-autonomy as emerging adults take on some of the responsibilities of living alone but leave other aspects of this responsibility to their parents or college authorities (Arnett, 2004).

Overall, emerging adulthood is best characterized by demographic diversity and instability, which further reflects the focus on change and exploration. This active exploration allows emerging adulthood to remain open to many possible futures. Arnett (2004) further defined this period as the age of possibilities.

Arnett (2004) posited that a key feature that makes this period an age of possibilities is that emerging adults leave their families of origin but have not dedicated themselves to new relationships and obligations. This is a time when the emerging adult can redefine parts of him or herself as a person away from their family. Arnett (2000) argued that this is especially true for individuals who grew up under difficult family conditions. Unlike a child or an adolescent, the emerging adult does not have to return to the challenging environment on a daily basis. For individuals raised in "happy homes" emerging adulthood is a period where they can transform themselves away from the image of the parent by making a decision about who they care to be and how they choose to live (Arnett, 2004). Regardless of the type of family life, emerging adults carry family influences with them. Emerging adulthood provides individuals with unlimited

opportunities to focus on the self and change what they have become as this change seems possible (Arnett, 2004).

Emerging adulthood is a period of self-focus because there are few ties that require obligations to others (Arnett, 2004). Moving out of the house of origin allows daily life to be more self-focused, which is healthy. Tanner (2006) proposed a process of re-centering that occurs at the beginning of emerging adulthood. Re-centering involves a "shift in power agency, responsibility, and dependence between emerging adults and their social context" (p. 27). In other words, it is a change from parental regulation to self-regulation even though the emerging adult may be financially dependent on their parents. The goal of self-focusing is to develop self-sufficiency, which the emerging adult views as a necessary step before making enduring relational commitments in love and work (Arnett, 2004).

The final feature that marks emerging adulthood as a distinct developmental period is how emerging adults subjectively view themselves. They do not see themselves as adolescents, and many do not see themselves as adults (Arnett, 2000). Arnett (2004) labeled this period as the age of feeling in-between because when he asked emerging adults if they felt they had reached adulthood, the majority answered ambiguously. The most popular response were "*yes, in some respects"* and "*no, in some respects."* Arnett (2000) contended that until now, this group did not have a name for the period so emerging adults could only deny being an adolescent or an adult or feel somewhere in-between.

Arnett (1998) found that age was not a good predictor of a full transition into adulthood. He hypothesized that the sense of ambiguity in transitioning to adulthood

among emerging adults might stem from demographic instability. It was possible that emerging adults would feel like adults after establishing stable residency, settling into an occupation, and getting married (Arnett, 2000). Surprisingly, the research findings indicated that these factors were not influential in determining adulthood status among emerging adults (Arnett, 1998).

The top characteristics reported by emerging adults in their subjective sense in transitioning to adulthood are individualistic qualities of character; specifically, *accepting responsibilities for oneself* and *making independent decisions* (Arnett, 1998). Another individualistic criterion that ranked at the top was *becoming financially independent*. Arnett (2000) stated that "only after these character qualities (i.e., accepting responsibility for oneself and making independent decisions) have reached fruition and financial independence has been attained do emerging adults experience a subjective change in their developmental status" (p. 473). While emerging adults are in the process of developing these qualities, they still feel like they are in-between adolescence and becoming a full adult (Arnett, 2004). However, Arnett (2000) argued that an emerging adult who becomes a parent can be thrust into adulthood. Most emerging adults wait until marriage to have children and until their self-sufficiency and individual identity has been firmly established (Arnett, 2004).

While Arnett's (2000, 2004) theory on emerging adulthood fits the context of this investigation, there are features of the theory that remain questionable. For instance, Coté (2006) argued that by keeping the possible risks and benefits of emerging adulthood in view, researchers could counter the inclination to celebrate the period as a pure advantage for the young people who are granted this opportunity. Not all young people

experience years of change and exploration as some lack the opportunity to use these years as a period of free will. The manner in which an individual reacts to these opportunities can be determined by the individual's complex ego identification with personal beliefs, values, religious and political ideologies and life roles. A review of the development and formation of ego identity as proposed by Marcia (1966) follows.

Marcia's identity status paradigm. Founded on Erikson's theory of psychosocial development, Marcia (1966) conceptualized four identity statuses through the operationalization of two dimensions critical to the process of identity formation: crisis (exploration) and commitment. The conceptualization of these terms allowed Marcia (1966) to develop four identity statuses: identity achieved, identity diffused, identity foreclosed, and identity moratorium. Better known as the identity status paradigm (Adams, 2012; Adams & Gullota, 1983; Miller & Kerr, 2003), these statuses symbolize the different levels of identity resolution by each character type (Côté & Levine, 2002). They are characterized by the absence or presence of a crisis and a commitment to specific ideological (religious and political) beliefs, or occupational choices. Marcia was able to operationalize these statuses in terms of the conscious exploration about commitments to various areas of personal value and functioning. Marcia (1966) was interested in understanding how an individual experiences the crisis and the degree to which the person would later commit to an ideology or role. He further explained that the interaction between the dimensions of crisis and commitment can help clarify the extent to which an individual resolves this identity formation conflict during the adolescent years.

Marcia (1980) asserted that identity is even harder to define than adolescence. He stated, "Identity refers to an existential position, to an inner organization of needs, abilities, and self- perceptions as well as a sociopolitcal stance" (p. 109). This definition touches on the process of socialization whereby the individual works at developing an internal self-structure. Depending on the development of this structure, individuals could become keenly aware of their uniqueness and similarities to others and utilize their strengths to navigate through the world. On the other hand, a less developed structure can bring confusion about the individual's distinctiveness from others causing a reliance on external sources for personal evaluation (Marcia, 1980). While Marcia's work complements the work of Erikson to the point that it offers experimental evidence for his original observations, it does not clarify the developmental function of the statuses. A closer look at the four statuses proposed by Marcia (1966) will help bridge the connection between the two authors and demonstrate how identity character types can affect intercollegiate athletes emotionally.

Description of statuses. According to Kroger, Martinussen, and Marcia (2010), the early developmental period of a person may begin with either diffusion or foreclosure. If the adolescent fails to experience the need to explore role alternatives and ideologies, the young person may not succeed in establishing a commitment to future socially accepted roles and ideological tenets (Adams & Gullotta, 1983). This adolescent is described as a person with a *diffused* identity, and represents a lack of concern with identity issues and the absence of commitment (Schwartz, Adamson, Ferrer-Wreder, Dillon, & Berman, 2006). Schawartz et al. (2006) further stated that if the individual in a diffused status has engaged in some identity exploration his/her efforts are not focused

and chaotic. These individuals appear to have a strong sense of apathy and disinterest in life and also use a variety of defense mechanisms such as drug use, thrill seeking, and other intense and risky experiences to cope with the anxiety that comes with their lack of a defined identity (Logan, 1978). Other maladaptive outcomes are poor academic performance (Berzonsky, 1987), and emotional separation from significant childhood figures (Kroger et al., 2010). In terms of self-esteem, Marcia (1967, 1980) found that individuals diffused in their identity were apt to change their personal evaluations (negative or positive) in light of feedback from others, as they tend to be externally oriented. Furthermore, Kroger (2003b) reported that as a group, "diffusions often show high degrees of hopelessness, have shown high levels of isolation and lower levels of intimacy in their relationships" (p. 202). Kroger (2003) suggested this is due to the lack of self-structure and internalization of the self with a significant member of their family. While an individual in diffusion may not have made important identifications with ideas or roles, the individual in a foreclosed status has made cautious identifications with influential figures from childhood (Kroger et al., 2010).

Marcia (1966) asserted that adolescents with an ego identity that is *foreclosed* readily commit to an ideology or role without sufficient exploration of existing alternatives. These adolescents have not experienced a period of crisis and therefore commit to the values, ideologies and beliefs given to them during childhood without examination. Vijaykumar & Lavanya (2015) explained that commitments in this status might be attributed to parental and cultural appreciations for commitments in individuals in the areas of occupation notwithstanding the exploration the individual might undertake in the future. These authors suggested this readiness for commitment promotes

psychological adjustment. However, in terms of cognition, these individuals are reported to do poorly on tasks that are cognitively challenging and tend to be narrower in their thought processing (Marcia, 1966). Waterman and Waterman (1974) reported that adolescents with foreclosed identities make more errors and respond impulsively to questions in the academic setting making them less reflective than individuals of other statuses. Additionally, these individuals are vulnerable to changes to their self-esteem when significant others indicate they have changed and are the least anxious of all statuses (Marcia, 1980). Marcia (1980) also suggested sudden changes in esteem are possible because individuals with foreclosed identities show the highest endorsement of authoritarian values among all the statuses and show a strong need for approval from others. He also reported that low levels of anxiety might serve as self-protection from exploratory behavior. Adams and Gullota (1983) supported Marcia's assertions when stating these individuals seek calm, arranged, and industrious lifestyles. While adolescents in a foreclosed status are hardworking, loquacious, and constructive, their dependency on parents and significant others often stifle their autonomous growth (Adams & Gullota, 1983). Brewer and Petitpas (2017) confirm these statements noting those who fail to experience a crisis often "exhibit lowered autonomy and self-directedness, have an external locus of control, and they often adopt parental ideals" in lieu of exploring values and ideals of their own (p.118).

Using an earlier version of Gerald Adams' *Objective Measure of Ego Identity Status* survey, Murphy, Petitpas, and Brewer (1996) examined identity foreclosure, athletic identity, and career maturity among intercollegiate athletes. These authors found a negative correlation between identity foreclosure and career maturity and an inverse

relationship between athletic identity and career maturity. The findings indicated that individuals with a foreclosed identity and a high identification with the role of athlete may fail to explore career plans and experience difficulty when disengaging from sport participation (Murphy et al., 1996). The protectiveness from exploration seen in individuals who are foreclosed in their identity makes them very different from individuals with an identity in moratorium who find themselves in crisis.

In their recent examination of athletic identity and foreclosure, Brewer and Petitpas (2017) reported athletes in foreclosure tend to elude persons or situations that might pose a threat to their athletic identity, as they believe that their sport accomplishments are the primary means of attaining parental and societal approval. Additionally, these individuals might become enmeshed into the sport program and not participate in exploration because of the time commitments to sport participation, the accolades received from peers and coaches, and the rewards obtained for good performances (2017).

Marcia (1966, 1967) viewed crisis as a turning point, which Adams, (2012) characterized as a continuum of exploratory behavior. Exploratory behavior is marked by an identity crisis in which the individual has not yet reached his or her self-defined commitments (Adam, 2012). From Marcia's (1966) view, this person is considered to be in *identity moratorium* where the struggle with occupational and ideological concerns is present. Marcia (1967, 1980) added that the individual at this stage experiences a greater degree of anxiety when compared to individuals in foreclosed or achieved statuses. Neuber and Genthner (1977) found that when compared to individuals with diffused identities, individuals in moratorium had the tendency to be more autonomous and took

more responsibility over their lives. This may also explain why they score high on self-esteem measures (Marcia, 1967).

Using Erikson's (1956) ego strengths of hope, will, purpose, competence, and fidelity, Vijaykumar and Lavanya (2015) examined vocational identity among emerging adults and found lower levels of ego strengths in individuals reporting higher states of exploration. Erikson (1963) noted that a lack of ego strengths of competence would hinder persons' confidence in their abilities which could also come from a lack of hope for a brighter future. He added that a poor will, might allow the individual to transfer the responsibility and ownerships of one's future in the hands of others or external factors. The person might lose a sense of purpose or conviction about the meaning of one's life. Vijaykumar and Lavanya (2015) suggested that parents, educators, and other professional could provide a safety platform for the individual to explore and develop a sense of direction. Schwartz et al., (2005) discussed that individuals in moratorium were "highest in default individualization" (p.223). They added that agency is noted in individuals who obtain developmental individualization which requires the person in moratorium to draw mostly on positive self-perceptions and ability to cope effectively. It is possible that individuals who are in moratorium might not have the ego strengths and coping effectiveness to move into an achieved status following a crisis of exploration. However, the converse might be true and an individual might possess agency, and appropriate ego strengths to successfully move past this period of discomfort and anxiety.

Waterman and Waterman (1970) investigated college student satisfaction and found that individuals in moratorium who had not determined an occupational commitment in college were the "most unhappy" with their college experience. They

also changed majors more often than other individuals. Other studies showed those in moratoriums were less cooperative with authority figures and demonstrated a need for both rebellion and conformity (Podd, Marcia, & Rubin, 1970) and could be seen as self-righteous and vacillating (Marcia, 1980). These findings support Matteson's (1974) report that those in moratorium are freer at impulse expression and tend to use drugs more readily than individuals with foreclosed or achieved identities. Though adolescents in moratorium are in active crisis and are cognitively complex, they still lack commitment and it is possible that they will not reach a commitment when compared to an achieved emerging adult.

Marcia (1966) reported that adolescents with an *achieved* identity have experienced a period of crisis and made a commitment regarding who they will become. He stated that achieved individuals are "seen as strong, self-directed, and highly adaptive" (Marcia, 1980, p. 161). However, he further states these individuals could face pre-mature achievement that could limit their ability to adapt due to early ideological or occupational commitments. Perhaps their ability to resist conformity (Marcia, 1980) can assist them in finding ways to adapt despite early commitments. Having achieved the highest level of ego development, these adolescents are complex in nature. They demonstrate the highest level of moral reasoning, self-esteem, cognitive styles, and have a future-oriented view of life (Adams, 2012; Adams & Gullota, 1983). Relationally, these adolescents are often able to develop strong bonds and maintain commitments to others (Marcia, 1980).

Reporting on college behavior patterns, Waterman and Waterman (1974) found that individuals with either foreclosed or diffused identities left school for reasons such as

poor academic performance while individuals in an achieved status left school for more self-initiated reasons. Self-motivated individuals have a well-articulated sense of self and a good sense of their strengths and weaknesses allowing them to thrive under pressure (Marcia, 1966). In a study examining a link between identity styles and psychological well-being, Vleioras and Bosma (2005) found a negative connection between individuals with a moratorium or diffused identity style and positive mental health. Meeus, Iedema, Helsen, and Vollebergh (1999) found those with achieved or foreclosed identities had high ratings of well-being. These findings indicate that in terms of psychological well-being, it is better to have reached commitments regardless of how they were attained.

The paradigm of identity proposed by Marcia (1966) provides an outlook of possible outcomes of ego identity development in adolescence which can include emerging adults. Early studies on ego identity formation and young adulthood offer support for Arnett's (2000) proposition on emerging adulthood as well as to the theory of vectors proposed by Chickering and Reisser (1993). Orlofsky, Marcia, and Lesser (1973) observed that the establishment of personal values and beliefs, autonomy and intimate relationships among traditional college-aged students is prevalent. Arnett (2000) later proposed that the exploration of autonomy and growth in character were important to emerging adults. Chickering and Reisser (1993) stated that establishing an identity based on values and beliefs is a developmental task to contend with during the same period of life.

College student development. Chikering and Reisser (1993) added to the literature by highlighting the unique challenges college students face. While Chickering and Reisser (1993) do not specify college athletes in their theory, it does encompass the

college experience of an intercollegiate athlete. The college experience for athletes is different than it is for non-athletes. Chickering and Reisser (1993) posited a theory of vectors that offers an understanding of how the overall psychosocial and identity development forms among college students. The theory focuses on identity as a goal of development in a diverse college population and explains how the seven proposed vectors build on each other to form identity (Williams, 2007).

The college experience is a noteworthy event in the life of a person. It is during this time that individuals undergo a series of developmental changes. Vector five of Chickering and Reissers' theory is *Establishing Identity* and builds on developments that occur during vectors one through four. The first vector, *Developing Competence,* involves the development of intellectual, physical, and interpersonal competence. The student is challenged by new ways of thinking and is concerned with personal appearance and activities that require performance skills while developing appropriate interpersonal communication skills (Williams, 2007). In the second vector, *Managing Emotions,* the student experiences a range of emotions such happiness, love, fear, and depression that are realized through encountering situations. The individual becomes increasingly aware of different emotions and begins to understand how to channel them effectively (Chickering & Reisser, 1993).

The third vector is *Moving through Autonomy toward Interdependence.* Chickering and Reisser (1993) explained that during this time, the college student begins to test different values, ideological systems, and behaviors related to different identities including the role of athlete. This period is also marked by the development of emotional independence by relying more on peers and authorities (e.g., coaches) than on parents

(Harris, 2003). They also become more self-sufficient and acquire the ability to function well in their new environment (Chickering & Reisser, 1993). These steps must be met before moving towards interdependence, which is indicated by learning and understanding when to ask for help and by being self-responsible (Harris, 2003).

In vector four, *Developing Mature Interpersonal Relationships*, the student develops the capacity to be intimate with others, appreciates, and tolerates differences between themselves and others (Chickering & Ressier, 1993). This process leads to the fifth vector, which involves the establishment of an identity. In this vector, *Establishing Identity*, Chickering and Reisser explain that students discover who they are. While the first four vectors do not have to occur in sequence, two important tasks must occur before identity formation takes place. The first task involves the encounter of a crisis in which the student responds in a way that growth is experienced. The second task includes a commitment on the part of the individual towards realized values (moral, sexual, occupational) or religious or other ideological beliefs (Harris, 2003). Harris asserted that an individual who establishes a healthy identity of the self can identify with having multiple roles including athlete, student, and friend among others (Harris, 2003). These concepts are similar to presuppositions presented by Erikson (1959), Marcia (1966), and Arnett (2000).

Vector six, *Developing Purpose*, is marked by the student making plans for the future. The individual achieves this through the integration of interpersonal and family commitments in addition to personal interest and occupational aspirations (Chickering & Reisser, 1993). *Developing Integrity*, vector seven, is the process in which students become aware of a true self as they develop more tolerance for significant differences in

political, racial, sexual, and social values. They begin to clearly define and defend a set of their own values in line with the way they choose to live (Chickering & Reisser).

Identity theories (Erikson, 1968, Marcia, 1966), emerging adulthood theory (Arnett, 2000, 2004) and vector theory (Chickering & Reisser, 1993) help in understanding identity formation among intercollegiate athletes. While Erikson's and Marcia's theories provide an understanding of psychosocial identity development in a general sense, Arnett (2000, 2004) and Chickering and Reisser (1993) complete the understanding of this development among college-aged individuals, which include intercollegiate athletes.

As athletes confront challenges identifying with both the role of athlete and student, self-identification may arise through the process of developing competency, emotional management, self-responsibility, self-sufficiency interdependence, and mature relationships. Once the athlete commits to a role (athlete or student) they begin to choose behaviors associated with that identity. How the individual defines the behavior of a particular identity is based on the social expectations of that role. If an intercollegiate athlete identifies more with the role of athlete but is expected to perform the behaviors of both athlete and student, often a healthy athletic identity can develop.

Thus, in addition to the developmental challenges experienced by all students, intercollegiate athletes must deal with different unique situation of developing an athletic identity. This identity is contingent on factors such as the complex structure of college athletics, social isolation, performance demands, and the extensive commitments to training and practice (Parham, 1993). A strong and exclusive athletic identity has positive and negative aspects for the individual such as when the identity is threatened or

the roles cease to exist for the individual because of life events. A discussion on the concept of an athletic identity will help address the importance of these theories to the research on athletic identity development among intercollegiate athletes.

Identity and Athletics

Socialization and early athletic participation and development. Dorsch, Smith, and McDonough (2009) reported that socialization is an ongoing process by which an individual attains a personal identity and learns the values, behaviors, norms, and skills to meet the standards set by the environment. Socialization serves individuals' psychological and social well-being by giving them a sense of uniqueness and belonging through feelings of mattering to others (Erikson, 1964). At the individual level, feeling significant serves to increase personal agency through the development of a positive self-concept (Adams, 2012).

Based on the psychology of the developing self, Damon (1983) described socialization as an inclination to establish and maintain relationships. He further stated these tendencies assure the integration and respect of the individuals in society, which standardizes behaviors according to social rules. Adams (2012) explained there are individual and social functions to socialization, which serve basic psychological and social needs. One of the psychological needs fulfilled by socialization is the feeling that one matters and has confidence. The social need met through the process of socialization is the strength of perception the individual forms about how he/she matters to others.

Erikson (1964) suggested that feeling significant is important to an individual's development. At the individual level, socialization functions to augment the uniqueness and individuation of the self and helps supports the characteristics of differentiation

(Adams, 2012). Adams explained there are two forms of differentiation, which include the intrapersonal (self) and the interpersonal (between individuals). The differentiation of self requires different values, motivations, and goals that are important only to the individual. Interpersonal differentiation is important because it centers on the materialization of an autonomous self from those around the individual. Conformity or social activation of personal interest best describes this identity. Therefore, socialization that assists in proper differentiation of the self can result in a sense of mattering to one's self. On the other hand, socialization functions socially to augment the individual's sense of closeness and mutual acceptance in relationships at either the intrapersonal or the interpersonal level (Adams, 2012).

At the intrapersonal level, socialization helps integrate an identity out of many possible social roles that may be personally meaningful to the individual (Adams, 2012). For instance, the person may develop an identity associated with being a Christian. This individual may identify more with the strict conservative ideals of the religion and less on the liberal ideologies held by others in the church. This personal identification at the intrapersonal level influences the choices made at the interpersonal level. At the interpersonal level, integration allows the person to become involved, connect, and share in intimate communication with others. Continuing with the example above, the person who recently developed a conservative religious identity may choose to belong to a congregation that meets the accepted conventional ideals rather than participating in a congregation where liberal activism is prominent. Regardless of the choice, the person is socialized and integrated into a group or a connection with others who respect the individual and is able to feel of sense of mattering in the form of a social identity

(Josselson, 1987). Through this process of self and relational integration, the individual is able to achieve what Erikson (1959) and later Marcia (1966, 1980) describe as a positive ego identity. Erikson (1963) later clarifies his idea by stating that the formation of identity supports an individual's ego identity only as long as the person can maintain a component of autonomous choice. Thus, based on the socialization process, ego identity is defined as knowing who you are and how you fit in society through the choices you make (Adams, 2012; Erikson, 1963; Marcia, 1966). For adolescents and emerging adults, knowing themselves and having the ability to accept that the choice is up to them is critical in the formation of a positive ego identity. This challenge is often seen in adolescents who are socialized and participate in sport early.

Researchers and laypersons alike often accept that early sport socialization positively contributes to development. Coakley (2011) argued that the link between early sport socialization and development is often not questioned and based on the assumption that sport, unlike other activities, "has a fundamentally positive and pure essence that transcends time and place so that positive changes befall individuals and groups that engage in or consume sport" (pp. 306-307). Coakley further claimed this accepted assumption implicates decisions made by policy makers when deciding where to allocate funds that impact society, but more importantly, it influences personal decisions made by parents and peers about early sport participation.

The essential claim that early sport involvement is an effective manner for developing problem solving skills and improving the quality of life of an individual falls into three main categories that include personal development, the reformation of "at risk" populations, and the ability to foster social capital that can lead to future success in

occupational choices (Coalter, 2007). Focusing on youth development, Coalter explained, the accepted claims that early sport socialization and participation have positive outcomes on youth development are due to the following outcomes: (a) it develops motor and sport-specific skills that are transferrable into physical capital; (b) it improves health and overall sense of physical well-being; (c) it increases self-confidence, self-esteem, and promotes a positive body image; and finally; (d) it builds character via discipline, teamwork, and responsibility. However, research on the relationship between early sport participation and youth development has concluded that this relationship is contingent on other factors such as type of sport (Côté & Fraser-Thomas, 2007), the actions of peers, parents, and coaches (Holt, 2008), social relationships developed though sport participation (Petitpas, Cornelius, & Van Raalte, 2008), and the way in which sport and sport experiences are integrated into an individual's life (Shehu & Moruisi, 2011). These divergent results raise many questions about the potential outcomes, benefits, and disadvantages attributed to early sport participation and socialization. However, these contingent factors elucidate how the family or significant others may influence the development and life of an athlete.

The family is an integral and important influence in the life of an athlete. Athletes often credit their parents for their successes by acknowledging their encouragement, instillation of discipline, and the value of achievement (Hellstedt, 2005). On the other hand, the family can also have harmful effects on the athlete's development through performance expectations and demands that promote an atmosphere of rigidity in the rules and expectations of their sport participation. Helldstedt (2005) further stated that the demands of athletic participation has intensified in recent years through the portrayal

of wealth and glamour of professional sports and the explosion in youth sport involvement. Many families today face a scenario where a talented young athlete has to meet high parental expectations, contend with the disappointments of parents who have put time, money, and emotional commitments into the young person's athletic development.

It is through scenarios like these that burgeoning athletes can begin to experience internal conflicts with their participation, but often succumb to the familial demands and pressure to accept the role and identity of athlete given to them at an early age. The positive aspects of developing athletic skills while engaging in social interaction and building self-confidence in early sport participation may be lost in this interaction, especially if the adolescent thinks that the exploration of roles is not possible (Erikson, 1963; Petitpas, 1978). Erikson (1968) suggested that exploration is important because young people will later engage in a process of identity formation in which they will selectively emphasize ideas and identifications from childhood while integrating identities with the emerging self-image. Although high school years are considered a period for exploratory behavior (Erikson, 1968) many young athletes arrive at college only to explore other sport-oriented opportunities as the role of athlete has become important due to their earlier socialization and successes (Adams, 2011). Brewer and Petitpas (2017) added that the structure of the sport system endorses the maintaining of group norms over individual thinking making it easier for an intercollegiate athlete to develop an exclusive athletic identity over other potential roles including the role of student. Thus, early socialization could influence the individuals' degree and acceptance of their athletic identity which might hinder exploration in college (2017).

Athletic Identity

According to Brewer, Van Raalte, and Linder (1993), "athletic identity is the degree to which an individual identifies with the athlete role" (p. 237). Houle, Brewer, and Kluck (2010) reported on the developmental trends in athletic identity, stating that college athletes experience an increase in athletic identity when compared to their early adolescent years.

During the early process of identity formation, the individual begins to identify more with the role and identity of athlete. As the individual enters college, the increase in athletic identity suggests that the role of athlete becomes exclusive and remains an important part of the athlete's identity well into early adulthood (Houle, Brewer, & Kluck, 2010). The exclusivity of the role and identity of athlete is said to increase among individuals who perform at high levels such as in college, which often can lead to an over-identification with the athletic role at the expense of other possible roles (i.e., student;) (Miller & Kerr, 2003; Settles, Sellers, & Damas, 2002). Stephan and Brewer (2007) examined athletic identity and found three distinct factors that make up this construct and implicated two of them in maintaining a strong athletic identity among athletes. The first factor, *social identity*, focuses on the degree to which the athlete perceives him or herself as an athlete through the view of others. The second factor, *exclusivity*, is the extent to which a person's athletic identity discounts other identities that result in a strict or exclusive athletic identity. The third and final factor, *negative affectivity*, refers to the extent to which a poor performance, injury, and de-selection from a position can negatively affect the person's athletic identity (Stephan & Brewer, 2007).

Stephan and Brewer (2007) reported that social identity and exclusivity influence the maintenance of a strong athletic identity. Socially, athletes participating at high levels of their sport felt more like athletes because they did not have to keep employment outside of their role of athlete (Stephan & Brewer, 2007). Other social aspects identified by these researchers are the reinforcement of a strong athletic identification provided by coaches, the fulfillment of the role of a social network, the attainment of social status, and the glorification of others.

In the personal dimension, athletes involved in high levels of sport participation give meaning to their lives as athletes and take pleasure in their muscular physique and skill level, which enhances the feelings of being an elite athlete. In addition to exclusivity and the social factors, negative affectivity is another distinct domain reported as a part of the construct of athletic identity. While negative affectivity was not responsible for the maintenance of a strong athletic identity, it served to lessen the degree of athletic identity following a poor performance or injury (Stephan & Brewer, 2007).

A negative affectivity response is said to be most prevalent in individuals who have adopted a high degree and exclusive athletic identity (Tasiemski & Brewer, 2011). These individuals are said to "show greater sport involvement and participate at higher levels of competition than those with a low athletic identity" (Brewer et al., 1993, p. 249). The impact of high levels of involvement at the most elite amateur classification may have both negative and positive consequences for an athlete when adjusting to college.

The identity of an intercollegiate athlete consists of two basic roles: one as student and the other as athlete. Settles, Settlers, and Damas (2002) purported that an individual who viewed the two roles as separate experienced lower levels of psychological well-

being, with one role overwhelming the other. By contrast, those who viewed their roles as one identity experienced higher levels of psychological well-being especially when active in one particular role. Killeya-Jones (2005) further supported the notion of dueling roles and found that the more convergence between student and athlete roles was associated with higher reported psychological adjustment and satisfaction. The literature suggests that an exclusive athletic identity could have negative occupational and psychological effects on intercollegiate athletes.

Using the Athlete Identity Measurement Scale (AIMS; Brewer et al., 1993), Houle (2010) investigated the relationship between athletic identity and career maturity among student-athletes and found that stronger identity with the athletic role led to less decision making about career and low decision-making efficacy. This information is important in understanding the effects of an exclusive identity with the athletic role among college athletes. The literature on the effects of athletic identity on college success and adjustment has been replete with divergent findings, as a high degree of athletic identity is reported to have both positive and negative consequences for athletes (Melendez, 2009).

Individuals with a strong athletic identity maintain a distinct sense of self when compared to those without (Salgado, 2011). Brewer et al. (1993) asserted that individuals with strong and exclusive athletic identities, "show greater sport involvement and participate at higher levels of competition than those with a low athletic identity" (p. 249). Other reported benefits include improved life management skills (Brewer, 1991), increased motivation (Brewer,et al., 2000)), improved sport performance (Danish, 1983), and improved social interactions (Pearson & Petitpas, 1990). Negative consequences of a

strong and exclusive athletic identity include difficulties transitioning out of sport (Sparkes, 1998), interruption of social development (Parham, 1993), difficulties conceiving other identities (Adler & Adler, 1991), and emotional disturbances such as depression following a career-ending injury (Brewer, 1993; Tasiemski & Brewer, 2011). High levels of involvement at the most elite amateur classification may also have implications on the degree of negative emotional disturbance (Brewer et al., 1993).

In an investigation, Melendez (2009) used the AIMS measure to understand how the strength of an athletic identity might affect adjustment to college. The findings of this investigation supported the existing literature and revealed that a strong athletic identity was negatively correlated with academic interest and achievements. Other findings by Melendez (2009) that supported existing literature related to lower career maturity and the development of identity foreclosure. Pearson and Petitpas (1990) hypothesized that identity foreclosure can lead to emotional difficulties when the commitment to the role becomes threatened (i.e., by injury, retirement, deselection, etc.). These findings have implications for student development and necessary supports to meet the needs of this unique population.

Research conducted by Masten, Tusak, and Faganel (2006) found that the negative affectivity component of athletic identity had an impact on state (short term) and trait (long-term) anxiety in athletes. They reported that athletes who are successful and receive sustaining praise are more satisfied with themselves and accept who they are. Conversely, negative affectivity was positively related to cognitive anxiety (Matsen et al., 2006). While some anxiety (arousal) is important in sport performance, cognitive anxiety can reduce future performance levels. Brewer, Selby, Linder, and Petitpas (1999) stated

that when athletes have poor performances or experience a losing season, they develop a negative outlook in terms of self-identity.

The majority of the empirical research on ego identity statuses and athletes has focused on career maturity, control, and occupational transitions of athletes with foreclosed identities (Brown, Glastetter-Fender, & Shelton, 2000; Chartrand & Lent, 1987; Houle, 2010; Mangel, 1997; McQuown, Linnemeyer, & Brown, 2010; Murphy, Petitpas, & Brewer, 1996). Empirical research is needed to fill the gap in the literature and to understand the effects of events on the identity formation of the intercollegiate athlete. These effects may include a change in the degree of athletic identity or a transition from one ego identity status to another (i.e., foreclosed to moratorium), which could ultimately result in symptoms of lowered psychological health.

Psychological Health

Attempts to define psychological health are not new. For the purpose of this study, the term psychological health is defined in terms of the variables measured by the Mental Health Inventory (MHI) developed by Veit and Ware (1983). Veit and Ware conceptualized psychological health as symptoms of psychological distress (e.g., anxiety and depression) and psychological well-being (e.g., life satisfaction and general positive affect).

Freud (1950) was the first to develop a theory of adjustment that focused on successfully passing through the psychosexual stages without conflict. He asserted that a well-adjusted individual is governed by a strong ego and not the id or super ego. However, psychoanalysis does not account for environmental conditions that contribute to overall health. Personality theorists reasoned that a well-adjusted individual has a

greater proportion of positive traits versus negative traits leading to maturation (Allport, 1961; Cattell, 1965). Individuals oriented in a positive direction should be able to take advantage of strong positive personality traits and minimize the effects of negative traits (Allport, 1961). For this to occur, individuals should demonstrate a balance of a variety of traits and not be dominated by one or two traits (Allport, 1961; Cattell, 1965). The critical part of trait theory stems from a lack of agreement among personality theorists about which traits are most important in achieving well-being. Follette, Bach, and Follette (1993) argued that trait theory does not provide an explanation for behavior and that the theory is more descriptive rather than explanatory.

Humanists such as Maslow (1954) defined adjustment and well-being in terms of achieving self-actualization by meeting higher order needs. Rogers' (1961) understanding of fully functioning persons included the notion that well-adjusted individuals fully accept who they are. In other words, the individuals accept both their positive and the negative attributes and their life experiences closely match their self-concept (Rogers, 1961). Follette et al. (1993) argued that the humanist perspective lacks empirical evidence despite the early experiments conducted by Rogers (1961) on human subjective experiences. They further asserted that this perspective lacks a mechanism for how people adjust to life situations (Follette et al.). Others researchers have expanded on humanist perspectives by utilizing the ideas to grow the body of research on the construct of subjective psychological well-being (Diener, 1994; Diener, Scollon, & Lucas, 2009; Ryff, 1989).

Erikson (1959) also influenced the understanding of well-being with his life-span developmental perspective that stated the resolution of a conflict at each stage of

development, especially at the psychosocial stage, could bring about certain strengths and the capacity for fidelity. Fidelity involves a sense of duty to others and society through genuineness and loyalty (Erikson, 1988). These familiar contributors helped shaped the research on psychological health, which led to improvements on how the construct is measured.

Other contributors to the understanding of psychological health come from researchers who have developed scales to measure aspects of psychological health. A short list of these instruments include the Wellness Wheel (Witmer & Sweeney, 1992); Five Factor Wellness Inventory (Myers & Sweeney, 2008); Ryff's Scale of Psychological Well-being (Ryff , 1989); and the Satisfaction With Life Scale (Diener, Emmons, Larson, & Griffin, 1985). Of note to this investigation are Veit and Ware (1983), the developers of the Mental Health Inventory. The differences between these measures are the domains selected to represent psychological health. While Veit and Ware use the term psychological well-being, the determinants that constitute psychological well-being in their measure differ from how the term is defined by others (Ryff, 1989; Diener et al., 1985). Veit and Ware (1983) have approached psychological health in terms of the absence or presence of psychological well-being and psychological distress and were interested in detecting changes in mental health. The Mental Health Inventory was developed based on the cognitive-motivational theories of emotion posited by Lazarus (1991, 2000).

Ware, Johnston, Davies-Avery, and Brook (1979) reacted to the early measures of mental health and argued that the content in many early instruments was heterogeneous in nature. Rather than including measures of physical and psychosomatic symptoms

common in the measures of the time, Ware et al. (1979) focused exclusively on measuring psychological constructs. In addition, they were interested in differentiating between changes in mental health but not changes in physical health (p. 730). Ware et al., further argued that including symptoms of psychological distress (i.e., anxiety, depression) and well-being (i.e., life satisfaction and emotional ties) in their measure would increase the precision in measurement of change in psychological health in the general population. The measure was field tested in the Rand Health Insurance Experiment.

Psychological well-being. The study of psychological well-being has spanned decades, but with limited success in establishing a unified acceptance of the variables that help define this construct. The definition and the variables encompassing the term varies widely, thus the use of the term in this investigation focuses on the variables proposed by Veit and Ware (1983). These authors define the construct through the variables *general positive affect, emotional ties, and life satisfaction*. A review of the construct will provide insight into its complexity.

Today the most popular usage of the term psychological well-being is derived from theory and a measurement scale developed by Ryff (1989) in her seminal work "Happiness is everything, or is it?" as well as similar conceptions proposed by others (Diener, Larsen, Levine, & Emmons,1985; Diener, Scollon, & Lucas, 2009) on psychological and subjective well-being. Bradburn (1969) first proposed the use of the term with the inclusion of the positive dimensions of happiness and life satisfaction in the development of the Affect Balance Scale. The primary focus of Bradburn's work was to examine how changes in social positioning as well as political climate influenced changes

in the psychological well-being of individuals in the general population. Bradburn asserted that levels of happiness correlate with psychological well-being. However, others argued that happiness was not an accurate indicator of psychological well-being and that positive and negative emotions are not separate concepts in the measurement of psychological well-being (Diener, Larson, Levine, & Emmons, 1985).

Bradburn's (1969) use of the variable *life satisfaction* to measure psychological well-being is still widely accepted today (see Ryff, 1989; Veit & Ware, 1983). The theoretical underpinning of the use of this variable as a measure stems from the notion that an individual's satisfaction with life would influence his/her psychological well-being. Ryff (1989, 1995) later contended that both happiness and life satisfaction were not sufficient indicators of overall well-being. Looking for points of convergence in the literature, Ryff tested and reviewed the suppositions of familiar theorists such as Jung, Erikson, Allport, Maslow, and Rogers to help develop a holistic measure of psychological well-being. Ryff's (1989) analysis added to the list of variables and provided a theory-guided dimension of psychological well-being that included *self-acceptance, positive relations with other people, autonomy, environmental mastery, purpose in life,* and *personal growth.* Ryff (1995) pointed out that being psychologically well involves more than being free from distress. Instead, she argued that an individual should possess measurable positive attributes in order to assess what is missing in that person's life. Ryff''s study had methodological limitations, which were later addressed in Ryff and Keyes (1995) and provided empirical support to the dimensions proposed by Ryff (1989) and supported the claim that happiness and life satisfaction alone were not

representative measures of psychological well-being. However, Veit and Ware (1983) include life satisfaction as a variable of psychological well-being in the MHI.

The addition of the positive dimension in measuring psychological health seemed paradoxical at the time of its conception. While Ryff does not view negative and positive emotions as distinct constructs in the measurement of psychological health, Veit and Ware (1983) found that positive and negative states are distinct and the MHI clearly measures these states separately. This evidence supports the suppositions made by previous researchers (Bradburn, 1969). Research on psychological well-being has grown over the years but still does not compare to the amount of research on psychological distress.

Psychological distress. Veit and Ware (1983) used the term psychological distress to describe a range of symptoms that include anxiety, depression, and loss of behavioral/emotional control. The World Health Organization (WHO; 2004) reported that psychological stress is a result of an interplay between biological, psychological, and social factors. According to the Dictionary of Modern Medicine, (2002) psychological distress is the result of internal conflict and stress that often prevent a person from self-actualizing and connecting with others. An individual can develop psychological distress by experiencing divergent emotions during life situations such as stress and bereavement. This definition shadows the theoretical underpinning of Maslow's notion of meeting higher order needs in life as well as Erikson's concept of the capacity to reach fidelity in life. Sharma (2012) added that psychological distress is a deep crisis of the self and the crisis exists when the "individual's perceived capacity or incapacity to control his/her life to adjust to his/her social environment" (p. 106). This assertion complements Veit and

Ware (1983) who use the variable loss of emotional control to measure psychological distress with the MHI.

Pillay (1998) stated that symptoms of distress are easily observable and measurable when compared to measures of psychological well-being. However, the lexical expression of psychological distress may be limited by terms used by researchers. In a quest to find complementarity between qualitative and quantitative methods in the measurement of psychological distress, Masse (2000) argued that psychological distress "should not be defined through a summation of independent decontextualized symptoms but instead through narratives that link them to the distress experience" (p. 413). He further asserted that individuals experience psychological distress that often manifests in changes of emotional stability to states of anxiety, demotivation, depression, irritability, aggression and depreciation of the self. The expression of the instability should be understood in context of the cultural group and not through idiomatic language. The researcher further argued that psychological distress should not be treated as an "empirical entity" of psychological health because the measurement of psychological distress reduces the meaning of the experience (Masse, 2000).

Masse's (2000) argument warrants further examination by researchers of psychological health. However, despite this claim, quantitative measures using defined lexical discriminants are still important to the measures of psychological distress and psychological health among the general population (Veit & Ware, 1983). Furthermore, measures of psychological health that include psychological distress can be made with precision when researchers extend the definition of psychological health to include the opposite spectrum of distress: psychological well-being (Veit & Ware, 1983). Shorey,

Snyder, Yang, and Lewin (2003) argued that believing in a positive future could lower levels of distress and increase levels of psychological well-being in life. Intercollegiate athletes can benefit from a conception of a hopeful future. However, how an athlete copes with stress in life may have implications for psychological health outcomes.

Participation in competitive sports is often associated with positive changes in psychological health. On the other hand, research has also shown negative consequences to participation in sport when coping strategies are not sufficient to help an individual. Researchers have examined the benefits and disadvantages of athletic participation with conflicting results (Storch, Storch, Killiany, & Roberti, 2005). One school of thought asserts that involvement in sports has numerous psychological health advantages. For instance, participation in sports has shown improvements in self-esteem (Armstrong & Oomen-Early, 2009; Ryska, 2002), general mental health (Steiner, McQuivey, Pavelski, Pitts, & Kraemer, 2000), and lower levels of social anxiety (Storch, Barlas, Dent, & Masia, 2002).

The second school of thought suggests participation in the highest amateur level (intercollegiate) of sports is associated with disadvantages and stressors for the athlete. The increased levels of competition from high school to college result in stress as the athlete must contend with issues such as competing for a starting position (Storch et al., 2005). The college athlete may also experience performance anxiety and lower social interactions due to a lack of skill maturation at the college level and the time committed to sports (Parham, 1993). Added to the stressors experienced by attending college, athletes face significant strain to manage these competing scenarios with diminishing emotional resources (Richards & Aries, 1999). Despite reports of disadvantages and

challenges associated with participation in intercollegiate athletics, Watson and Kissinger (2007) report that the majority of intercollegiate athletes find their participation in sport rewarding. Reported concerns are related to adjustment to college, emotional discomfort, and psychological disturbances because of their participation in sport (Watson & Kissinger, 2007).

In addition to adjustments and transitions, the athlete begins to make commitments to compete intensely in intercollegiate sports (Yang et al., 2007). This commitment is compounded by the fact that 40% to 50% of intercollegiate athletes sustain at least one injury resulting in time away from sport participation during their college career (Meeuwisse, Tyreman, Hagel, & Emery, 2007). Wiese-Bjornstal, Smith, Shaffer, and Morrey (1998) stated that time away from sport participation and the limitations it places on the level of athletic performance often lead to hardships for intercollegiate athletes in effectively coping with injury in a cognitive, emotional, and behavioral manner. These hardships can elicit substantial psychological disturbances and can evoke anger, depression, anxiety, and a significant decrease in self-esteem and athletic identity (Brewer, 1991; Brewer et al., 1993; Tasiemski & Brewer, 2011).

Storch et al. (2005) investigated the rates of psychosocial maladjustment among intercollegiate athletes and non-athletes and found that female athletes reported higher levels of depressive symptoms, social anxiety, and non-support when compared to male athletes and male and female non-athletes. The researchers stated that female athletes are possibly exposed to greater number of life stressors during college than their male athlete counterparts. Additionally, they asserted that female athletes might internalize the unforeseeable changes encountered in intercollegiate athletics more than male athletes

(Storch et al., 2005). They speculated that female athletes might internalize negative feedback as well as the effects of life stressors resulting in distress. These data are supported by Proctor et al., (2010) who investigated the prevalence of depressive symptoms in male athletes compared to non-athletes. The researchers found that male athletes reported fewer symptoms of depression than non-athletes after controlling for different coping styles (Proctor et al., 2010).

Richard and Aries (1999) reported that intercollegiate athletes are more dissatisfied with their college experience due to their extensive involvement with their individual teams. Yang et al, (2007) found that gender and grade level were contributing factors to depression among intercollegiate athletes. They reported that females and first year students (freshmen) were at increased risk of experiencing symptoms of depression (p. 484). A discussion of the stress and coping process, as well as studies that have used the MHI to measure psychological health among college athletes will follow.

One theoretical base for the development of the MHI (Veit & Ware, 1983) came from the early works of Lazarus. Lazarus (1991) proposed a cognitive-transactional process theory where stress is an active and unfurling process made up of causal antecedents, mediating processes, and effects. Antecedents are variables particular to the person and include things such as commitments, beliefs, and environmental factors that involve demands and situational limitations. Mediating processes refer to the appraisal and coping of demands and resources. When an individual experiences a stressful life event and has to cope with the situation, immediate effects arise. These effects can be short-term changes in affect or physiology or long-term effects in relation to psychological well-being. Lazarus (1991) defined stress as a unique relationship between

the person and the environment. The individual who is experiencing the event appraises the situation as "taxing or exceeding" the person's ability to cope with the event thus endangering his or her well-being.

The driving assumptions behind Lazarus' theory are metatheoretical and include transactions, process, and context (Lazarus, 1991). According to Lazarus, stress occurs as an event where the person and the environment exert influence over each other. The stress is subject to change, and the meaning given to the particular event is derived from the underlying context. Schwarzer and Schulz (2002) asserted that although these assumptions mirror a heuristic framework, they are important to the study of stress and coping and should be investigated as an active unfurling process.

According to Lazarus (1991) the cognitive appraisal model details two processes, a primary (demand) and a secondary (resource) appraisal. The outcome of the appraisals is divided into categories: challenge, threat, and harm/loss. The primary appraisal refers to the stakes a person has in a given stressful event. The individual can appraise the event as challenging when the event sets the person in motion mentally and physically and requires immediate involvement. The individual may accept the challenge and see the opportunity as a personal growth event, an anticipated gain, and mastery over the stressful event. The threat occurs when the individual believes there is danger, possible physical injury, or a blow to his or her self-esteem. In the harm/loss scenario, damage has occurred, which can include the loss of a significant person, object, self-worth, or loss in social status (Lazarus, 1991). Grindstaff, Wrisberg, and Ross (2010) offered support to Lazarus' appraisal model when they reported that some athletes interpret an injury as an

opportunity to learn, suggesting they accept the challenge presented by the event, while others view the event as a threat to their athletic career or self-identity (p. 129).

In his theory, Lazarus (1991) included a secondary appraisal or resource appraisal. In this appraisal process, the individual assesses coping options for managing the stressful demands of the situation. The process involves an automatic evaluation of the individual's competence, available social support, or resources that may help in reestablishing equilibrium between the individual and the environment while readapting to the situation.

Lazarus and Folkman (1984) outlined eight properties that events appraised as meaningful and stressful include: novelty, predictability, event uncertainty, imminence, duration, temporal uncertainty, ambiguity, and timing in relation to the life cycle. Of particular note to this investigation are the properties of predictability and timing in relation to the life cycle. Predictability is based on the assertion that loss of predictability takes place when the individual expectancy of an event is not met (Thatcher & Day, 2008). Dugdale, Eklund, and Gordon (2002) reported that elite athletes described their most stressful event as unexpected. Thatcher and Day (2008) reported that most athletes anticipate competitions and their daily activities as usual, which makes them susceptible to a loss of predictability. Life events are often unexpected (i.e., injury, de-selection), which can make the appraisal process for the athlete engrossing.

Lazarus and Folkman (1984) explained that stressful life events are likely to happen in the background of the individual's life cycle. Thus, the significance of a stressful life event may be appraised in relation to other life events. Thatcher and Day (2008) explained that in this situation, the athlete might appraise the event as more or less

stressful when occurring during other life events. Examining the relationship between major life and minor life events, Pillow, Zautra, and Sandler (1996) reported that individuals experiencing a major life event might be more sensitive to minor life events. The individual becomes more sensitive to minor events especially if the event holds specific themes such as rejection, failure, or loss of control (p. 383). Thus, the major life event can create a ripple effect and act as a predisposing factor that can make the minor event seem like a difficult and culminating situation (Pillow et al., 1996). Focusing on the intercollegiate athlete, one can infer that the demands of the dueling roles of student and athlete while emerging as an adult constitute events that present challenges during this period of life.

Cumming, Smith, Gossbard, Smoll, and Malina (2012) investigated the predictive relationship among coping strategies, body size, and psychological health in female gymnasts and basketball players using the MHI to assess psychological health. The authors found that psychological and biological factors influenced psychological health in female athletes. The MHI scores ($M = 136$, $SD = 22.9$) indicated a positive correlation between the tendency to engage in maladaptive and adaptive coping strategies and psychological well-being. Additionally, the MHI scores were inversely related to distress in both gymnastics and basketball.

In their examination of antecedents to sport injury, Williams and Andersen (1998) reported that an athlete's history of stressors, daily hassles, a myriad of negative life events, and low social support may leave the athlete with few resources to handle stress. They reported this situation leaves the athlete open to injury in competition. This investigation showed that in this group of participants, MHI scores were closely

associated with engagement in maladaptive coping strategies including avoidance, wishful thinking, and blame shifting, which would likely generate negative psychological health outcomes or psychological distress. The findings also showed that athletes' coping strategies can predict variance in psychological health.

Albison and Petrie (2003) examined the cognitive appraisal, stress, and coping strategies of athletes prior to injury and post injury and found that athletes who reported experiencing negative life events prior to the season reported perceived difficulties in coping with their injuries four days after the injury occurred. They suggested the athlete's confidence in being able to cope effectively was attributed to a high degree of tension experienced from the negative life event prior to their injury. The relationship between confidence and tension from the negative life event influenced the athlete's secondary appraisal of the injury to be more negative (Albinson & Petrie, 2003). The researchers also found that after controlling for the duration of the injury and the athlete's mood prior to the injury, life event stress was the strongest predictor of mood changes.

Supporting a developmental perspective, Brewer (2003) explained that risk associated with negative life events such as injury in sport might differ across the life span. Brewer, Linder, and Phelps (1995) reported that extreme negative responses to injury in the sport setting lessens with age. Brewer (2003) stated that due to the increase in early sport participation and recreational activities across ages, research should focus on trying to generalize findings on injury in sport across the life span. Investigating differences in the development of an athletic identity and response to injury and other life events specific to athletes may also provide noteworthy findings (Brewer, Van Raalte, & Linder, 1993).

Overall, psychological health among intercollegiate athletes is dependent on how athletes perceive their life situation and how they appraise and act upon it. The use of the MHI developed by Veit and Ware (1983) helps uncover how this outcome is predicted via the strength of an individual's athletic identity and ego status classification. Important to this investigation is a demonstration of how the variables in this study (i.e., athletic identity, ego identity status, and psychological health) interact to better understand overall psychological health among intercollegiate athletes.

Interaction of Variables

An approach to understanding how the variables (i.e., athletic identity, ego identity development, and psychological health) in the present study can interact is best conceptualized through the view of life experiences presented by Mirowsky and Ross (2010) and Mirowsky (2010). These researchers asserted that social conditions, beliefs, and emotions help form circular fields of experiences in life (Mirowsky & Ross, 2010). The outer-most field is composed of conditions that define the physical realities of circumstances that inhibit or enable action. On the other hand, beliefs form a psychological bridge between these conditions and the emotional responses by forming around these realities through interpretations made about the external conditions (Mirowsky & Ross, 2010). Emotions are reported to surface from these formed beliefs (Mirowsky & Ross).

Individuals at different stages of life live under diverse conditions. In terms of emerging adulthood, individuals often find themselves obtaining an education and training that will provide them with a foundation for their occupational attainments well into adulthood (Arnett, 2001). This period (ages 18 to 25) is marked by reflective change

in the areas of love, work, and worldviews (Arnett). Despite the possible directions an emerging adult can take, exploration of identity and life's possibilities is influenced by and limited to the cultural and social conditions existing in the individual life. The connection between the experiences of an intercollegiate athlete as an emerging adult helps demonstrate this situation.

Simons et al. (1999) reported that early patterns of sport socialization can be viewed as social conditions that influence identity exploration towards commitments in an intercollegiate athlete's life. The process of separation-individuation from the parent-child relationship (Meeus, Iedema, Maasen, & Engels, 2005) can also be viewed as social. Concerning athlete identity formation, early sport specialization in adolescence can have effects well into emerging adulthood. Simon et al. (1999) reported that through early sport socialization and the specialization of skills, young athletes begin to identify with the role of athlete at an early age. While socialization could serve an individual's psychological and social well-being by providing the person with a sense of uniqueness and belonging through feelings of mattering to others (Erikson, 1964), it is possible that early commitments to roles will influence how an athlete negotiates life roles in the future (Settles, Seller, & Damas, 2002). Research on how individuals classify the self and perceive personal roles has connotations for psychological functioning (Settles, Sellers, & Damas, 2002).

Settles, Sellers, and Damas (2002) examined how college athletes vary in how much they perceive their roles as student and athlete as separate from or interfere with each other. The authors found that role interference and well-being were negatively related, which can be explained by relational and role importance factors. They also

indicated that role interference could be due to increased participation in one or both of the roles (Settles et al., 2002). The literature on athletic identity has shown that the exclusive identification to the role of athlete increases among individuals who perform at the college level (Brewer et al., 1993). This scenario could often lead to an over-identification with the athletic role at the expense of other possible roles (Miller & Kerr, 2003). Settles, Seller, and Damas (20002) contended that when an individual views his/her social identity role as separate (not integrated), the person could experience less role interference and more positive aspects in two life areas when both roles are functioning optimally. The individual is also able to focus on the demands of each role better, which could have an impact in the individual's psychological health (2002).

Derrick (2012) investigated the relationship among athletic identity, sport commitment, time participating in sport, social support, life satisfaction, and psychological well-being and found a significant relationship between college athletes who identified strongly with the role of athlete high and the level of commitment to sport. The researcher asserted these individuals may have the ability to cope with stress well. Derrick also found no evidence that athletes with high athletic identity would spend more time in sporting activities versus other activities. This finding could show how an athlete who highly identifies with athletic role would likely manage role conflicts or crisis situations well, which could be evidenced by signs of psychological well-being. It may also show that an athlete who highly identifies with the role of athlete due to early socialization, may not feel detached from the sense of control later in life (Mirowsky & Ross, 2010).

In terms of ego identity classifications, this individual may fall under the achieved identity or foreclosed status where beliefs and ideas are congruent with life roles. Individuals with identities in moratorium may not respond as well if they have not developed the proper skills to cope with the additional conflict in life. Adams (2012) asserted that individuals who begin to let go of some of their beliefs begin to search for personal ideologies may experience a feeling of collapse as the new self emerges, manifested as disorientation, bewilderment, and feeling of emptiness. It could be asserted that such individuals might welcome these changes and cope with the internal conflicts well.

Another scenario that may indicate interactions between the variables studied in this investigation could be seen when an athlete does not get selected to start or is demoted from a higher to lower level of play. In a qualitative study, Rotella and Newburg (1989) investigated the psychosocial experiences of athletes on competitive teams who rarely get the opportunity to play. Referred to by many as benchwarmers (e.g., second or third strings on a team), the individuals in this study reported a range of negative emotions when describing their experiences. One respondent in this investigation was a starter in high school, benched during her first year of varsity play, then later dropped to junior varsity at a Division II school. This participant reported feeling a loss of pride in the game, deterioration of skills, embarrassment, and depression. She reported that she carried these feelings of inadequacy well after her college experience. The athlete reported having a strong athletic identity in high school and at the start of her college career but after the demotion in play status she reported not being able to face the field again. This situation left her unsure about her role as an athlete and

also influenced her understanding of her role as student as her grades decreased. In this case, the individual was possibly thrust into unexpected exploration of roles and personal identity. The athlete may have been secure in her role as athlete, which was later taken away, causing lasting emotional disturbances.

Brewer (1993) examined self-identity and vulnerabilities to depression in athletes and found that when athletes were presented with imaginary season-ending injuries, individuals highly identified with the athlete role showed vulnerability to a depressive response. Respondents in the control group did not report signs of depression. Mangel (1997) found a link between moratorium scores and athletic scholarship status and type of sport. Individuals who were not in revenue-producing sports, did not receive a scholarship, and realized they would not move forward in their sport career engaged in active exploration of other possible career opportunities, but experienced some anxiety in the process.

Studies that demonstrate how athletic identity and ego identity status can interact to predict psychological health are limited. This researcher hypothesizes that the most significant interaction will be seen in a scenario where an individual has a strong athletic identification and whose identities are either achieved or in moratorium. The outcome may show signs of positive psychological health. Another possible significant interaction might be seen in the scenario where an individual with a strong athletic identity and a moratorium status, who experienced a negative life event would likely report lowered degrees of psychological health.

Summary

The review of the literature in this chapter provided information regarding factors that may contribute to the psychological health of intercollegiate athletes. Identity development and formation is a life task that is completed between the periods of adolescence through the emerging adulthood years (Arnett, 2000; Chickering & Reisser, 1993; Erikson, 1959; Marcia, 1966). The establishment of identity includes the formation of an athletic identity among intercollegiate athletes and involves the exploration of and commitment to roles that may result in enduring choices later in life (Adams, 2012; Marcia, 1966). The process of identity formation is a challenge for many individuals that could lead to psychological distress.

The literature on early sport participation and socialization indicates that young individuals begin to develop an athletic identity well before high school and college years. Through continued participation and success in sport, athletic identity increases and finds its peak in college. Intercollegiate athletes are expected to perform and excel at both academics and athletics. The time committed to sports is substantial for college athletes who must also balance school and social activities. The expectations and pressures to win in competition in order to satisfy coaches, parents, fans, and even scouts could add undue stress for the intercollegiate athlete. These demands and pressures coupled with the internal struggles of establishing an identity could lead to elevated risk for anxiety and depression. Adding a major life event like an injury or early sport separation can further complicate the emotional responses of the intercollegiate athlete. Despite the pressure and results of a major life event, many intercollegiate athletes do not

take advantage of services that are often available exclusively to them (i.e., athletic counseling).

Chapter 3: Methodology

Introduction

In Chapter 2 a review of the theoretical framework important to the understanding of the variables and hypothesized possible interactions to show relationships between the variables was presented. In this chapter the methodology used to examine the relationship between the independent variables athletic identity and ego identity status and the dependent variable psychological health: psychological distress and psychological well-being is presented. The guiding research question and hypothesis of this investigation are presented, followed by information on the sampling plan process and the characteristics of the participants. The instruments used to measure the variables are described and the information on their psychometric properties followed by a brief discussion on the demographic survey developed for this investigation. The data collection process is described and the methods used to analyze the data are discussed. Included in the last section of this chapter are the results of the pilot study and its impact on the ensuing investigation.

Research Question and Hypothesis

Research Question: Can athletic identity and the ego identity statuses of diffusion, foreclosure, moratorium, and identity achievement predict psychological health outcomes among intercollegiate athletes?

Hypothesis: There is a predictive relationship between the independent variables athletic identity and ego identity statuses of diffusion, foreclosure, moratorium, or identity achievement, and the dependent variable psychological health.

Null Hypothesis: There is no predictive relationship between the independent variables athletic identity and ego identity statuses of diffusion, foreclosure, moratorium, or identity achievement, and the dependent variable psychological health.

Sampling Plan

The sampling plan was designed to obtain data from teams who were part of an accessible population of intercollegiate athletes. The process is described in the following section.

Data Collection

The population for this investigation were intercollegiate athletes from a public Mid-Western university who participate in Division I athletics. Initially, the researcher planned to sample athletes from several schools within the Mid-American Conference (MAC). The athlete population where the data were collected are a part of the MAC and the demographics and overall make of the athletic teams closely match the athlete population and teams of other university programs in the MAC. Thus, the researcher selected the sample based on the accessibility of the athletes on the premise that this university mirrors the demographic make-up of the other universities within the MAC system.

The research design for this study was a standard regression design. The variables were measured via an electronic survey using three surveys that include the Athlete Identity Measure (AIMS; Brewer et al., 1993), the Objective Measure of Ego Identity Status (OMEIS; revised, Adams, 2010), and the Mental Health Inventory (MHI; Veit & Ware, 1983). Included in the survey was a demographic questionnaire.

Procedures. The data collection for this study began with a consultation with the Senior Executive Athletic Director (SEAD) of the department of athletics at the selected university. In an attempt to garner support for participation in the study, the SEAD sent a blanket email to all the team head coaches. The email sent by the SEAD did not divulge information about the study that might give coaches insight into the study parameters. The researcher waited two weeks after the initial email from the SEAD to follow up with the coaches. The researcher sent a follow up email inviting coaches to meet with the researcher to discuss the focus, aim, and procedures of the study and to establish a final approval to participate. Once the approval was obtained and a date determined by the coach and researcher set, the coach invited his or her players to participate in the study. Measures were taken to avoid participant coercion by the researcher or coach. Interested participants were directed via email to go to a computer lab reserved by the investigator. In order to avoid interference from other students, staff or faculty, the computer lab manager closed the lab during the data collection period. The researcher placed signs on the door of the lab as well as on columns and walls leading to the lab noting the unavailability of the premises during the periods listed on the sign.

Other measures were taken by the researcher to ensure the fidelity of the participant's responses. The investigator requested that participants not talk to one another, use their cell phones, or open their personal emails while they completed the survey. The participants were instructed to locate the survey link labeled "study" that were placed on the computer desktops in the lab prior to the participants arriving. Once the participants clicked on the link they were presented with an electronic survey developed using the survey program Qualtrics. The survey included a consent form

(Appendix B), the Athletic Identity Measure Scale (AIMS), the Objective Measurement of Ego-Identity (OMEIS), and the Mental Health Inventory (MHI) and ended with a demographic questionnaire. Participants signed the consent form electronically by selecting yes or no on the form and then responding to the survey. Once instructions were provided to participants, the researcher stepped outside of the lab to avoid researcher bias. The average time to complete the survey was between 20 to 25 minutes. As a gesture of gratitude, the researcher provided food and beverages to all participants after they completed the survey. The concessions were displayed in a room next-door to the lab. The provision of food did not interfere with the NCAA student athlete eligibility and did not require approval from the NCAA compliance personnel. The researcher gained approval from Internal Review Board (IRB) who determined that that the study would be exempt from a review (Appendix C).

A total of 211 participants completed the survey for this study. The collected data were later analyzed using the statistical program SPSS 25. A standard regression analysis was utilized to answer the research question: Can athletic identity and the ego identity statuses of diffusion, foreclosure, moratorium, and identity achievement predict psychological health outcomes among intercollegiate athletes?

A post hoc backwards regression using the "create all models" stepwise approach developed by Ruengvirayudh and Brooks (2016) was also conducted. Models were produced from the backwards regression and compared to the full standard regression model. Results of the analyses will be presented in chapter four. Descriptive statistics, including means, frequencies, standard deviations, and alpha reliability coefficients were calculated for each variable. A reliability and factor analysis were conducted on the

scales used in this study. The researcher did not see any concerns with internal or external validity of the study. However, because the data collected comes from a self-report questionnaire one should consider biased responses from participants as a limitation. The survey solicited information regarding values, beliefs, practices, and emotional and mental status, thus, participants might have responded in a socially desirable manner. Only the MHI used in this study has a built in scale to measure for social desirability.

After the study was completed, the researcher prepared a presentation of the findings to discuss with the Athletic Director and his staff including coaches, and sports medicine personnel. The information provided might impact how the university develops curriculum, activities, and programming to fit the needs of athletes at the university. This information may also influence how sport counselors and sports medicine personnel intervene with athletes who might be experiencing the need for psychological interventions.

Participants

The participants were from a mid-size public university located in the Mid-western part of the United States. The following team coaches were sent email invitations to participate in the study: the men's teams include baseball, lacrosse, wrestling, basketball, football, cross-country and ice hockey. The women's teams invited to participate in the study were softball, basketball, soccer, volleyball, cross-country and the swimming and diving. The sport teams in season at the time the invitations were sent for participation in this study included baseball, lacrosse, ice hockey, men's and women's cross-country and women's swimming and diving. The teams not in season included

football, wrestling, men's and women's basketball, and women's soccer team and volleyball. The only team that did not participate in this study was football. Football is a revenue generating sport and because the investigator was not able collect data from football, the generalizability of the results is limited to non-revenue generating sports also referred to as Olympic sports. Comparisons between these group differences are not able to be made based on the findings of this study. Additionally, the demographic data including that of race could have influenced the results of the identity statuses measured in this study as football contains greater racial diversity amongst its ranks.

In order to participate in this study, the intercollegiate athletes were expected to meet eligibility standards set by the NCAA (see ncaa.org for Div. I eligibility rules and regulations) and be 18 years of age or older. The American Hockey Collegiate Association protocols were also adhered to for this study. Athletes who were injured or whose athletic participation were suspended or delayed in order to extend the athlete's period in which they can play during college were eligible to participate. A profile of the teams participating in the MAC follows to provide a rationale for why the accessible population was a good representation of the conference as a whole.

According to www.mac-sport.com, the MAC conference is composed of 12 fulltime schools with a 14-member roster for football only. Headquartered in Cleveland, Ohio the MAC is comprised of an East and West Division. The membership base is in the Great Lakes Region stretching from Western New York to Illinois. Nine of the 12 schools in the conference are located in Ohio and Michigan. The single members are located in Illinois, Indiana, and New York. There are 23 sports fielded in the MAC with 11 men's and 12 women's sports.

The MAC conference is comprised of schools set in unique geographical settings, however, the demographical make-up of each school is similar. In terms of geography, the majority of the schools (7 of 12) in the MAC are located in rural or suburban settings. The schools in rural settings (e.g., Ohio University & Miami of Ohio) are considered college towns as the university population dominates the community. Some of the schools in the suburban setting are influenced by cities (e.g., Western Michigan University and Kent University) due to their proximity to urban areas. Only four schools are located in urban areas (e.g., University of Toledo, The University of Akron (Akron), State University of New York at Buffalo (Buffalo), & Kent State University) and these schools have a higher number of minorities enrolled as compared to schools in rural and suburban areas (Collegedata.com).

In terms of enrollment, the majority of the schools in the MAC register between 17 and 22 thousand students, which include graduate students (Collegedata.com). According to Collegedata.com, the ethnicity of U.S. students enrolled in MAC schools is mostly White. Eight of the twelve schools reported having 80% or more registered students that are of the White race. Three of the 12 schools reported African Americans as the second most common ethnic group ranging between 17% and 20% of the overall student population (e.g., University of Toledo (UT), Buffalo and Akron). At these three schools, the percentage of White students ranged between 65% - 70% (Collegedata.com). With the exception of Western Michigan University (WMU; 80% White and 20% African American), the schools that reported White enrolled students at 80% or higher, did not detail a second major ethnic group at their institutions. In other words, there was no prominent second ethnic group reported. The minority group percentages were in the

single digits with no notable differences in numbers reported for these groups (Collegedata.com). The ratio of male to female students enrolled at these institutions was heavily in favor of women. Only three schools (e.g., UT, WMU, & Akron) reported having a 50/50 split and only one school reported having more men than women enrolled (Collegedata.com).

A review of the MAC showed that the overall make-up of the athletes and teams at the studied university closely represents those characteristics of athletes and teams within the MAC. The total sample size was determined using the precision efficacy analysis for regression (PEAR) method (Brooks & Barcikowski, 2012). Using the precision efficacy of .80 and a p2 value of .25 it was determined that data would be collected from a minimum of 180 participants.

Instrumentation

Three instruments were utilized in this study: (a) the Athletic Identity Measurement Scale (AIMS; Brewer et al., 1993), (b) the Objective Measure of Ego Identity Status (OMEIS revised; Adams, 2010), and (c) the Mental Health Inventory (MHI; Veit & Ware, 1983). The survey ended with a demographic questionnaire to obtain information from participants such as biological sex, age, sport, academic year, scholarship or non-scholarship, years of sport participation, and string placement. The changes made to the survey after the pilot study included the presentation format of the AIMS into a single matrix table and the elimination of some demographic questions.

Five independent variables were determined based on the measures used in this study. The first is athletic identity (AIMS; Brewer et al., 1993) followed by the diffusion, foreclosure, moratorium, and identity achievement, which are the four subscales of the

OMEIS (Adams, 2010) measure. Two dependent variables were determined using the MHI (Veit &Ware, 1983) which included psychological well-being and psychological distress. This study used a standard regression design in order to increase knowledge about the relationships between the predictive variables and the outcome variables. Thus, total scores versus subscale or cut off scores were necessary for this investigation. The OMEIS and the MHI had cut-off scores available for analyses but the researcher decided to use the total scores generated from these measures.

Athletic Identity Measurement Scale (AIMS; Brewer et al., 1993). The AIMS is a psychometric tool used to measure athletic identity. Brewer et al. (1993) defined athletic identity as "the degree to which an individual identifies with the athlete role" (p. 237). The AIMS was initially developed as a 10-item questionnaire and later revised as a 7-item survey (Brewer & Cornelius, 2001). Research has provided support for the 7-item version which correlates significantly to the 10-item version used in this study (Brewer & Cornelius, 2001). The scale was developed to reveal the strength and exclusivity of the athletic role among individuals. Using a rating system, the measure helps investigators comprehend the degree to which athletes attribute their identity to the role of athlete. The respondents rate the importance of athletic identity to their behavior. Both versions of the AIMS have shown to have face and construct validity as scores increased with the level of sport participation (Tasiemski, Kennedy, Gardner, & Blaikley, 2004). The scale was designed with item content that covers social (e.g., "Most of my friends are athletes,"), cognitive (e.g., "I have many goals related to sport,"), and affective (e.g., "I would be very depressed if I were injured and could not compete in sport") elements of the athlete's identity. Responses to the statements are made on a 7-point Likert scale

ranging from 1 - 7 (1 = strongly disagree, 7 = strongly agree). Scores on the measure range from seven to 49 with higher scores indicating a strong identification with the athlete role (Brewer et al., 1993; Brewer & Cornelius, 2001). There are no set cut-off scores for the AIMS.

Brewer and Cornelius (2001) validated the abbreviated 7-item version of the AIMS. They reported the scale as a sound psychometric derivative of the 10-item version of the measure with an internal reliability coefficient of alpha = .81 to .93. The researchers also found evidence for the test-retest reliability over a 14-day period to be r = .89. Concerning validity, Brewer and Cornelius (2001) reported that among athletes and non-athletes, AIMS scores increased with the level of sport involvement as well as the perceived importance of sport skills and competence. The AIMS was normed on a group of 90 males of a university varsity football team. It was also normed on two different groups of male and female students in a psychology introduction course (n = 243; n = 449). While the AIMS was determined to be multidimensional based on three factors labeled as *social identity, exclusivity, and negative affectivity,* there is a dearth of research on its the reliability of these factors. In this current study, the researcher used a single total score on the AIMS to identify the strength of the individual (Brewer, 1991; Brewer & Cornelius, 2001).

The researcher considered a sample-specific set of cut-off scores. He decided on the following cut-off scores that ranged from low, moderate to high degrees of athletic identity. Low score range was set between 7-14, moderate 15-35, and high scores 36-49. The means scores for this study was *m* =40, with a range of 25, and a standard deviation of 5.38. The reliability of the AIMS for this study was Cronbach alpha .690.

The Objective Measure of Ego Identity Status (OMEIS; revised, Adams, 2010). The first successful attempt to measure ego identity started with Marcia's (1966) identity paradigm. This qualitative measure was criticized for its narrowness in capturing the full range of the identity construct (Kroger, 2000; Schwartz, 2005). Adams, Shea, and Fitch (1979) continued to work in this area and developed the Objective Measure of Ego Identity Status (OMEIS). Adams (2012) revised the OMEIS and the revised version was used to measure ego identity status in the current study. The revised OMEIS (Adams) is a 24-item self-report questionnaire that employs a Likert-scale format ranging from 1- 6 (1 = strongly disagree, 6 = strongly agree).

The survey measures identity status by evaluating the degree of exploration and commitment alongside ideological content originally proposed by Marcia (1966) as well as interpersonal issues in identity development as suggested by Grotevant, Thorbecke, and Meyer (1982). The first four areas are included within Marcia's ideological content, which assess occupational, political, religious, and lifestyle philosophical commitments and exploration. The content of interpersonal concerns includes the assessment of friendship, dating, sex role, and recreational commitments and exploration (Grotevant et al., 1982). Each set of 6-items of the four subscales of the OMEIS were tested for internal validity (Adams, 2012). The Cronbach alpha for each subscale indicate internal consistency. *Diffusion* (alpha = .88), *Foreclosure* (alpha = .84), *Moratorium* (alpha = .91), and *Achieved* (alpha = .90).

In this study the following alpha numbers were obtained for the OMEIS: *Diffusion* (alpha = .65), *Foreclosure* (alpha = .66), *Moratorium* (alpha = .68), and *Achieved* (alpha = .66).

The subscale statuses are independent variables which were tested statistically to determine if they predicted predict psychological health outcomes in the sample population. The researcher was interested in the participants low to high subscale scores on any identity subscale dimension. Participants will be compared on their distributions scores for the fours subscales (See Table 3) While a single identity status classification can be made, the researcher will not use a single subscale category. The possible range for each identity status as measured by the OMEIS is 6 – 36. Each identity status has determined cut-off scores (diffusion = 19, foreclosed = 21, moratorium = 21, and achieved 30), which are compared to the summated raw scores. The researcher will only look at total raw scores for the purpose of this study. Adams (2012) stated individuals with raw scores below the cutoff points for each possible status are considered undifferentiated. These individuals do not report a distinction when using the dimensions of commitment and exploration. The OMEIS (revised; 2010) is normed on individuals between the ages of 13 and 30 years of age.

An example of an item for a diffused status includes the comment, "I haven't thought about politics and they aren't important to me." Additionally, "I have thought a little about what a job means to me but I mostly follow whatever my parents believe or think" is an item focusing on a foreclosed classification. An example item for an achieved classification is "I thought about my political beliefs and know what I believe now." Finally, an example of an item that addresses a moratorium classification is, "Religion is confusing to me and I keep on searching for views on what's right and wrong for me." An identity status can be assigned for a combined ideological or interpersonal identity.

Mental Health Inventory (MHI; Veit & Ware, 1983). Psychological health outcomes were measured using the Mental Health Inventory (MHI) developed and validated by Veit and Ware (1983). The MHI is an instrument that contains 38 items and measures both psychological distress and psychological well-being. The measure has two independent variables that produce global scores for the variables *psychological distress* (PD) and *psychological well-being* (PW). Each global scale contains three subscales. PD contains the subscales that measure *anxiety* ("How much of the time, during the past month, have you been a very nervous person?"), *depression* ("Did you feel depressed in the past month?"), *and loss of emotional and behavioral control* ("During the past month, have you been in firm control of your behavior, thoughts, emotions, and feelings?"). The PWB scale contains subscales that measure *general positive affect* ("During the past month, how much of the time have you generally enjoyed the things you do?"), *emotional ties* ("During the past month, how much of the time did you feel loved and wanted?"), and *life satisfaction* ("During the past month, how much of the time has living been a wonderful adventure for you?). Higher scores in PWB indicate positive psychological health, whereas higher scores on PD indicate negative psychological health. The response to the items yield a total score referred to as a *mental health index*. The researcher only looked at the mental health index.

The Cronbach alpha for the mental health index was reported to be .96 indicating robust internal consistency (Davies, Sherbourne, Peterson, & Ware, 1988). Based on a five or six-point scale, respondents rate the frequency and intensity of psychological symptoms during the past month. The mental health index scores range from 38 to 226. Higher respondent scores specify a positive sense of psychological health, whereas lower

scores indicate a sense of psychological distress during the past 30 days (Davies, Sherbourne, Peterson, & Ware, 1988). The mental health index score was not used in this investigation. The measure provides individual scores for PD and PW. The two score were used to separate outcome variables. This relationship analysis helped test the predictive relationship of the independent variables and the dependent variable hypothesized by the researcher. In the study, the reliability data obtained for the dependent variables was: *Psychological Well-Being* (alpha = .89) and for *Psychological Distress* (alpha = .86)

Demographic survey. Based on the item analysis and feedback from the participants in the pilot study five questions were removed (e.g., *Did you play your primary sport in high school)* from the demographic questionnaire. An item analysis of the items removed did not show a strong relationship between the items and the variables of this study. Thus, the researcher used a revised version of the survey for the present study.

Data Analysis

Once data were collected, descriptive statistics, including means, frequencies, standard deviations, and alpha reliability coefficients were calculated for each variable. A reliability and factor analysis were conducted on the scales used in this investigation. A standard regression model was used to test the research hypothesis: Can athletic identity and the ego identity statuses of diffusion, foreclosure, moratorium, and identity achievement predict psychological health outcomes among intercollegiate athletes?

The possible psychological outcomes in this investigation were psychological distress or psychological well-being thus two standard regression were conducted. After

standard regression were performed and the best model identified, post hoc analysis were conducted using theory driven entries into the models. To further test the relationship between the independent and dependent variables, analysis using a Pearson R correlation were conducted between the global and subscale scores of the independent variable measures (AIMS, Brewer et al., 1993 and OMEIS; revised, Adams, 2010) and dependent variable measure scores (MHI; Veit & Ware, 1983) the global index score of the dependent measure.

Assumptions associated with the standard regression analysis which were tested. Assumptions were also tested for the post hoc backwards regression model which included linearity, normality, homoscedasticity, and outliers. The linearity of a standard regression were tested visually by plots as well as by statistical means. Homoscedasticity, which is the constancy of the variance of the dependent variables was examined by testing the hypothesis of no regression by obtaining the least square residuals and then modeling these residuals as a multiple regression. A screening of outliers of the hierarchical regression model was also performed using univariate and multivariate analyses. The researcher obtained permission from IRB (Appendix C) to conduct the present study as well as the pilot study.

Pilot Study

To assess the feasibility of this investigation a pilot study was conducted. The researcher approached the coaches of men's and women's rugby teams who are considered club teams within the Mid-American Conference (MAC). Both teams agreed to participate in the pilot study.

Participants. Participants (N = 54) for the pilot study were recruited from the men's and women's rugby club teams at the university were the present study was conducted. Although the rugby clubs are not NCAA sanctioned teams, they are a part of the Mid-American Conference. Recently, both teams moved from Division II to Division I status. The university offers club sport programs to all students, faculty and staff interested in participating. The men and women's rugby clubs are currently composed of all students. According to each club's website the players range from sophomores to seniors. The women's club has 33 players (www.ohio.edu/orgs/wrugby/) and the men's team has 42 players (http://ohiorfc.com/).

The coaches for each club agreed to participate and offered their players the opportunity to choose to participate in the pilot study. As an incentive to participate in the study, the players in each club were offered the opportunity to receive community service points. Every season, players are required to serve the local community by volunteering and they receive points for their efforts. A certain number of points must be completed by the end of the season.

Procedures. The researcher approached the coaches of the men and women's rugby clubs via email asking for permission to use the clubs in the pilot study. Each coach responded positively by forwarding a complete list of emails for each team members. The researcher sent every athlete an email containing the link to the electronic survey developed using the survey program, Qualtrics. The survey included a consent form (Appendix B), demographic questionnaire, the Athletic Identity Measure Scale (AIMS), the Objective Measurement of Ego-Identity (OMEIS), and the Mental Health Inventory (MHI) and ended with a demographic questionnaire. Participants signed the

consent form electronically by selecting yes or no on the form and then responding to the survey. After completion of the survey, the participants were thanked for their time and provided with a reception that served as a focus group. An initial screening of the data and the focus group helped in determining changes to the organization and design of survey and the study in general.

Data analysis. Once data was collected, the researcher screened for missing values, outliers, and normality. A correlational analysis of the outcome variables was conducted. Descriptive statistics, including means, frequencies, and standard deviations, were also calculated for each variable.

Screening of the data showed there were missing values on some of the variables under analysis. During the correlational analysis of the outcome variables, the researcher explored with listwise deletions and pairwise deletions and found no difference in the strength of the relationship between the outcome variables.

Results. Descriptive and correlation analysis of the outcome variables examined in the pilot study yielded the following results. The possible range on the AIMS measure is 0 – 49, where higher scores represent a higher degree of athletic identity. The obtained range in the pilot study was 23 – 46. The possible range for each identity status as measured by the OMEIS is 6 – 36. Each identity status has determined cutoff scores (diffusion = 19, foreclosed = 21, moratorium = 21, and achieved = 30), which are compared to the raw scores.

The subscale scores on the OMEIS correlated significantly with the AIMS scores, diffusion $r = .422$, $p < .01$, foreclosed $r = .661$, $p < .01$, moratorium $r = .536$, $p < .01$, and achieved $r = .757$, $p < .01$. The MHI ($M = 132$, $SD = 58$) Index score and the AIMS

scores were also significantly correlated, $r = .72$, $p < .01$. Additionally, the total scores on the OMEIS measure were significantly correlated with the MHI Index, $r = .82$, $p < .01$.

A review of the frequencies showed interesting findings in the data. The reported number of participants in this study N = 54 was not accurate in light of missing values. There were seven cases where the respondent started the survey but left a good portion of the survey incomplete. These cases were deleted. In other cases, the respondent opened the survey, agreed to the informed consent, but never entered any information. It is possible the individuals wanted a preview of the questions before making a decision to participate. For this reason, the researcher decided to use a listwise approach with the missing information when analyzing the data.

Other results indicated by the observation of frequencies and discussion with participants showed that respondents were uncertain about some questions on the survey. For instance, the most frequent response for item #10 ("*In general, would you say your morals are above reproach*?") on the MHI was "I don't know." It is possible many respondents did not know the meaning of the word reproach. Additionally, participants reported that by the time he/she reached the midpoint on the MHI measure the respondents reported paying less attention to the meaning of their responses. Many reported the wording on the MHI became more challenging as time went on.

An analysis of the coefficient of determination using a scatterplot linear regression for various outcome variables showed the variables fit well in this model. For instance, a comparison between AIMS scores and the MHI Index showed a linear

coefficient of determination of R^2 =.527. The AIMS scores and the psychological well-being subscale score in the MHI measure yielded an R^2 = .492.

Insight gained from pilot study. The results of the pilot study provided the researcher with insight into the design of the study. Based on the feedback provided in the focus group regarding the length of the survey some of the questions (e.g., *Did you play your primary sport in high school*) in the demographic section were removed after a relationship analysis was conducted between the questions and the variables of the study. Item 10 ("*In general, would you say your morals are above reproach*?") on the MHI was not removed or changed in order to maintain the statistical integrity of the instrument.

Summary

The research design for this study was identified as a standard regression design which used a simultaneous method of entry followed by a backwards regression ordered method to remove the variables in a post hoc analysis. The researcher developed a data collection plan that involved collecting data from an accessible university that closely resembled that of the MAC conference.

The data was gathered via an electronic survey using three surveys, which include the Athlete Identity Measure, the Objective Measure of Ego Identity Status, and the Mental Health Inventory. Included in the survey was a demographic questionnaire. The revised survey consisted of 94 questions and took approximately 15 to 25 minutes to complete. Data analysis in the pilot study indicated that the independent variables (athletic identity and ego identity status) were predictors of the dependent variable (psychological health). An analysis of the scales also indicated strong reliability and validity of the measures in this study.

Chapter 4: Results

Introduction

Chapter three presented the methodology utilized to obtain the results that are discussed in this chapter. This section begins with descriptive statistics for the demographic data. Screening of data for violations of assumptions, test of normality to examine the slope of the variables in question and a test of interactions to examine the correlation between the variables in this study are presented. A standard regression was conducted to answer the research question. A post hoc backward regression was performed to compare the models produced by the analysis with the full models of the standard regression. The backwards regression was helpful in determining the usefulness of the independent variables for future research. The outcome variables of psychological well-being (PW) and psychological distress (PD), measured by the Mental Health Inventory (MHI) were predicted from athletic identity (AIMS) and the ego identity statuses of moratorium (MOR), achieved identity (ACH), foreclosed identity (FOR) and diffused identity (DIFF). The chapter concludes with a summary of the results.

Descriptive Statistics

The researcher downloaded the data to SPSS 25 from the Qualtrics survey software. Prior to the analysis of the data, data screening procedures were applied using a listwise deletion function. The listwise deletion process deleted eight outlier cases of the 211 attempts as these cases had missing information for more than one of the variables in this study.

The final sample size for this study was N=203. In regards to demographics, 120 of the respondents identified as male while 83 identified as female. In terms of race, 172 of

the participants identified as Caucasian/ White with the next highest number, 20 identified as African American/Black. The sampled participants were all undergraduates, distributed widely across academic years, with 55 reported to be freshman, 61 reported to be sophomores, 42 reported to be juniors, reported to be seniors and only 5 reported to be fifth year students. (Table 1)

Table 1.
Participant Gender, Class Year, Race or Ethnicity, and Undergraduate Status

Variable	n	Percentage
Gender (N = 203)		
Female	83	40 %
Male	120	60 %
Class Year (N = 203)		
Freshmen	55	26.9%
Sophomores	61	29.9%
Juniors	42	20.5%
Seniors	40	19.6%
Fifth Year	5	02.8%
Age (N = 146)		
18-19 Years Old	32	21.9%
20-21 Years Old	55	37.6%
22-23 Years Old	12	8.20%
24 or Older	47	32.2%
Race or Ethnicity (N = 205)		
African American/Black	20	09.7%
American Indian or Alaska Native	1	0.49%
Asian	3	1.5%
Caucasian/White	172	83.5%
Hispanic/Latino	5	2.4%
Other	4	01.9%
Playing Status (N =205)		
Starter	114	55.6%
Second String	42	20.4%
Third string	15	7.32%
Other	34	16.5%

The participants in this study came from a variety of intercollegiate non-revenue generating sports some that were in season (IS) during the study and others that were not in season (NIS). The participants in terms of sports IS and NIS and in the order the data was collected are as follows: Men's ice hockey (n=29, IS); Women's softball (n=16, IS); Men's basketball (n=10, NIS); Men's lacrosse (n=13, IS); Women's basketball (n=12, NIS); Wrestling (n=29, NIS); Baseball (n=26, IS); Women's swimming and diving (n=23, IS); Women's and Men's cross country (n=14, IS); Women's soccer (n=20; NIS); Women's volleyball (n=11, NIS) for a total n=203 (See Table 2).

Table 2.
Participating sports and seasonal status

Sport	***n***	**In season (IS)**	**Not in season (NIS)**
Men hockey	29	X	
Softball	16	X	
Men's basketball	10		X
Men's lacrosse	13	X	
Women's basketball	12		X
Wrestling	29		X
Baseball	26	X	
Swimming and Diving	23	X	
Men's and Women's cross country	5	X	
Women's cross country	9	X	
Women's soccer	20		X
Women's volleyball	11		X
Total	203	7	5

The investigator also performed a crosstab of the information obtained from the demographic survey to examine if there was balance between playing status and year, age and recruitment. In terms of playing status and academic year, it was assumed by the investigator that majority of the starters in this study would be seniors. The result of the crosstab showed that the majority of the starters in this study were sophomores (n=38). The second largest groups of starters were juniors (n=26) and seniors (n=26). The

freshmen (n=17) came in third; however, the freshmen had the highest number of second strings (n=13) followed by the sophomores (n=13). The juniors (n=8) and seniors (n=7) reported being second strings (Appendix D). The crosstab between playing status and recruitment seemed more balance. Of the 202 responding ICAs (n=174) reported being recruited as starters.

In terms of recruitment to play their primary sport, 178 reported being recruited to play in college while 28 reported not being recruited. The majority of participants (n=110) reported being starters on their team while the remaining participants reported being a second string (n=42) or a third string (n=15). Of the participants (n=32) reported that they were either not in the lineup to play, did not know their playing status or reported being out of the lineup due to injury. (Appendix E) It is possible that the majority of the starters during this study were recruited as starters when they were freshmen.

To assist with the discussion, a descriptive analysis indicating where participants' responses showed their ego identity status classification(s) is provided (see Table 7). Adams (2010) provided classification parameters by comparing the raw scores against the cut-off designations for each status. The cut-off scores are as follows: DIFF, 21; MOR, 30; ACH, 30, and FOR 21. Adams noted that respondents can be "classified into a {pure} single identity status or into a transition identity status category" (p. 39). He also provided "classification rules" for scoring (p. 39). To fall into a pure identity status, the respondent's scores must be above the cut-off score for a single identity status. Respondents with scores above the cut-offs in two statuses (e.g., MOR – ACH; DIFF – FOR) are given the transition status classification. Adams noted that respondents whose

responses place them in three or four statuses "should be dropped from further research analysis or placed at the lowest level of functioning, diffusion" (p. 39). He added that respondents with scores below all the status cut-offs are placed in the undifferentiated status. He stated these individuals, "do not present a clear distinction using the dimensions of exploration and commitment" and that these individuals "may be a second type of diffusion" (p. 39). He cautions investigators when using this status as there is no clear theoretical description or explanation for this status which might lead to construct validity issues. For the purpose of this study the investigator labeled this group as outliers. (see table 3)

Table 3.
Ego Identity Statuses Scoring

Ego Identity Statuses	***n***	**%**
Pure identity		
DIFF	23	11.3
FOR	28	13.8
MOR	15	7.4
ACH	16	7.9
Transition identity		
DIFF & FOR	4	2.0
DIFF & MOR	11	5.4
FOR & MOR	5	2.5
FOR & ACH	4	2.0
MOR & ACH	1	.5
Undifferentiated	88	43.3
Outliers	8	3.9
Total	203	100.0

Correlations

A Pearson correlation matrix revealed that all the independent variables have a linear relationship between the dependent variables. The matrix also showed that no independent variables were highly correlated showing that test of multicollinearity was met. Looking at the basic relationships of variables it was noted that there were some negative relationships among variables used in this investigation. In regards to Psychological Wellness (PW), a significant negative correlation was noted between PW and MOR, r = - .346, p = < .000. The results also showed a significant negative relationship between the outcome variable between Psychological Distress (PD) and MOR, r = - .361, p = < .000, and AIMS, r = - .231, p = < .004. These significant relationships will be reviewed further in the next chapter. The correlations between the independent variables diffusion (r = -.172), moratorium (r =-.346), foreclosed identity (r = -.163), achieved identity (r = .265) and the dependent variable psychological wellness

were significant at <.05. Similarly, the correlation between the independent variables athletic identity (r = -.231), moratorium (r = -.361), foreclosed identity (r = -.206), achieved identity (r = .144) and the dependent variable psychological distress were also significant at <.05. Per Cohen (1988) correlation coefficients describe the direction and the magnitude of the relationship between two variables, with greater values indicating a stronger linear relationship. (see table 4). These numbers are relevant indicators for the researcher to reject the null hypothesis.

Table 4.
Pearson Correlations of Predictors and Outcome Variable Psychological Health

	PW	AIMS	DIFF	MOR	FOR	ACH	PD
PW	-						
AIMS	-.080						
DIFF	-.172*	.109					
MOR	-.346*	.104	.480*				
FOR	-.163*	-.171*	.133	.206*			
ACH	.265*	.003	-.440*	-.367*	.017		
PD	.168*	-.231*	.092	-.361*	-.206*	.144*	-

Note. PW = psychological well-being, PD = psychological distress, AI = athletic identity, DIFF = diffused, MOR = moratorium, FOR = foreclosed, ACH = achieved, *p < .05.

Testing of Assumptions

In a multiple regression analysis there are assumptions to be met in order to analyze the results with accuracy. The assumptions of linearity among variables, normality, homoscedasticity (the variance of error) and interaction among variables were

tested. Using SPPSS the researcher generated histograms and scatterplots to test for normality of the distribution of scores. In addition to the graphs and plots the research conducted a test of normality using the Shapiro-Wilk tests. The results of this test showed significant values among the variables. Additionally, the independent variable AIMS and the dependent variable PD were negatively skewed. However, a review of the standardized residual histogram showed that the skewness of these variables were small and not a significant threat to the test of normality (Appendix D). Thus, the researcher determined that the test of normality was met and the results are summarized in Table 5. Another test of assumption includes a test of collinearity. A Pearson correlation matrix was processed to show that the relationship among all pairs of variables were linear, thus, the assumption of linearity were met. Scatter plots were also generated and viewed to assure the linearity of the variables in this study (Table 6).

Table 5.
Tests of Normality for All Variables

	Shapiro-Wilk		
Variables	Statistic	*df*	*Sig.*
AIMS Score	.977	203	.002
Diffusion	.978	203	.003
Moratorium	.984	203	.024
Foreclosed	.986	203	.050
Achieved	.990	203	.182
Psychological Distress	.967	203	.000
Psychological Well-being	.989	203	.125

Table 6.
Collinearity Statistics for Standard Regression

Regression Model	Tolerance	VIF
AIMS	.960	1.042
DIFF	.681	1.467
MOR	.712	1.404
FOR	.922	1.085
ACH	.762	1.312

Analyses

Primary analysis. In order to answer the research question a standard regression was performed. The results identified the unique predictive contributions of the independent variables of athletic identity (AIMS), foreclosed identity (FOR), identity in moratorium (MOR), diffused identity (DIFF) and achieved identity (ACH) to the dependent variables psychological wellness (PW) and psychological distress (PD) a standard regression analysis was performed. The analysis showed the proportion of variance in the dependent variables that is credited to each independent variable in order.

The standard regression with all five predictive variables to predict psychological well-being was statistically significant, $R = .397$, $R^2 = .157$, adjusted $R^2 = .136$, F (5, 197), $p < .000$. To examine the contributions of each predictor the *t* ratios were observed. Two of the five predictors were significantly predictive of the outcome variable psychological well-being. The two predictors include identity in moratorium (MOR) $t\ (203) = -3.605$, $p < .000$ and achieved identity (ACH) $t\ (203) = 2.575$, $p < .011$. The model with all five predictors resulted in an adjusted $R^2 = .136$ indicating that MOR,

ACH, AIMS, FOR and DIFF were estimated to accounted for 13.6 % of the variance in population for the outcome variable PW. The results also showed a negative relationship between MOR (β = -0.279) and PW in this analysis. A summary of the results can be reviewed in Table 7.

Table 7.
Standard Regression for the Predictors of Psychological Well-Being

Predictor	B	SE	β	*t*	*p*
AIMS	-.066	.115	-.038	-.572	.568
DIFF	.132	.160	.065	.824	.411
MOR	-.520	.144	-.279	-3.605	.000
FOR	-.208	.128	-.110	-1.622	.106
ACH	.347	.135	-.193	2.575	.011

A second standard regression was performed using the same predictors (AIMS, FOR, MOR DIFF and ACH) for the outcome variable psychological distress. The overall regression with the five predictors to predict psychological distress was statistically significant, R = .442, R^2 = .196, adjusted R^2 = .175, F (5, 197), $p < .000$. The *t* ratios were observed to examine the contribution of each predictor. Similar to the standard regression previously described, two of the five predictors were significantly predictive of the outcome variable. In this standard regression, MOR t (203) = -4.750, $p < .000$ and AIMS t (203) = -2.895, $p < .004$ were significant predictors of the outcome variable psychological distress. The model with all five predictors resulted in an adjusted R^2 = .175 indicating that MOR, ACH, AIMS, FOR and DIFF were estimated to account for 17.5 % of the variance in populations for the outcome variable PD. Again, the results showed MOR (β = -0.360) and AIMS (β = -0.189) to have a negative relationship to PD in this standard regression.

The predictive relationship of MOR and AIMS to psychological distress was also as predicted. However, the negative relationship to PD will be discussed further in

chapter five. The predictors ACH and FOR did not have a significant predictive relationship with psychological distress. The predictor DIFF was not a good predictor for either PW or PD in this analysis. A summary of the results can be viewed in Table 8.

Table 8.
Standard Regression for the Predictors of Psychological Distress

Predictor	B	SE	β	*t*	*p*
AIMS	-.540	.186	-.189	-2.895	.004
DIFF	.508	.259	.152	1.965	.051
MOR	-1.11	.233	-.279	-3.605	.000
FOR	-.379	.207	-.122	-1.862	.069
ACH	.238	.218	.080	1.092	.276

Overall, the results of the standard regressions to predict PW and PD using the predictor variables AIMS, MOR, ACH, DIFF, and FOR showed that each full model for PW and PD were statically significant. The results also showed ACH and MOR as significant predictors of PW and AIMS and MOR as significant predictors of PW. The predictor MOR appears to serve as a significant contributor for both outcome variables PW and PD. Additionally, the results of the Pearson correlation showed negative relationships between AIMS, MOR and PD and MOR and PW. In order to better understand the relationship between the predictor variables and the outcome variables and to determine the usefulness of these variables for future research, a post hoc backwards regression was performed.

Testing of Assumptions

Assumptions of a backward regression analysis were tested including: assumptions of linearity among variables, normality, homoscedasticity, and interaction among variables. Using SPPSS the researcher generated histograms and scatterplots to test for normality of the distribution of scores. In addition to the graphs and plots the researcher conducted a test of normality using the Kolmogorov-Smirnov and Shapiro-Wilk tests. The test of normality was met using the graphs and abovementioned test and the results are summarized in Table 2. A Pearson correlation matrix was processed to show that the relationship among all pairs of variables were linear, thus, the assumption of linearity were met. Scatter plots were also generated and viewed to assure the linearity of the variables in this study.

A test of collinearity was performed and the results for this test are summarized in table 4. The tolerance levels remained above .10 and the variance inflation factor (VIF) was less than 10 indicating that the assumption of multicollinearity were met in the multiple backward regression.

Post hoc Backward Regression Analysis Psychological Well-being. In order to further test the strength and usefulness of the relationship between the variables in this study the researcher completed a backward regression as a post hoc analysis. The results identified the relationships between the predictor variables: ACH, DIFF, AIMS, MOR, and (FOR) to the dependent PW. The analysis showed the proportion of variance in the dependent variables credited to the stronger related independent variables in order.

The backward regression model was performed to find the best way to predict the dependent variable PW. The results showed that Model 3 was the best predictor (See

Table 8.). This model contained the predictor variables ACH, FOR, and MOR. To examine the contributions of each predictor, the *F* ratios were observed for each variable. For the predictor achieved identity (ACH) *F (*203) = 2.435, *p* <.016, identity in moratorium (MOR) *F (*203) = -3602, *p* < .000, and foreclosed identity (FOR) (203) = -1.673, *p* <.096. This model resulted in an adjusted R^2 .141 *p* .001. This means that the predictors of ACH, MOR, and FOR were estimated to account for 14.1% of the variance in this population for PW.

In order to select the best model a backward regression was performed as well as a review of the model selection criteria consisting of various models that explain the dependent variable of psychological well-being. The criteria consist of the Akaike Information Criterion (AIC) = 878.305; Amemiya Prediction Criterion (APC) = .881, the Mallows Prediction Criterion (MPC) = 2.942, and finally the Schwartz Bayesian Criterion (SBC) = 891.558. Model three was compared to model two. Model two results were AIC = 879.674, APC = .887, MPC = 4.327, and SBC = 896.240.

Predictor variable FOR was not statistically significant in the model, but when grouped with ACH, and MOR it improved the strength of the model as evidence of the above criteria, the magnitude of each variable, and the adjusted R^2 of .141. The third model had the least number of variables that explains the dependent variable of psychological well-being not statistically different than the full model with all of the predictor variables. Model 2 can explain that PW is not significantly different than the full model. The difference of the amount of proportion of variance explained in PW is not statistically significant. See Table 9.

Table 9

Backwards Regression Analysis for Outcome Variable Predicting Psychological Well-Being

	β	***t***	***df***	***R²***	***Adj R²***	**Selection Criteria**			
						Akaike Information Criterion	**Amemiya Prediction Criterion**	**Mallows Prediction Criterion**	**Schwarz Bayesian Criterion**
Model 1			5	.157	.136	881.	.894	6.00	901.
ACH	.193	2.58		.					
DIFF	.065	.824							
AIMS	-.038	-.572							
MOR	-.279	-3.60							
FOR	-..110	-1.622							
Model 2			1	.156	.139	880.	.877	4.33	896.
ACH	.191	.256							
DIFF	.062	.785							
MOR	-.281	- 3.64							
FOR	-.116	- 1.73							
Model 3			1	.153	.141	878.	.881	2.94	892.
ACH	.172	2.43							
MOR	- .259	- 3.60							
FOR	- .112	- 1.67							
Model 4			1	.142	.133	879.	.884	3.72	889.
ACH	.160	2.27							
MOR	-.287	-4.08							
Model 5			1	.119	.115	882.	.898	6.88	889.
MOR	-.346	-5.22							

Note. Model 3 adjusted R^2 = .141 or 14.1% of estimated variance in population

Testing of Assumptions

The assumptions of a backward regression analysis were tested including: assumptions of linearity among variables, normality, homoscedasticity, and interaction among variables for the dependent variable of psychological distress. Using SPPSS the researcher generated histograms and scatterplots to test for normality of the distribution of scores. In addition to the graphs and plots the researcher conducted a test of normality using the Kolmogorov-Smirnov and Shapiro-Wilk tests. The test of normality was met using the graphs and abovementioned test and the results are summarized in Table 2. A Pearson correlation matrix was processed to show that the relationship among all pairs of variables were linear, thus, the assumption of linearity were met. Scatter plots were also generated and viewed to assure the linearity of the variables in this section of the study.

Post Hoc Backward Regression Analysis for Outcome Variable Psychological Distress. The backward regression conducted for the dependent variable psychological distress found model two to be the best model to predict this dependent variable. The predictor variables in this model include MOR, FOR, DIFF, and AIMS. This model resulted in an adjusted R^2 = .175, F = < 1.19. This finding means that MOR, FOR, DIFF, and AIMS were estimated to account for 17.5 % of the variance in this population for PD.

In order to select model two of the backward multiple regression the researcher also looked at the model selection criteria consisting of various models that explain the dependent variable of psychological well-being further. The criteria for the models consist of the following criterion and the scores for model two are presented: Akaike Information Criterion (AIC) = 1075.945; Amemiya Prediction Criterion (APC) = .850,

the Mallows Prediction Criterion (MPC) = 5.192, and finally the Schwartz Bayesian Criterion (SBC) = 1092.511. Model two was compared to model one. See Table 10.

Table 10.

Backwards Regression Analysis for Outcome Variable Predicting Psychological Distress

	β	*t*	*df*	R^2	*Adj* R^2	Selection Criteria			
						Akaike Information Criterion	**Amemiya Prediction Criterion**	**Mallows Prediction Criterion**	**Schwarz Bayesian Criterion**
Model 1			5	.196	.175	1076.	.853	6.00	1096.
MOR	-.360	-4.75							
ACH	.080	1.09							
FOR	-.122	-1.82							
DIFF	.152	1.97							
AIMS	-.189	-2.90							
Model 2			1	.191	.175	1076.	.850	5.19	1093.
MOR	-.378	-5.11							
FOR	-.113	-1.71							
DIFF	.124	1.70							
AIMS	-.186	-2.85							
Model 3			1	.179	.167	878.3	0.881	2.94	891.5
MOR	-.319	-4.85							
FOR	-.110	-1.66							
AIMS	-.179	-2.73							
Model 4			1	.168	.159	1077.	.857	6.85	1088.
MOR	-.340	-5.25							
AIMS	-.195	-3.01							
Model 5			1	.130	.126	1085.	.887	14.09	1091.
MOR	-.361	-5.48							

Note. Model 2 adjusted R^2 = .175 or 17.5% of estimated variance in population.

Summary

This chapter reviewed the results of the present study. The tests of assumptions, data screening procedures, and results for each analysis were presented. A standard regression was used to answer the main research question. The standard regression models for athletic identity and the ego identity statuses of foreclosed identity, identity in moratorium, diffused identity, and achieved identity included the predictors of psychological well-being and psychological distress. Overall, the results of the standard regressions results showed both full models to be significant. The results also showed achieved identity and identity in moratorium to be significant predictors of psychological well-being, and athletic identity and identity in moratorium to be significant predictors of psychological distress. The predictor identity in moratorium appeared as significant to both outcome variables. This finding was uncommon when compared to other research using the ego identity statuses as predictors. The researcher further tested these variables by performing a post hoc backwards regression and the findings showed all variables in this study to be useful for future research. It also uncovered diffusion as a suppressor variable to moratorium and athletic identity. In addition, findings showed that diffusion changed the zero order of some of the beta coefficients resulting in negative relationships among moratorium, athletic identity, and foreclosure and the outcome variables psychological well-being and psychological distress. These results of the standard and backwards regression will be parsed out in chapter five. Chapter five includes a discussion of these findings, including a discussion of the relationship of variables to current and past research. Chapter five also includes the implications of the findings for

clinical and academic settings, directions for future research in this area, and the limitations.

Chapter 5: Discussion

Introduction

The purpose of this study was to investigate if athletic identity and the ego identity statuses of moratorium, diffusion, achieved identity and foreclosed identity might predict psychological health among intercollegiate athletes. There were two outcome variables measured related to psychological health: psychological well-being and psychological distress. The researcher used the term psychological health as defined by the developers of the Mental Health Inventory (MHI). Veit and Ware (1983). defined psychological health as the presence or absence of psychological well-being and psychological distress that include positive or negative mental health states which include life satisfaction, positive affect, anxiety, depression and loss of behavioral and emotional control. Due to the lack of consensus of a definition for psychological well-being provided by Veit and Ware, (1983), this investigator used the analysis on psychological well-being provided by Ryff (1989) described in chapter two. This analysis is closer to the definitions provided by Erikson (1963) in his discussion of his proposed ego strengths.

Participants completed an electronic survey containing measures that evaluated the four ego identity status variables: identity in moratorium (MOR), diffused identity (DIFF), achieved identity (ACH), and foreclosed identity (FOR) and a fifth variable athletic identity (AIMS). The sample for this study was one of convenience consisting of 203 intercollegiate athletes (ICAs) from a Midwestern public university participating in the NCAA Division I system. The research question and hypothesis that guided this

investigation were: Can the independent variables of AIMS and ego identity statuses of DIFF, FOR, MOR, and ACH predict psychological health outcomes among intercollegiate athletes? The dependent variable psychological health consisted of two sub-variables – psychological well-being (PW) and psychological distress (PD). The research null hypothesis associated with this question was: *There is no predictive relationship between the independent variables AIMS and the ego identity statuses of DIFF, FOR, MOR, and ACH and the dependent variable psychological health*. The results supported rejecting the null hypothesis.

Two standard regressions analyses were performed to examine and answer the research question and to test the null hypothesis. Overall, the results showed an uncommon finding regarding MOR compared to prior studies. In this current study MOR emerged as a good predictor for both PW and PD among the ICAs surveyed. The ego identity status ACH in combination with identity MOR were significant predictors of psychological well-being. Conversely, AIMS and MOR were good predictors of psychological distress. However, negative relationships were found between MOR and both outcome variables PW and PD. Additionally, AIMS was found to have negative relationships with some of the variables which will be discussed in this chapter.

A post hoc backward regression using the "create all models" stepwise approach (Ruengvirayudh & Brooks, 20016) was performed. This supplemental analysis assisted the investigator to further understand the relationship between the predictor variables and to assess their usefulness in future research. The results of this analysis revealed unexpected relationships. In addition to confirming the negative relationships between

some of the variables the post hoc analysis showed that DIFF played a suppressor role for MOR and AIMS when predicting psychological distress. A discussion of these findings will follow.

Research has shown that college athletes experience psychological challenges or distress during the formative years of psychological development (Murray, 1997). Murray added that participation in intercollegiate athletics may hinder the athlete's ability to accomplish the developmental tasks that individuals at this age must master through the exploration of other roles and ideologies. Other factors that contribute to this issue are early sport specialization and socialization (Coakley, 2011), and psychologically controlling parents (Luyckx et al., 2007). Early adolescent exposure to sport by parents and caregivers often influences the identity formation process of the intercollegiate athlete (ICA) who begins to identify more, and often exclusively, with the role of athlete during the emerging adult years (Arnett, 2000; Miller & Kerr, 2003).

The findings of all of the analyses performed will be discussed in-depth including the implications for coaches, parents, sport counselors and other professionals who work with intercollegiate athletes at the accessible university. The limitations of this study are also discussed along with the recommendations for future studies on this topic.

Predicting Psychological Well-Being

Psychological well-being represents the positive evaluation of oneself and includes one's satisfaction with life (Veit & Ware, 1983). One can infer using Veit and Ware's definition that the individual has experienced positive affect, overall-well-being and has not experienced loss of behavioral and emotional control or psychological

distress. Ryff' (1989) analyzed several studies measuring psychological well-being noted that psychological well-being is more than the absence of psychological distress. Ryff (1989) added to the list of variables that were utilized in this study to represent a guided dimension of psychological well-being. Similar to ego strengths suggested by Erikson (1965), Ryff (1989) suggested that self-acceptance; relationships with other, autonomy, environmental mastery, purpose in life, and personal growth are all qualities possessed by individuals who are psychologically well. Establishing an identity can be a psychologically demanding process that can leave the individual unsure and anxious about exploring the enduring life question, "Who am and I and who can I become?" However, it is possible that this rigorous process can help individuals develop in ways that allow them to thrive under pressure as emerging adults (Arnett, 2000; Erickson 1965; Marcia, 1966). Meeus, Iedema, Helsen, and Vollebergh (1999) found individuals with ACH and FOR identities to have high ratings of well-being and a good sense of their strengths. During the period of exploration, these individuals are vulnerable to fluctuations in their self-esteem when significant changes occur in life that affects their identity (Marcia, 1980). Erikson (1963) described the danger of this stage as role confusion and the successful negotiation of this stage as fidelity. For those able to obtain fidelity through self-exploration it is suggested that these individuals had the proper coping skills, ego strengths, positive attitude, and agency to develop a positive identity at the end of this challenging period (Erickson 1965; Perna, 1991; Schwartz et al., 2005; Vijaykumar & Lavanya, 2015).

Using a standard regression with all five predictive variables to predict psychological well-being was statistically significant, $R^2 = .157$, adjusted $R^2 = .136$. When generalizing to the population the five predictors in this study (AIMS, MOR, ACH, FOR, and DIFF) accounted for 15.7% of the variance in psychological well-being. The ego identity statuses of MOR, $p < .000$ and ACH, $p < .011$ were more significant predictors of psychological well-being in the standard regression.

The results of a backwards regression also showed support for ACH, MOR, and FOR. This model resulted in 14.1% of the variance in psychological well-being that can be explained by ACH, MOR, and FOR. The appearance of FOR in the backward regression models was not surprising as many individuals in this identity status are protected from the process of exploration due to their readiness for committing to the ideals of others (Marcia, 1966, 1980). Vijaykumar and Lavanya (2015) explained further that this readiness for commitment can promote positive psychological adjustment.

It was hypothesized that some of the intercollegiate athletes (ICAs) in this study would report being in MOR (N = 15) noting an active or inactive response while emerging successfully through this period of exploration and crisis into an ACH status. The results demonstrated that some of the respondents in this study reported reaching an ACH identity (N = 16), which is marked by having reached commitments in various domains posited by Marcia (1966) such as love, relationships, occupation, religion, and politics after personal exploration. A breakdown of these significant predictors of psychological well-being in this study will follow.

Moratorium identity status. Erikson (1950, 1963, 1968) described identity formation as a normal event that occurs as an individual transitions from adolescence to adulthood. The process, referred to as moratorium (MOR), involves the progression of identity exploration and experimentation as the individual tries to integrate identities and ideologies (crisis) previously obtained by others into one that becomes his or her own (commitment; Erickson, 1959; Marcia, 1966). The ability to explore new roles and identities can be marked with excitement and hope, but it can also be filled with anxiety, uncertainty, and instability as many individuals become concerned about where this exploration will lead (Arnett, 2000, 2004). Marcia (1980) reported that exploration is often associated with symptoms of depression and signals an identity crisis. However, Marcia (1980) also noted that it has also been linked to positive mental health experiences during the process and also after the exploration has reached a positive ending. Individuals in the ego status of MOR are actively exploring roles, which can mark a turning point in the individual's life both negatively, or positively (Marcia, 1980). Arnett (2000) explained these exploratory moments as emerging adults can be intense and engulfing and not always experienced as pleasant. In this study, some participants reported being in MOR (N = 15) and also reported being psychologically well. There are factors that might contribute to both the negative and positive outcomes of MOR. As the results showed, MOR was a strong predictor of psychological well-being and psychological distress yet it was negatively related to PW. This section focuses on MOR as a predictor of PW. Early socialization and specialization in a sport can also have negative and positive effect on an ICA. It is possible that early and socialization and

specialization in sport might have contributed to the experiences of the ICAs in MOR in a positive manner.

Like many of their peers, it is likely that the ICAs in this study experienced early socialization and skill specialization in order to prepare for higher levels of play in the future (i.e., college). However, it is possible that the impact of these actions by parents was not detrimental to these ICAs. Based on these results, it is possible that while being exposed to these early experiences of sport socialization and specialization, the parents of the ICAs were not psychologically controlling while the respondent explored other identity alternatives. It is possible these parents communicated encouragement, support, and patterns of competencies to them while they were younger athletes (Bluestein et al., 1991). As Vijaykumar and Lavanya (2015) suggested in regards to providing individuals in MOR a safe platform to explore, it is also possible the ICAs were provided with a safety platform for them to explore and develop a sense of direction during their time of self-exploration. Bluestein et al., (1991) reported that these positive communication patterns from parents could produce a strong impact on behavior of exploration and investment later in life.

Damon (1983) defined socialization as a predisposition to establish and maintain relationships. Adams (2012) explained that one of the psychological functions of socialization is the feeling that one matters and has confidence. Early socialization and specialization in sport can serve athletes if the outcome of this experience serves to strengthen their social perception. ICAs can come to understand that they do matter to others even when they are struggling to find themselves.

In this study, some athletes reported being in the state of MOR seemed to demonstrate the ability to handle the crisis of identity role exploration well. Vleiroas and Bosma (2005) indicated that working through a crisis that results in accepting and developing personal commitments is related to psychological well-being. It seems these ICAs developed a number of psychological strengths which include hope, will, agency, purpose, competence and maturity that assisted in the successful completion of the tasks they encountered during this period (Schwartz, Côté, & Arnett, 2005; Vijaykumar & Lavanya, 2015).

Perna (1991) referred to the skills and attitudes that emerge within the individual as ego qualities because of the interface between the developed competencies of the individual and societal pressures. Arnett (2000) stated that only after certain character qualities (i.e., accepting responsibility for oneself and making independent decisions) have reached fruition and financial independence has been attained do emerging adults experience a positive subjective change in their developmental status. Vijaykumar and Lavanya, (2015) stated that tapping into these ego strengths and previous knowledge during this period may continue to develop a bridge towards reaching an achieved identity.

Achieved identity status. The contribution of the predictor variable ACH was also predicted as these individuals have experienced MOR (crisis) and have experienced considerable exploration before identifying and making ideological commitments. There were ICAs (N = 16) in this who scored in the ACH classification in this study. Marcia (1966; 1980) reported that achieved individuals are seen as "strong, self-directed and

adaptive" (p. 61). He added these individuals are able to resist conformity (Marcia, 1980). Marcia (1966, 1980) noted that individuals with achieved identities have reached the highest level of ego development and are complex in nature. They also demonstrate the highest levels of self-esteem, cognitive styles and have a future-oriented view of life (Adams, 2012).

In terms of roles, ICAs contend with two: one as student and one as athlete. Settlers, Settlers, and Damas (2002) reported that when an athlete views these roles as separate they tend to experience lowered psychological well-being. If the athlete is able to converge the roles of athlete and student researchers have reported higher psychological adjustment and satisfaction (Killeya-Jones, 2005).

The findings of this study might indicate that ICAs (N = 16) with ACH identities have found a balance between role exploration and enduring commitments of roles in the future (Adams, 2012). The act of exploring an array of identity options during periods of instability requires an individual to use all available resources in order to obtain stable life commitments (Arnett, 2000, 2004; Adams, 2012). These individuals may have concluded that the athletic role is important yet not solely defining of who they are as a person demonstrating self-understanding (Brewer et. al., 1993).

Because causal models were not examined in this study the researcher is not able to say with certainty that having an achieved identity brings about psychological well-being. However, as a strong predictor of psychological well-being, ACH identity can be theorized to be of assistance to positive development in ICAs. It is possible that agency or a continued sense of responsibility towards individualization (Schwartz, Côté, Arnett,

2005) served the individual to reach the achieved status. These individuals seemed to maintain their exploration and draw upon resources obtained at different stages of life such as the development of strong relational bonds and mental capacities that help them work through difficult moments (Vijaykumar & Lavanya, 2015) Individuals (N = 16) who scored high in ACH might have utilized skills developed through their athletic training as well as taken advantages of the social structure (i.e., coaching, athletic department), to achieve the desired changes during their explorations and quest for balance. Through this process of self and relational integration, the individual is able to achieve what Erikson (1959) and later Marcia (1966, 1980) describe as a positive ego identity.

The individuals in this study reporting to be in ACH might have a greater sense of autonomy by taking more responsibility over their life choices, which is required for one to achieve individualization as emerging adults (Arnett, 2000, Adams, 2010). These individuals might have the mental fortitude to discern between misinformed ideas and beliefs not matching their developing interests, values, and beliefs (Adams, 2010). Additionally, these individuals might have been able to access effective coping skills during difficult times of their exploration and acceptance of their new life commitments.

Predicting Psychological Distress

For the purpose of this study, psychological distress (PD) is defined as a range of symptoms that include anxiety, depression, and loss of behavioral and emotional control (Veit & Ware, 1983). The World Health Organization (WHO; 2004) stated that psychological distress is a result of an interchange between biology and psychosocial

factors. Lazarus (1991) defined stress as a distinctive relationship between the person and the environment. According to his theory of cognitive appraisal, the individual can appraise an event as exceeding his/her ability to cope thus endangering his or her well-being. He added that stress occurs when the person and the environment wield influence over each other (Lazarus, 1991). The individual might accept the challenge of as an opportunity or as a personal growth, or mastery over the event. The idea of threat occurs when the person feels in danger, foresees possible injury, or as a blow to his/her self-esteem (1991). If damage, harm, or loss occurs as physical injury, loss of social status, or loss of self-worth, the individual might still see the event as a learning experience or might continue to see it as a threat (1991).

As presented in Chapter 2, Albison and Petrie (2003) examined the cognitive appraisal, stress, and coping strategies of athletes prior to injury and post injury and found that athletes who reported experiencing negative life events prior to the season reported perceived difficulties in coping with their injuries four days after the injury occurred. In their study examining the antecedents of sport injury, Williams and Andersen (1998) reported that an athlete's history of stressors, negative life events, and low familial and social support may leave the athlete with few resources to handle stress. William and Anderson (1998) found that that respondents in their study reported maladaptive coping strategies including avoidance, wishful thinking, and blame shifting that could likely generate psychological distress. In light of this current study, other stressors may include psychologically controlling parents, the pressures to not explore other roles and identities, and the existing demands of the roles of athlete and student.

All these experiences add to the existing stressors of the intercollegiate athlete that can be engrossing. Sharma (2012) added that psychological distress is a deep crisis of the self which exists when the "individual's perceived capacity or incapacity to control his/her life to adjust to his/her social environment" (p. 106) is present.

The findings of this study supported the researcher's predictions that AIMS, $\beta = -.540$, $p < .004$ and MOR, $\beta = -1.10$, $p < .000$ would be strong predictors of psychological distress. The model with all five predictors resulted in an adjusted $R^2 = .175$ indicating that MOR, ACH, AIMS, FOR and DIFF accounted for 17.5 % of the variance in the outcome variable psychological distress. Additionally, a review of the beta coefficients in the correlation matrix showed MOR and AIMS relating to PD negatively.

The results of the backward regression showed support for the predictor variables MOR, AIMS, FOR, and DIFF. This model resulted in an adjusted $R^2 = 17.5\%$, F = < 1.19. This finding means that 17.5 % of the variance in psychological distress can be best predicted by the predictor variables MOR, FOR, DIFF, and AIMS. In this model, AIMS $p < .005$ and MOR $p < .000$ were stronger predictors than FOR $p < .088$ and DIFF $p < .091$. However, it is not surprising that FOR and DIFF might appear as possible predictors of psychological distress.

Individuals with a foreclosed identity may experience sudden changes to their self-esteem when significant others take note that they have suddenly changed in behaviors or ideologies (Marcia, 1980). These individuals also tend to show a durable need for approval from others which hinges greatly on their emotional health. (Marcia, 1980). Individuals with diffused identities show high degrees of hopelessness, tend to

isolate more, and demonstrate lower levels of intimacy with significant others (Kroger, 2003b). These individuals also show disinterest in life and tend to use drugs among other risky experiences to cope with anxiety which might come from their lack of defined identity (Logan, 1978).

It was hypothesized that the respondents in this study would report psychological distress when identifying exclusively with their AIMS and possibly feeling distress when exploring other roles as described in the literature as an individual with an identity in moratorium (MOR). MOR tends to occur during the formidable college years for ICAs which can appear as a disturbing experience for this population when coupled with a strong and exclusive AIMS. A closer look of these significant predictors of psychological distress is in order.

Identity in moratorium. In this study the independent variable of MOR was a significant predictor for both psychological well-being and psychological distress. Researchers have taken aim to better understand the outcome of these divergent findings by identifying the different contributions to identity development, including the impact of family and parental behavior (Luyckx et al., 2007; Schwartz et al., 2005). While this period of unprecedented exploration for the emerging adult can be positive in an encouraging familial climate, parents and other authority figures can also negatively impact the freedom of the individual to explore through controlling and manipulative behaviors (Arnett, 2004; Luyckx et al., 2007).

Using three main questions proposed by Arnett (2004) (a) What makes a person an adult?, (b) What are the expectations for the future for an emerging adult?, and (c)

How does the relationship with parents impact the emerging adult process?, Luyckx et al., (2007) explored the dimension of identity formation among emerging adults when dealing with a psychologically controlling parent(s). Luyckx et al., (2007) and Arnett (2004) reported that the influence of family on emerging adults is prevalent especially during the college experience. Luyckzx et al., (2007) reported that psychologically controlling parents tend to pressure the emerging adult to satisfy their needs and standards at the expense of the needs and values of the young person during these formidable years of growth and exploration. These researchers reported that "the more participants perceived their parents as psychologically controlling, the more difficulties they experienced in establishing committed choices" (p. 549). Often these parents resort to controlling tactics such as the withdrawal of love and make the young person feel guilty when they learn that the emerging adult initiated self-exploration (2007). Côté and Levine (2002) and Erikson (1956) reported that controlling behaviors from parents or prominent figures in the life of a young person can lead to the underdevelopment of agency and ego strengths when overcoming life obstacles. In respect to this study, a life obstacle for an ICA would be the mastering of the task of obtaining fidelity through positive identity exploration.

In their examination on agency and individualization in the process of identity formation among emerging adults, Schwartz et al., (2005) reported that individuals who are blocked from acting deliberately towards their identity exploration, tend to lack agency and hope towards obtaining a positive ego identity. They added these individuals also tend to take an unreceptive or even lackadaisical approach towards their

individualization (Schwartz et al., 2005). Reflecting on this study, it can be inferred that ICAs who might have been stymied from role and identity exploration by a psychologically controlling parent might have been deprived from the hope and ability to act in an agentic manner during this critical period of exploration. Schwartz et al., (2005) noted that agency involves taking responsibility for one's life course and requires the belief that one is in control over making crucial life decisions. Schwartz et al., added that agency also involves the confidence to overcome life challenges that might arise during the course of one's existence. It may be inferred that ICAs in this study might not have been provided a safe platform to explore alternative identities and that the ICA might have lacked the confidence to face the challenges of MOR. It can also be inferred that ICA reporting scores in MOR in this study might have given the responsibility of their life course to their psychologically controlling parent(s) or other authority figure in their life such as a coach.

Adams and Gullota (1983) reported that when a young person is not able to achieve a positive self-identification, the individual will perceive the process of decision making as divergent. They added that this can make it difficult for the individual to resolve the psychosocial task of achieving identity fidelity which later can be related to "feelings of shame, lack of pride, and feelings of being manipulated by others" (Adams & Gullota, 1983, p. 187). It is possible that ICAs with a psychologically controlling parent(s) might have faltered in their efforts in achieving fidelity and positive ego identity. These ICAs might have experienced difficulties overcoming the period of MOR

and may have become confused about what roles are important or acceptable to them or others in society (Erickson, 1968; Marcia, 1980).

In their study examining vocational identity and identity formation, Vijaykumar and Lavanya (2015) found that higher scores in MOR were associated with lowered psychological resources defined by the ego strengths of hope, will, purpose, competence, and fidelity. It is possible that a good number of ICAs in this investigation reported elevated scores in MOR than other ICAs in this study making it a strong predictor of psychological distress. These elevated scores might also indicate that these ICAs did not have the adequate psychological resources to deal with the task of searching for a positive identity during this period of MOR. Erikson (1963) reported a lack of will might result in the individual allocating the responsibility and ownership of one's future in the hands of others in this case the parent or coach. It can be deduced from Erikson's (1963) assertion that by handing over one's life responsibilities to others, might promote the sense that there is no purpose to explore and thus the individual might find comfort and safety in another identity status such as FOR.

In their study Vijaykumar and Lavanya (2015) found a strong relationship between individuals in FOR and the ego strength of purpose. It can be implied that ICAs in this current study who did not complete the task in MOR might revert to the safety of FOR in order to regain a sense of purpose in their life. Chickering and Reisser (1993) reported that developing purpose is marked by the individual making plans for the future. They added this is achieved by the integration of interpersonal and familial commitments which is a process that can occur successfully and safely in a FOR status.

In his investigation on how the strength of AIMS might affect college adjustment in athletes, Melendez (2009) found that a strong AIMS was negatively related to academic interest and achievements. More interestingly was his finding that high AIMS was related to lower career maturity a highly related to the development of FOR. Through the imposed assistance of a psychologically controlling parent(s) an ICA might have failed to achieve a positive ego identity during MOR and could have defaulted to the status of FOR. The status FOR is marked by the individual accepting the identity and values that were given to them by family or significant others. The ICA who reported psychological distress could have committed to the identity of FOR as a result of the distress experienced during MOR.

Erickson (1959) proposed that through the process of self and relational integration, an individual is able to achieve a positive ego identity. He added that the formation of identity only supports an individual's positive ego identity as long as the person can espouse autonomous choice (Erickson, 1959). In the case of the ICAs in this study, it seems they did not have the ability to accept that the choice is theirs which is critical in the formation of a positive ego identity. The process of MOR might have been experienced by the ICA with uncertainty and as a threat to the self because of the manipulative behaviors of the parent(s). In this respect, the early socialization and specialization of skills in sport endured by the ICA during their younger years might have had a negative impact through the continued psychological controlling behaviors of the parent(s) in college. While socialization and specialization can have positive effects on individuals' sense of self and belonging (Erikson, 1964; Adams, 2012) the converse is

also possible when considering the early socialization and specialization in sport (Coalter, 2007; Coakley, 2011; Mirowski & Ross, 2010). Simons et al., (1999) stated that early arrangements of sport socialization can be viewed as a social condition that may influence identity exploration towards future commitments in ICAs. Meeus, Iedema, Maasen, and Engels (2005) also noted that separation-individuation process from the parent-child relationship can also be viewed as a social condition impacting MOR. The lack of awareness by the young athlete to the controlling behaviors of the parent(s) in this scenario would have allowed the unquestionable acceptance of early socialization and specialization of skills in sport by their parent, even as an emerging adult. ICAs might have lacked the confidence to denounce the controlling behaviors of the parent(s) and the experience might have created fear in them to hope for something different. Coupled with the expectations and performance demands from others (i.e., parents, coaches) (Luycks, et al., 2007; Parham, 1993) ICAs might start identifying exclusively to AIMS during this period. Miller and Kerr (2003) reported that exclusivity of AIMS is said to increase as the athlete gets older and starts playing at higher levels such as college. These researchers noted the increase in AIMS in college can lead to an over identification in AIMS at the expense of other roles (Miller & Kerr, 2003). It can be inferred that the degree of psychological distress in ICAs in this study was dependent on how they perceive their life situation, how they appraise and act upon it while in MOR, and how strongly they identify with AIMS, (Arnett, 2004, Luyckx et al., 2007; Marcia, 1980; Miller & Kerr, 2003).

Athletic identity. Brewer, Van Raalte, and Linder (1993) developed the construct of AIMS and defined it as "the degree to which an individual identifies with the athlete role" (p. 237). Cieslak (2004) defined AIMS as the degree of importance, strength and exclusivity attached to the athletic role maintained by the athlete and influenced by the environment. College emerging adults, including ICAs are theorized to be exploring identity roles and commitments by questioning current held roles and beliefs developed throughout childhood and adolescents (Arnett, 2000, 2004; Chickering & Reisser, 1993; Luyckx et al., 2007). For many ICAs, the development of AIMS and athletic skills comes with early socialization and participation in sport (Coalter, 2007; Coakley, 2011). As discussed above, this process is highly influenced by parents and or other role models that might have made it difficult for many aspiring athletes to question (Adler & Adler, 1991; Luyckx et al., 2007; Petitpas, Danish, Murphy, & McKelvain, 1992; Simon et al., 1999). These influences and pressures may have started during adolescence but could have continued well into the emerging adult period (18-25) (Arnett, 2004; Luyckx et al., 2007). For many of the ICAs, the development of an exclusive AIMS at this level is highly probable as research has shown that AIMS increases as the level of play increases (Brewer et al., 1993; Houle, Brewer, & Kluck, 2010; Miller & Kerr, 2003;). As the ICA's skills and performance improve in their preferred sport, the motivation to remain active in sport and AIMS increases (Houle et al., 2010). The increase and exclusive identification to AIMS is said to have positive and negative repercussions on the psychological health of the individual, in this case ICAs (Brewer, et al., 1991; Brewer et al., 1993; Houle, et al., 2010, Miller & Kerr, 2003;).

Brewer (1993) reported the potential costs of an exclusive AIMS for athletes playing at higher levels in their sport and stated these athletes often have difficulties managing emotions upon injury. He added they also develop difficulties with the fear of deselection, possible sport career termination, and hindrance in career maturity (1993). Compounded by personal performance demands from parents, coaches, and teachers (Luyckx et al., 2007), negative life events and daily hassles (Williams & Andersen, 1998), ICAs stand to experience emotional, physical, and developmental challenges (Watson & Kissinger, 2007). Thus, ICAs are considered a high-risk sub group across college campuses in the United States (Etzel, Watson, Visek, & Maniar, 2006).

It is difficult to ascertain what situations or climate the ICAs in this study were experiencing when they reported elevated identification to AIMS and the correlation with the reported psychological distress. However, research on AIMS and the impact of an exclusive AIMS, and athletes in general that suggest that athletes are at greater risk for depression (Brewer, 1993; yang et al., 2007) and overall psychological distress that might warrant professional counseling (Bird, Chow, & Cooper, 2018; Hinkle, 1994; Parham, 1993; Yang, Peek-Asa, Corlette, Cheng, Foster, & Albright, 2007;).

In this study, AIMS was found to be a significant predictor of psychological distress among the ICAs who responded to the survey. The results of this study seem to indicate that symptoms of psychological distress can develop if the individual maintains an exclusive AIMS over other possible roles. Researchers have explained that many athletes with high or exclusive AIMS often experience negative affectivity at the onset of injury and changes in the athletes' level of participation (Stephan & Brewer, 2007).

Changes in playing status due to injury or change in the status of play (i.e., from starter to second string) was found by Brewer et al., (1993), to cause psychological distress. For instance, when an athlete with an exclusive athletic identity is removed from the role of athlete he or she might say, "What am I going to do with myself while I am not playing"; "All I know how to do is be an athlete." For many athletes in this position it becomes important for the healing process to move along quickly in order to return to play (Brewer, 1993). It is possible that several ICAs who participated in this study might have experienced a change in play or status due to injury or poor performances. It is also possible that the ICA might have experienced a re-injury making the change in playing status permanent. Brewer, Raalte, Cornelius, Petitpas, Sklar, Pohlman, and Ditmar (2000) reported that it is common for athletes to underreport symptoms of injury or feign adherence to recovery in order to be cleared to return to play, which might create potential danger for athletes if they become re-injured. There seems to be an emotional desperation that comes with the lack of participation possibly due to the emergence of identity questions that can only be answered with proper exploration and commitment to other roles (Brewer et al., 1993; Miller & Kerr, 2003;). It is possible for ICAs in this study to predict that the symptoms of psychological distress might be even greater if they learn they can never play their sport again. It could be that these participants might feel a sense of being left behind versus the sense of being in-between as suggested by Arnett (2000).

The ICAs reporting psychological distress in this investigation might have come to a point where they were thrust into a period of exploration or MOR due to their injury

or change in status (Marcia, 1966; Miller & Kerr, 2003). It is possible that these ICAs began thinking about who they are and who they can become after a permanent or temporary change occurred in their playing status. This might also explain the significant findings of psychological distress while in MOR among several ICAs in this investigation.

Of the four identity statuses presented by Marcia (1966), MOR was a strong predictor of psychological distress along with athletic identity in this investigation. A significant number of ICAs in this study reported experiencing psychological distress at the time they completed the survey. A review of the demographics of this investigation showed a majority of the participants were starters and noting that they played key roles on their teams and were past the theorized age where exploration of identity begins (18-25; Arnett, 2000). For many ICAs in this study it is possible that this process was delayed due to their engulfment in the role of athlete and an exclusive AIMS. If an athlete with a high degree of AIMS found themselves forced to explore other roles due to significant changes in sport participation, it is theorized that they can experience psychological distress (Brewer et al., 1993; Schwartz et al., 2005).

In college ICAs contend with dual roles of athlete and student which can prove to be detrimental to personal development as an emerging adult if the individual has identified greatly or exclusively with AIMS and has not explore alternatives during this prolonged period of exploration (Arnett, 2004; Chickering & Reisser, 1993; Erikson, 1968; Marcia, 1966; Schwartz et al., 2005;). It is also possible that the ICAs with high AIMS tried to balance the role of athlete and the role of student and might have taken

advantage of role alternatives and psychological resources that education can provide during a period of exploration (Arnett, 2004). However, many college athletes view the role of student as interfering with the role of athlete, setting them up for possible distress when their AIMS is threatened such as with a poor performance, change in playing status be it temporary or permanent (Stephan & Brewer., 2007).

From an emerging adult development perspective, it could be theorized that ICAs who participated in this investigation with high AIMS and in MOR might have taken an avoidant or passive approach to the exploration of alternative roles leading to and individualization process that is important to the their development (Schwartz et al., 2005). The unfurling process of identity formation might have evoked feelings of anxiety leading to psychological distress including depression, in individuals in this investigation. They might begin to experience what Erikson (1958, 1969) called "role confusion" as they feel stripped of the part of themselves they knew best.

Negative relationships. The results of a Pearson correlation indicated MOR was negatively correlated with PW and PD which indicate statistical differences between low and high scores among ICAs on the MOR classification. The result also showed AIMS to be negatively correlated to PD, which poses the same issue with low and high scores on AIMS scores among the ICAs participating in this study. A brief discussion of MOR and its negative relationship to PD and PW follows.

A review of the literature did not provide much support for the coinciding negative relationships of MOR with PD and PW. In their examination of disparities among ego identity statuses and psychological security of Egyptian children, Diayr and Salem (2015)

found a significant negative correlation between MOR and emotional stability, emotional control, emotional regulation, and adventure seeking among their population. These authors did not provide a rationale for their results but suggested that boys in their study seemed to report more adventure seeking behaviors over girls, thus, suggesting that gender might have been a moderating variable in their case (2015). They also reported that their findings were divergent when compared to others studies using the ego identity paradigm. The psychological focus of the study conducted by Diayr and Salem (2015) suggest to this investigator that there might be similar moderating factors in the present study. Based on the limited support in the literature, this investigator can only make suggestions and speculations about the negative correlation results between MOR, PD and PW.

Conversations with an experimental psychologist confirmed that in order to find an answer to these findings it would be helpful to assess if MOR and AIMS were interacting with a moderating variable(s) (H. Osborn, personal communication, December 7, 2018)

After a closer review of the demographics table (Table 1) and the status table (Table 2) the investigator found that some of the numbers in the categories of age and playing status seemed uncharacteristic for intercollegiate sports in the United States. The reviewer also noted the number of ICAs reporting scores in MOR (N = 15) and the number of ICAs reporting ACH (N = 16). Thus it seemed logical to consider class year and play status as possible moderating factors to MOR, PD, and PW in this study. A review of the ensuing study might provide support for this possible explanation.

In a recent study examining ego identity statuses and psychosocial functioning in Turkish youth, Mornsunbul, Crocetti, Cok, and Meeus (2016) found significant age differences among individuals scoring in the four ego statuses. These authors differentiated the MOR status between those who are searching in MOR and those "in MOR" (2016). Those "in MOR" "strive to find more satisfying identity related commitments, display low commitment, a medium level of in-depth exploration and high reconsideration of commitment" (p. 146). They added that individuals in "searching MOR" have "high levels of commitments, in-depth exploration, and also reconsideration of commitment" (p. 146). Taking these parameters into consideration, it is possible to apply to the results of this study when considering the following.

In terms of this study, it is possible that playing status and possibly age or class year status might be moderating the negative relationship between MOR and PD and PW. As seen in the demographic table (Table 1) the highest-ranking age group of ICAs were between the ages of 20-21 (N = 55) or second years. This group also had the highest-ranking number of ICAs with the playing status of starters (N = 35). It is customary in intercollegiate sports in the United States, for third and fourth years (ages 22-24) to be starters and assumingly older than second years. It is possible that if the demographics of age and playing status might have matched the presumptions of roles in intercollegiate sports that the relationships between MOR and PD and PW would have been positive. Using the Morsunbul et al., (2016) differentiation of MOR, the second years reporting into MOR in this study, might have not fully activated explorative behavior but still are considering changes in identity. On the other hand, the fourth years might be considered

"in searching MOR" as they are in the throes of exploring possibly due to their diminished role of athlete due to their play status. Taking participants reporting score in ACH into consideration, it possible that many of the fourth years are in this status, as these ICAs might have come to the acceptance that their role as athlete might have to end and might have settled into other commitments that do not include competitive play.

Keeping the demographic information of the ICAs in this study in focus as well as the results of the numbers of ICAs reporting into the ACH status (N = 16) and the fourth year, it is possible that the negative relationship between AIMS and PD was also moderated by play status and class year. Research has shown that as an athlete enters college and the level of play increases, AIMS increases and the role of athlete becomes more exclusive and important to the athlete well into early adulthood (Houle et al., 2010). Houle et al. reported both positive and negative repercussions on psychological health among athletes with exclusive AIMS (2010).

In an investigation examining developmental trends in AIMS, Brewer, Petitpas, Van Raalte, and Mahr (1993) found that level of AIMS were not different between ICAs in their first two years of college and ICAs in their last two years of college (as cited in Brewer, & Petitpas, 2017). In a review of studies following changes in AIMS, this investigator found that AIMS seemed to decrease after the ICAs experience events that inhibit their ability to perform including deselection due to a poor performance during a season (Brewer et al., 1993), deselection (Pearson & Petitpas, 1990), and severe injury (Brewer, Cornelius, & Van Raalte, 2010) However, Brewer et al., (1993) also theorized that when ICAs are forced to explore other roles due to changes in play status and overall

sport participation they can experience PD and thus a decrease of AIMS might occur. This suggestion supports the findings in this study. On the other hand, in a longitudinal investigation of identity and athletic retirement, Lally (2007) noted that the decreasing of AIMS might serve as a protective factor and often is initiated in a proactive manner as the ICA learns of imminent changes to their sport involvement, which might also support the findings of this present study.

In a personal communication with B. Brewer, (Personal communication, December, 09, 2018), Brewer noted the negative correlation between AIMS and PD in this present study confirm results of one of his previous studies (Brewer, 1993). His investigation searched for causal (study one) and relational (study four) results of emotional vulnerabilities in athletes with exclusive AIMS based on negative live events such as athletic injury. The experimental group in study one supported his hypothesis that an imagined career-ending scenario would cause a depressive response in participants with an exclusive AIMS. However, Brewer found a negative correlation between and exclusive AIMS and depression in the control group who experienced relaxations techniques. In his discussion, Brewer explained the negative correlation between AIMS and depression might possibly have been moderated by active involvement in sport participation by the participant with and exclusive AIMS. In study four Brewer (1993) found exclusive AIMS to be positively related to depressive response among a group of injured athletes.

In light of the results of Brewer (1993) the negative relationship between and exclusive AIMS and PD might be explained by playing status and active sport

participation. ICAs in this study in the starter playing status are apt to be actively involved whereas third or fourth string status ICAs are not. The more active ICAs might have reported into an exclusive AIMS classification while the less active ICAs reported lower scores in AIMS. The findings showing the majority of the starters in this study were second years, and not third or fourth years. So it is unclear whether class year served as a moderator to the negative relationship between AIMS and PD. However, a review of the ACH scores in this study could offer some insight on this relationship.

There were an unexpected number of ICAs reporting pure identity scores in ACH (N = 16). It is possible that the third and fourth year ICAs became resolved with the fact that they would not be performing as often and or at all, thus, moving forward in their commitments to other roles and accepting the changes in commitments and ideologies to sport involvement and retirement.

The overall findings here might have implications for sport counselors when working with ICAs with exclusive AIMS or ICAs reporting decreased identification with AIMs. An ICA with an exclusive AIMS might not be at risk for negative emotional responses when experiencing challenging life events. The sport counselors should assess the nature of the negative life event and the individual response of the ICA to the event.

A final speculation by this author to explain the negative correlations between the variables MOR and PD and PW and AIMS and PD would be that these variables were interacting with another ego status variable such as DIFF. The results of the backwards regression found DIFF (Appendix F) was implicated in changing the zero order in the correlation analysis thus causing these variables to relate negatively. DIFF also played

the role of suppressor variable to MOR and AIMS and when applying DIFF to the negative relationship the interactions between these variables it is noted as scores in DIFF go up scores in MOR and AIMS go down thus scores in PD go up. This might implicate DIFF as a possible moderator when interacting with these variables. However, the challenge to parse this out is beyond the scope of this study. Thus, the focus will remain on possible categorical variables working as a moderator to MOR, AIMS, and PD and PW.

Implications of Study and Results

The results of this investigation were significant in understanding the process of identity formation among ICAs in the sampled population. The results of the standard regressions examining psychological well-being indicate that an ICA can engage in active and deliberate role exploration (MOR) without experiencing psychological distress. In the process of exploration, individuals are able to come to a satisfactory understanding of their commitments to other roles and ideologies in different domains in life. This represents an arrival to an achieved identity in which individuals might feel prepared to meet future challenges that might impede their progress towards their personal growth and forward movement in life.

The second standard regression indicates that the exclusivity of AIMS in an ICA can predict psychological distress for individuals in the form of anxiety, depression, and loss of behavioral and emotional control. The distress might surface when the identification of the role of athlete is threatened or removed due to circumstances outside of the ICAs control. These findings suggest that individuals working with intercollegiate

athletes should be prepared to incorporate techniques and interventions that might assist them the unfurling process of identity formation.

The results of this study cannot be compared to other studies as this investigation is an original line of research in sport counseling. However, the investigator of this study also worked as a sport counselor at the intercollegiate level where the results of this study were able to play out in real time while working with this population. Suggestions for sport counselors, coaches, parents and other professionals will be provided in light of these results and personal experience with this population.

Sport counselors. Sports counselors are at an advantageous position to assist ICAs when they are enduring psychological distress due to issues involving development and identity formation (Petitpas, Buntrock, Van Raalte, & Brewer, 1995). The sport counselor is trained to focus on the positive development of individuals (Petitpas et al, 1995). However, there are caveats for counselors working with intercollegiate athletes as many perceive seeking help as a sign of weakness (Parham, 1993). Many might enter counseling under disguised premises even if the coach mandates the athlete into counseling for particular performance or emotional reasons. (Brewer et al., 2000). Thus, before engaging an intercollegiate athlete in counseling, aspiring sport counselors should commit themselves to fully understanding the experiences of athletes at various levels of sport participation (Hebard & Lamberson, 2017).

A thorough assessment of the client history in sport participation can help garner the information needed to understand where the client is in their identity development (Andersen, 2000). The athlete will often be the source of most of this information, but

whenever possible information should also be obtained from parents and coaches when available (Andersen, 2000).

It would be important to assess when the athlete first began sport participation and if there were any early concerns from the point of the athlete into the process of early sport socialization (Andersen, 2000). A good description of the individuals involved and their particular roles and influence on the athlete during early participation are important to know (2000). Parents offering information might be guarded or defensive depending on their perceived role (i.e., good or bad) in the development of the athlete (Luyckx et al., 2007)

Sport counselors should also assess the athlete's current level of athletic identity using the Athletic Identity Measurement Scale (AIMS) and discuss the findings with him or her (Brewer, 1993). The counselor can provide education on the effects of an exclusive athletic identity on development primarily identity formation. If the counselor finds the athlete is foreclosed in his/her identity as athlete, the counselor can develop interventions that can assist the client to begin a process of exploration in a safe environment. It is important the athlete feel safe to trust the counselor and for the athlete to know the information obtained is confidential.

Before starting any interventions, it is helpful to assess the athlete's position and training. Sport counselors should also assess client willingness and level of cooperation in counseling. The referral source is often a good indicator of these characteristics. It is the investigators experience that referrals from the sport medicine staff are better received by athletes which allows them to be more engaged in the therapeutic process. Referrals

from coaches come with challenges that are beyond the scope of this discussion. However, if the ICA associates the role of the counselor as a part of the athletic department structure that might impact a coaches' decision, doubts might arise in athletes about how much information to divulge to the counselor. Confidentiality in session should be stressed in order for a trusting therapeutic alliance to form. Athletes must trust that they can limit what the counselor shares with a coach or parent.

Sport counselors can present programming to athletic departments that focus on role exploration during the college years including career exploration. The counselor could develop a training packet that includes assessment of ego strengths and athletic identity. Included in this training packet could be sessions presenting the development of coping skills for individuals experiencing psychological distress due to change in playing status and injury which can prepare the intercollegiate athlete for exploration of other possible roles. Prior to engaging at this level,

While counselors are positioned to serve this population, sports counselors still lack the professional identity in the sport arena and within the counseling profession. Counselors interested in serving or already serving athletes should focus on enhancing their practice and positioning in this arena by documenting their behaviors, interventions, and values and beliefs (Hebard & Lamberson, 2017). Sport counseling lacks documentation of how counselors do what they do when working with athletes. Furthermore, documentation of the values and beliefs that distinguish sport counselors from other sport medicine professionals needs to be identified (Hebard & Lamberson, 2017). Hebard and Lamberson (2017) suggested that sports counselors should work with

counselor educators in "the development of competencies, teaching and practice guidelines, and ethical codes" (p. 379) in order to establish a separate identity from other sport medicine professionals but well-suited to fit in with the current recognized services available for athletes.

Counselor educators. Petipa's, Buntrock, Van Raalte, and Brewer (1995) stated that the growth of sport counseling rested on two factors: employment opportunities and training. These factors seem to be important today. Thus, in order to improve the counselor presence in sports, counselor educators should work on developing "empirically derived competencies important to working athletes along with rigorous teaching guidelines of sport counseling" (Hebard & Lamberson, 2017, p. 377). Counselor educators and sport counselors are in a position to "prioritize advocacy" (p. 377) for the mental health of athletes at all levels of play. These individuals should also be able to competently discuss how the involvement of counselors in sport will benefit athletes across the lifespan (Hebard & Lamberson, 2017). Hebard and Lamberson (2017) added that a limitation for sport counselors has been an ailing professional identity. These authors suggested counselor educators and researchers should advocate for the sport counseling specialization and provide a clarified professional identity for counselors (2017). They added that counselor educators should emphasize the unique skills garnered in counselor training and revisit the 20/20 Vision for the Future of Counseling (Kaplan & Gladding, 2011).

In an effort to unify and strengthen the counseling profession, Kaplan and Gladding (2011) invited leaders in counseling profession to update and clarify the

definition of a counselor. Hebard and Lamberson (2017) and Kaplan and Gladding (2011) suggested that sport counselors and counselor educators should start with the 20/20 philosophy of a counselor to define sport counseling as a specialty. Using a Delphi methodology, Kaplan, Tarvydas, and Gladding (2014) were able to develop a consensual philosophy of counseling as "a professional relationship that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals" (p. 366). This investigator agrees with the recommendation provided by Kaplan and Gladding (2011) and Hebard & Lamberson (2017) and pledges to move forward with sharing, teaching, and embodying this counseling philosophy.

Coaches and athletic programs. Coaches play an integral role in the development of performance skills in athletes. In early socialization and participation in sport the coach is aware of the physical changes of the athlete but should be aware of the social and emotional challenges presented to the young athlete during that time. Beyond the coaches' role to assist young athletes in developing skills necessary for them to become proficient in their sports, they are also are charged with the task of helping the young athlete develop into an overall individual in regards to body, mind, and spirit. Coaches are at the forefront of helping athletes understand the limitations of their skills. While a strong athletic identity might be beneficial to a coach, a coach might be aware of the ill effects of an exclusive identity to the athletic role due to early sport socialization and participation. Coakely (2011) noted that early sport socialization and development are not often questioned, noting the positive aspects of early sport involvement as "fundamentally positive and pure" (pp. 306-307). Côté and Fraser (2007) acknowledge

early sport participation but argued that the benefits of the positive aspects of early sport participation are contingent on the type of sport and the actions of parents and coaches. Intercollegiate coaches can obtain information about the athlete's development during the early stages of sport participation that might allow them to understand the possible pressures and influences enforced by the parents and earlier coaches. Through an understanding of the socialization process, a coach might be able to ascertain whether the athlete is too engulfed in the role of athlete. A discussion with the athlete about his/her role as student and the grades received by while in college might help the coach to identify future development with the athlete in question.

Coaches and staff can assist the intercollegiate athlete by providing clear information about the quality of the athlete's performance and provide role alternatives to those who might not able to perform at a more elite level beyond college. Depending on the sport, the coaches could share the reality of the possibilities of the athlete moving on to higher levels of play as well. These actions might assist the athlete to have an honest review of skills and possibilities for advancements in the sport of participation. Thus, the athlete can seek assistance in learning about other roles he/she might explore.

Athletic departments are also charged with the task of developing the "whole" athlete. Creating programs tailored for athletes involving possible career changes and personal growth development, might assist in helping intercollegiate athletes explore other career roles and paths not considered by them in them in the past. A session on life after sports can be developed to include assessments and the redirecting of skills to other occupational areas that were developed while participating in sport. Athletic departments

can further enhance the vocational identity of athletes by inviting a sport counselors to assess athletes' ego strength development and athletic identity.

Athletic department might also offer classes to parents of athletes in their program and their community at large about the importance of personal development and the risk involved for athletes with exclusive athletic identity. Hiring a sport counselor to initiate these programs can be a positive investment for an athletic program where winning is not the end all result of their existence.

Limitations

Despite the significant findings of this investigation, the study had several limitations. Some of the limitations identified were sample bias, experimenter bias, the reliability of measures, self-report bias, and limitations with the design of the study among others.

Sample bias. The objective of this study was to obtain data from as many teams in the accessible population at the university where this study was conducted. Therefore, the selection of the participants was not random. The rational for using this accessible population consisted of ease of access to the coaches and their teams at the university. The investigator developed a rapport with key administrators at the university who shared their support for the study with the coaches in the athletic program. While the findings of this study can only be generalized to participants within population, it is of note that the demographics and profile of the teams and ICAs at other universities within the Mid Atlantic Conference (MAC) are similar. Because of these similarities, the investigator made cautious suggestions in the implications of this study that can be helpful for other

programs within the MAC to consider. However, the conclusions drawn from this study are distinct to the accessible population**.**

Experimenter bias. Another limitation of this study was possible experimenter bias due to the fact that the researcher was not far in presence during data collection. Relatedly, the researcher served other roles within the athletic department which increased visibility among the ICAs. Additionally, the researcher may have known some of the ICAs in other capacities. However, one way to control for this bias was by making sure none of the participating ICAs in this study were not directly under the care of the researcher when serving in the role of sport counselor.

Limitation of the instrument. A third limitation of this study was that the reliability of the Mental Health Inventory (MHI; Veit & Ware, 1983) which was lower than expected. The investigator performed a factor analysis for this measure which showed the items on the scale did not load onto the specified factors based on previous research and the original citations by Veit and Ware (1983). In order to avoid further concerns with reliability, the investigator retained all the items of this measure.

Another limitation concerns instruments such as the OMEIS (Adams, 2010) to measure the construct of ego identity statuses. Adams (2012) noted that "identity is intertwined with unavailable aspects of each living system" (p. 75). Thus, the fluctuation of instability of individuals causes this construct to be unstable to measure accurately.

Self-report bias. Another limitation to this study involved possible self-report bias. The ICAs in this study responded to a variety of psychological measures that made up the survey used to collect data. The ICAs could have minimized or exaggerated

psychological symptoms or responded to questions in manners perceived to be desirable to the investigator.

Limitation of design. The design of this study was correlation, thus there was no manipulation of the variables, which limited the investigator from drawing causal conclusions from the results. This limitation could be remedied in the future by development of a true experiment using these variables and a similar population.

Recommendations for Future Research

A discussion of recommendations for anyone who might be interested in replicating or enhancing this study in the future are contained in the following sections. The recommendations include changes in the design of the study, changes in the instrument used to predict the dependent variable of psychological health, changes in the research question and analyses, changes in the methodology, and a discussion of the usefulness of the independent variables, AIMS, DIFF, FOR, MOR, and ACH as predictors of the dependent variables psychological distress and psychological well-being,

Change in design. It would be helpful to develop a true experiment where the variables and conditions could be manipulated by to allow the investigator to make causal conclusions based on the results. For instance, a control condition could utilize a priming technique whereby the participant is exposed to a scenario in MOR in one condition and FOR in another. In the MOR condition, the participant is provided with the definition of MOR then asked to think about a time they might have felt this way while exploring. The recall of this experience could elicit a heightened response making the experience

salient. In the FOR condition, responses would be lessened and not as salient. The researcher could then compare the responses and draw causal conclusions from the results.

Additionally, the researcher should develop a plan to randomly select participants randomly. The researcher might consider creative ways to reach athletes such as sending the survey to the larger student body, which includes athletes. Permission for this type of design might not need the approval of the athletic department nor from the National College Athletes Association (NCAA) which can provide more data for comparison. Should the researcher already be involved in the day-to-day dealings of the athletic department, he/she should hire a research consultant to handle the methodological processes and procedures of the study.

Change in instrumentation. The Mental Health Inventory (MHI; Veit & Ware, 1983) created a limitation in this study because the reliability of this measure was lower than expected based on previous research and the original citations from the authors. This investigator performed a factor analysis of the measures used in this study and found that some of the items on the MHI did not load into the specified factors found in previous research.

Change in research question and analyses. This study did not have a hierarchical component hence the research question was answered by a standard regression. Developing a question that would require more rigorous analysis might increase the understanding of the usefulness of the variables in this study. It is possible that some of the predictors in this study might be more important than others. While the

standard was sufficient and provided useful results, using a hierarchical analysis can provide useful information to the researcher.

There are several hierarchical methods to consider for future research but with some caution. The frequent use of stepwise regressions has caused statisticians call for concern due to the fact that have reported and accepted results without adjusting them to the model building process (Ruengvirayudh & Brooks, 2016). These authors stated that many researchers seek for the statistical analyses to provide them with the most correct answer. However, they noted that "research is about theory not statistics" (Brooks & Ruengvirayudh, 2016, p. 15). In order to enhance both the statistics and the theory building opportunities, Ruengvirayudh and Brooks (2016) developed a methodology they called "create all models stepwise approach" where the stopping criteria normally used in stepwise regressions is eliminated. These researchers customized a PIN (entry) and POUT (removal) method using the predictive variables in a forward (PIN) regression and a backwards (POUT) regression. This method can help the researcher use the stepwise method through thoughtful theory development and model selection building in order to obtain the best model that might best explain the dependent variable. The method includes a review of the complex relationships between the variables and might present models that have not been conceived in theory by the researcher.

In order to better understand the relationship between the variables, the investigator utilized the "create all models" PIN and POUT customization method developed by Ruengvirayudh and Brooks (2016) in the backwards (POUT) regression analysis. The results lead to the acceptance and rejection of various models (See Tables

& 8). In some of the models created by this method, the analysis introduced variables that might not have seemed to fit logically in theory but worth investigating further. For example, in predicting the dependent variable of psychological well-being, the Model 2 results of the backward regression showed that FOR and DIFF might be good predictors of psychological well-being. However, in Model 3, Diff was removed leaving FOR, ACH, and MOR in the model. Theoretically, DIFF has not been considered by researchers as an ego identity status involved in many positive outcomes. A person in DIFF usually does not care or bother with exploration and spends a lot of time involved in risky and hurtful coping habits such as drinking and taking drugs (Marcia, 1966. 1980). On the other hand, FOR has had been reported to have defined characteristics that suggest that an individual in FOR might be psychologically well due to the safe acceptance and commitment to the ideologies of significant others (Marica, 1966, 1980).

After a review of the adjusted R square and the model selection criteria of the Akaike Information Criterion (AIC), the Amemiya Prediction Criterion (APC), the Mallows Prediction Criterion (MPC), and the Schwarz Bayesian Criterion (SBC), the investigator selected Model 3 for reasons of parsimony and a current theoretical understanding of these predictor variables. While the APC in Model 2 was higher than the APC in Model 3, the inclusion of DIFF in Model 3 needs to be tested further; thus, making it a variable for future research consideration when assessing psychological health in a population. The backwards regression was a supportive of the standard regression which was the primary analysis of this study.

In addition to this newly developed stepwise regression model searching, researchers could also considered using other statistical analysis that might work better in longitudinal studies such as hierarchical linear modeling (HLM).

Future research with athletes could benefit from the use of a more rigorous research design such as the hierarchical linear modeling (HLM) also referred to as multilevel modeling (MLM) for several reasons. In their study examining sport injury rehabilitation, Cornelius, Brewer, and Van Raalte (2007) reported that using MLM is appropriate when analyzing repeated measures and when data is clustered. They added that MLM is not highly impacted by missing data or by an uneven number of observations. These researchers also reported that MLM allows the researcher to examine relationships both within individuals and between groups in longitudinal studies. Other advantages according to Snijder and Bosker (2000) includes "The test of specific effects for single independent variables are more powerful in MLM analysis" (p. 201). Thus, a researcher can see more clearly the impact of a predictor variable using MLM.

In terms of the current study, the investigator could compare how identity might change over time. The investigator could also compare data between institutions to improve generalizability while controlling for differences between institutions. The investigator could also report between group level differences and individual differences. For instance, results might show that identity might change more or less in regards to sports and teams. This information could be rich to report in the findings.

One final research recommendation would be to conduct a correlation of the playing status of the ICA and the year they are in, as a way to find changes in identity

due to de-selection due to poor performance. The converse could also be interesting to examine. As seen in the crosstab performed for this study, the balance of playing status and year were not consistent in terms of age and playing status commonly seen in intercollegiate sports in the United States. It is usually assumed that seniors would be the main starters for a team but in this case the majority of the starters were second years.

Summary

This chapter discussed the results of the present study and provided a discussion of the significant findings. The chapter also discussed the implications of the results for sport counselors, coaches and coaching staff including the athletic department of the selected university to participate in this study. A discussion of the limitations of the study was provided followed by recommendations for future research on this topic.

References

Adams, J. C. (2011). Athletic identity and ego identity status as predictors of career maturity among high schoo sudents. University of Houston). ProQuest Dissertations and Theses, 122. Retrieved from http://search.proquest.com/docview/879446119?accountid=12954. (879446119).

Adams, G. A. (2012). *Ego-identity formation in adolescence and early adulthood.* Lexington, KY: Create Space Independent Publishing Platform.

Adams, G. R., & Gullotta, T. P. (1983). *Adolescent life experiences*. Monterey, CA: Brooks/Cole Publishing Company.

Adams, G. R., Shea, J. A., & Fitch, S. A. (1979). Toward the development of an objective assessment of ego-identity status. *Journal of Youth and Adolescence, 8*(2), 223-237. doi:10.1007/BF02087622

Adler, P. A., & Adler, P. (1989). The gloried self: The aggrandizement and the constriction of self. *Social Psychology Quarterly, 52*(4), 299-310.

Adler, P. A., & Adler, P. (1991). *Backboards & blackboards: College athletics and role engulfment*. New York, NY: Columbia University Press.

Albinson, C. B., & Petrie, T. A. (2003). Cognitive appraisals, stress, and coping: pre-injury and post-injury factors influencing psychological adjustment to sport injury. *Journal of Sport Rehabilitation, 12*(4), 306-322.

Allport, G. W. (1961). *Pattern and growth in personality*. Oxford, England: Holt, Reinhart & Winston.

Andersen, M.B. (Ed.). (2000). *Doing sport psychology*. Champaign, IL: Human Kinetics.

Armstrong, S., & Oomen-Early, J. (2009). Social connectedness, self-esteem, and depression symptomatology among collegiate athletes versus nonathletes. *Journal of American College Health, 57*(5), 521-526.

Arnett, J. (1998). Learning to stand alone: The contemporary American transition to adulthood in cultural and historical context. *Human Development, 41*(5/6), 295-315. doi:10.1159/000022591

Arnett, J. (2000). Emerging adulthood. *American Psychologist, 55*(5), 469.

Arnett, J. J. (2001). *Adolescence and emerging adulthood: A cultural approach*. Upper Saddle River, NJ: Prentice Hall.

Arnett, J. J. (2004). *Emerging adulthood: The winding road from the late teens through the twenties*. Oxford; England Oxford University Press.

Arnett, J. J., & Tanner, J. L. (2006). *Emerging adults in America: Coming of age in the 21st century* (1st ed.). Washington, DC: American Psychological Association.

Berzonsky, M. D., & Adams, G. R. (1999). Reevaluating the identity status paradigm: Still useful after 35 years. *Developmental Review, 19*(4), 557-90.

Berzonsky, M. D. (1987). *Identity status, self-presentations, and self-conceptions*. American Counseling Association.

Bird, B.D, Chow, G.M, Cooper, B.T. (2018). Student-athletes' mental health help-seeking experiences: A mix methodological Approach, *Journal of College Student Psychotherapy (12)*, 1-19. doi:10.1080/87568225.2018.1523699.

Boeree, G. (2006). *Personality theories: Erik Erikson*. Retrieved from http://webspace.ship.edu/cgboer/erikson.html

Bradburn, N. M. (1969). *The structure of psychological well-being*. Oxford, England: Aldine.

Brewer, B. W., Selby, C., Linder, D. E., & Petitpas, A. J. (1999). Distancing oneself from a poor season: Divestment of athletic identity. *Journal of Personal & Interpersonal Loss, 4*(2), 149-162.

Brewer, B. W. (1991). *Athletic identity as a risk factor for depressive reaction to athletic injury*. (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses, (Accession Order No. ATT 303968864).

Brewer, B. W., Linder, D. E., & Phelps, C. M. (1995). Situational correlates of emotional adjustment to athletic injury. *Clinical Journal of Sport Medicine, 5*(4), 241-245.

Brewer, B. W. (2003). Developmental differences in psychological aspects of sport-injury rehabilitation. *Journal of Athletic Training, 38*(2), 152.

Brewer, B. W. (1993). Self-identity and specific vulnerability to depressed mood. *Journal of Personality, 61*(3), 343-364. doi: 10.1111/1467-6494.ep9402021311

Brewer, B. W., & Cornelius, A. E. (2001). Norms and factorial invariance of the Athletic Identity Measurement Scale. *Academic Athletic Journal, 15*(2), 103-113.

Brewer, B. W., Raalte, J. L. V., Cornelius, A. E., Petitpas, A. J., Sklar, J. H., Pohlman, M. H., . . . Ditmar, T. D. (2000). Psychological factors, rehabilitation adherence, and rehabilitation outcome after anterior cruciate ligament reconstruction. *Rehabilitation Psychology, 45*(1), 20-37. doi: 10.1037//0090-5550.45.1.20

Brewer, B. W., Van Raalte, J. L., & Linder, D. E. (1993). Athletic identity: Hercules' muscles or Achilles heel? *International Journal of Sport Psychology, 24*(2), 237-254.

Brewer, B. W., Cornelius, A. E., Stephan, Y., & Van Raalte, J. (2010). Self-protective changes in athletic identity following anterior cruciate ligament reconstruction. *Psychology of sport and exercise*, *11*(1), 1-5.

Brewer, B. W., & Petitpas, A. J. (2017). Athletic identity foreclosure. *Current opinion in psychology*, *16*, 118-122.

Brook, R. H., Ware Jr., J. E., Davies-Avery, A., Stewart, A. L., Donald, C. A., Rogers, W. H., . . . Johnston, S. A. (1979). Overview of adult health status measures fielded in Rand's health insurance study. *Medical Care, 17*(7), 1-131.

Brown, C., Glastetter-Fender, C., & Shelton, M. (2000). Psychosocial identity and career control in college student-athletes. *Journal of Vocational Behavior, 56*(1), 53-62. doi: 10.1006/jvbe.1999.1691

Cattell, R. B. (1965). *The scientific analysis of personality*. New York, NY: Penguin.

Chartrand, J. M., & Lent, R. W. (1987). Sports counseling: Enhancing the development of the student-athlete. *Journal of Counseling & Development*, *66*(4), 164.

Chickering, A. W. (1969). *Education and identity*. San Francisco, CA: Jossey-Bass Publishers.

Chickering, A. W., & Reisser, L. (1993). *Education and identity*. San Francisco, CA: Jossey-Bass Publishers.

Cieslak, T. J. (2004). *Describing and measuring the athletic identity construct: Scale development and validation.* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (Accession Order No. AAI 3144860)

Cieslak, T.J., Fink, J.S., & Pastore, D.L. (2005). Measuring the athletic identity construct: Scale development and validation [Abstract]. Journal of Sport & Exercise Psychology, 27(Suppl.), S48.

Coakley, J. (2011). Youth sports: What counts as "Positive development? *"Journal of Sport & Social Issues, 35*(3), 306-324. Doi: 10.1177/0193723511417311

Coalter, F. (2007). Sport-in-international development assistance: Accountability or development? *Conference Papers -- International Studies Association, (*1)1-12.

Cornelius, A. (1995). The relationship between athletic identity, peer and faculty socialization, and college student development. *Journal of College Student Development, 36*(6), 560-573.

Cornelius, A. E., Brewer, B.W., & Van Raalte, J.L. (2007). Applications of multilevel modeling in sport injury rehabilitation research. *International Journal of Sport & Exercise Psychology, 5(*4), 387-405.

Côte, J. E., & Levine, C. (1988). A critical examination of the ego identity status paradigm. *Developmental Review, 8*(2), 147-184. doi: 10.1016/0273-2297(88)90002-0

Côté, J. (2000). *Arrested adulthood: The changing nature of maturity and identity*. New York, NY: NYU Press.

Côté, J. E. (1997). An empirical test of the identity capital model. *Journal of Adolescence, 20*, 577-597. doi: 10.1006/jado.1997.0111

Côté, J. E. (2006). Emerging adulthood as an institutionalized moratorium: Risks and benefits to identity formation. In J. J. Arnett, & J. L. Tanner (Eds.), *Emerging adults in America: Coming of age in the 21st century* (pp. 85 – 116). Washington, DC: American Psychological Association.

Côté, J. E., & Fraser-Thomas, J. (2007). The health and developmental benefits of youth sport participation. In P. R. E. Crocker (Ed.), *Sport psychology: A Canadian perspective* (pp. 266-294). Toronto, Canada: Pearson Education Canada.

Côté, J. E., & Levine, C. G. (2002). *Identity formation, agency, and culture: A social psychological synthesis*. Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Côté, J.E., & Schwartz, S.J. (2002). Comparing psychological and sociological approaches to identity: Identity status, identity capital, and the individualization process. *Journal of Adolescence, 25*, 571-586.

Cumming, S. P., Smith, R. E., Grossbard, J. R., Smoll, F. L., & Malina, R. M. (2012). Body size, coping strategies, and mental health in adolescent female athletes. *International Journal of Sports Science & Coaching, 7*(3), 515-526.

Damon, W. (1983). *Social and personality development: Essays on the growth of the child* (1st ed.). New York: W.W. Norton.

Danish, S. J. (1983). Musings about personal competence: The contributions of sport, health, and fitness. *American Journal of Community Psychology, 11*(3), 221-240. doi: 10.1007/BF00893365

Davies, A. R., Sherbourne, C. D., Peterson, J., & Ware, J. E. (1988). *Scoring manual, adult health status and patient satisfaction measures used in RAND's health insurance experiment*. Santa Monica, CA: Rand.

Diener, E. (1994). Assessing subjective well-being: Progress and opportunities, *Social Indicators Research 31*, 103–157.

Diener, E., Scollon, C., & Lucas, R. E. (2009). The evolving concept of subjective well-being: The multifaceted nature of happiness. In E. Diener (Ed.), *Assessing well-being: The collected works of Ed Diener* (pp. 67-100). New York, NY: Springer Science + Business Media. doi:10.1007/978-90-481-2354-4_4

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*(1), 71-75. doi: 10.1207/s15327752jpa4901_13

Diener, E., Larsen, R. J., Levine, S., & Emmons, R. A. (1985). Intensity and frequency: Dimensions underlying positive and negative affect. *Journal of Personality and Social Psychology*, *48*(5), 1253-1265. doi:10.1037/0022-3514.48.5.1253

Dorsch, T. E., Smith, A. L., & McDonough, M. H. (2009). Parents' perceptions of child-to-parent socialization in organized youth sport. *Journal of Sport & Exercise Psychology, 31*(4), 444-468.

Dugdale, J. R., Eklund, R. C., & Gordon, S. (2002). Expected and unexpected stressors in major international competition: Appraisal, coping, and performance. *Sport Psychologist*, *16*(1), 20-33.

Erikson, E. H. (1950). Growth and crises of the 'healthy personality.' In M. J. E. Senn (Ed.), *Symposium on the healthy personality* (pp. 91-146). Oxford, England: Josiah Macy, Jr. Foundation.

Erikson, E. H. (1958). The Nature of Clinical Evidence. In R. S. Wallerstein, L. Goldberger (Eds.), *Ideas and identities: The life and work of Erik Erikson* (pp. 245-275). Madison, CT: International Universities Press, Inc.

Erikson, E. H. (1959). Identity and the life cycle: Selected papers. *Psychological Issues, 1*, 1-171.

Erikson, E. H. (1963). *Youth: Change and challenge*. New York, NY: Basic Books.

Erikson, E. H. (1964). *Insight and responsibility: Lectures on the ethical implications of psychoanalytic insight*. New York, NY: W. W. Norton.

Erikson, E. H. (1968). *Identity: Youth and crisis*. Oxford, England, Norton & Co.

Erikson, E. H. (1988). Youth: Fidelity and diversity. *Daedalus, 117*(3), 1-24.

Etzel, E. F., Watson, J. C., Visek, A. J., & Maniar, S. D. (2006). Understanding and promoting college student-athlete health: Essential issues for student affairs professionals. *NASPA Journal (National Association of Student Personnel Administrators), 43*(3), 518-546.

Ferrante, A. P., & Etzel, E. (1991). Counseling college student-athletes: The problem, the need. In E. F. Etzel, A. P. Ferrante, & J. Pinkney (Eds.), *Counseling college student-athletes: Issues and interventions*, Morgantown, WV, Fitness Information Technology, p. 1-17.

Follette, W. C., Bach, P. A., & Follette, V. M. (1993). A behavior-analytic view of psychological health. *The Behavior Analyst, 16*(2), 303-316.

Goldscheider, F. K., & Goldscheider, C. (1994). *Leaving and returning home in 20th century America*. Washington, DC: Population Reference Bureau.

Grindstaff, J. S., Wrisberg, C. A., & Ross, J. R. (2010). Collegiate athletes' experience of the meaning of sport injury: A phenomenological investigation. *Perspectives in Public Health, 130*(3), 127-135. doi: 10.1177/1757913909360459

Grovetant, H. D., Thorbecke, W., & Meyer, M. L. (1982). An extension of Marcia's identity status interview into the interpersonal domain. *Journal of Youth and Adolescence,* 11(1), 33-47.

Harris, L. L. (2003). Integrating and analyzing psychosocial and stage theories to challenge the development of the injured collegiate athlete. *Journal of Athletic Training, 38*(1), 75-82.

Hebard, S. P., & Lamberson, K. A. (2017). Enhancing the Sport Counseling Specialty: A Call for a Unified Identity, *Professional Counselor*, *7*(4), 375–384. https://doi-org.proxy.kc.edu/10.15241/sph.7.4.375

Hellstedt, J. (2005). Invisible players: A family systems model. *Clinics in Sports Medicine, 24*(4), 899-928.

Hinkle, J. S. (1994). Integrating sport psychology and sports counseling: Developmental programming, education, and research. *Journal of Sport Behavior, 17*(1), 52.

Hinkle, J. S. (1996). Depression, adjustment disorder, generalized anxiety, and substance abuse: An overview for sport professionals working with college student-athletes. In

E. F. Etzel (Ed.) *Counseling college student-athletes: Issues and interventions* (2nd ed.) (pp. 109 –136). Morgantown, WV: Fitness Information Technology. .

Holt, N. L. (2008). *Positive youth development through sport*. New York: Routledge.

Houle, J. L. W. (2011). *An examination of the relationship between athletic identity and career maturity in student-athletes*. Auburn University. *ProQuest Dissertations and Theses*. Retrieved from http://search.proquest.com/docview/900573437?accountid=12954. (900573437).

Houle, J. L. W., Brewer, B. W., & Kluck, A. S. (2010). Developmental trends in athletic identity: A two-part retrospective study. *Journal of Sport Behavior, 33*(2), 146-159.

Josselson, R. (1987). *Finding herself: Pathways to identity development in women* (1st ed.). San Francisco: Jossey-Bass.

Kaplan, D. M., & Gladding, S. T. (2011). A Vision for the Future of Counseling: The 20/20 Principles for Unifying and Strengthening the Profession. *Journal of Counseling & Development*, *89*(3), 367–372.

Kaplan, D. M., Tarvydas, V. M., & Gladding, S. T. (2014). 20/20: A Vision for the Future of Counseling: The New Consensus Definition of Counseling. *Journal of Counseling & Development*, *92*(3), 366–372. https://doi-org.proxy.kc.edu/10.1002/j.1556-6676.2014.00164.x

Killeya-Jones, L. A. (2005). Identity structure, role discrepancy and psychological adjustment in male college student-athletes. *Journal of Sport Behavior, 28*(2), 167-185.

Kroger, J. (1993). On the nature of structural transition in the identity formation process. In J. Kroger (Ed.), *Discussion on ego identity* (pp. 205-234). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Kroger, J. (2000). Ego identity status research in the new millennium. *International Journal of Behavioral Development, 24*(2), 145-148. doi: 10.1080/016502500383250

Kroger, J. (2003). What transits in an identity status transition: A rejoinder to commentaries. *Identity, 3*(3), 291-304.

Kroger, J. (2003b). What transits in an identity status transition? *Identity, 3*(3), 197-220.

Kroger, J., Martinussen, M., & Marcia, J. E. (2010). Identity status change during adolescence and young adulthood: A meta-analysis. *Journal of Adolescence, 33*(5), 683-698. doi: 10.1016/j.adolescence.2009.11.002

Lally, P. (2007). Identity and athletic retirement: A prospective study. *Psychology of Sport Exercise, 8*(1), 85 – 99. https://doi-org.proxy.kc.edu/10.1016/j.psychsport.2006.03.003.

Lazarus, R. S. (1991). *Emotion and adaptation*. New York, NY: Oxford University Press.

Lazarus, R. S. (2000). Toward better research on stress and coping. *American Psychologist, 55*(6), 665-673. doi: 10.10370003-066X.55.6.665

Lazarus, R. S., & Folkman, S. (1984). Transactional theory and research on emotions and coping. *European Journal of Personality, 1*(3), 141-169.

Luhmann, M., Hofmann, W., Eid, M., & Lucas, R. E. (2012). Subjective well-being and adaptation to life events: A meta-analysis. *Journal of Personality & Social Psychology, 102*(3), 592-615. doi: 10.1037/a0025948

Luyckx, K., Soenens, B., Vansteenkiste, M., Goossens, L., & Berzonsky, M. D. (2007). Parental psychological control and dimensions of identity formation in emerging adulthood. *Journal of Family Psychology, 21*(3), 546-550. doi: 10.1037/0893-3200.21.3.546

Mangel, G. (1997). *Ego-identity status in university athletes.* (Master's thesis). Retrieved from ProQuest Dissertations and Theses. (Accession Order No. AAT 304402878)

Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology, 3*(5), 551-558. doi: 10.1037/h0023281

Marcia, J. E. (1967). Ego identity status: Relationship to change in self-esteem, 'general maladjustment,' and authoritarianism. *Journal of Personality, 35*(1), 119-133. doi: 10.1111/j.1467-6494.1967.tb01419.x

Marcia, J. E. (1980). Identity in adolescence. In J. Adelson (Ed.) *Handbook of adolescent psychology*. New York, NY: Wiley.

Marcia, J. E. (1993). The relational roots of identity. In J. Kroger (Ed.), *Discussion on ego identity* (pp. 101-120). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Marcia, J. E. (2002). Adolescence, identity, and the Bernardone family. *Identity, 2*(3), 199-209.

Marcia, J. E. (2003). Treading fearlessly: A commentary on personal persistence, identity development, and suicide. *Monographs of the Society for Research in Child Development, 68*(2), 131-138. doi: 10.1111/1540-5834.00257

Marsh, H. W., Perry, C., Horsely, C., & Roche, L. (1995). Multidimensional self-concepts of elite athletes: How do they differ from the general population? *Journal of Sport & Exercise Psychology, 17*(1), 70-83.

Massé, R. (2000). Qualitative and quantitative analyses of psychological distress: Methodological complementarity and ontological incommensurability. *Qualitative Health Research, 10*(3), 411-423.

Masten, R., Tusak, M., & Faganel, M. (2006). Impact of identity on anxiety in athletes. *Kinesiology, 38*(2), 126-134.

Matteson, D. R. (1974). *Alienation vs. exploration and commitment: Personality and family correlaries of adolescent identity statuses*. Kobenhavn, Danmark: Danmarks Laererhojskole.

Maslow, A. H. (1954). The instinctual nature of basic needs. *Journal of Personality, 22*(3), 326-347. doi: 10.1111/1467-6494.

McQuown Linnemeyer, R., & Brown, C. (2010). Career maturity and foreclosure in student athletes, fine arts students, and general college students. *Journal of Career Development, 37*(3), 616-634. doi: 10.1177/0894845309357049

Mead, G. H. (1934). *Mind, self & society from the standpoint of a social behaviorist*. Chicago, IL: The University of Chicago Press.

Meeus, W., Iedema, J., Helsen, M., & Vollebergh, W. (1999). Patterns of adolescent identity development: Review of literature and longitudinal analysis. *Developmental Review, 19*(4), 419-461. doi: 10.1006/drev.1999.0483

Meeus, W., Iedema, J., Maassen, G., & Engels, R. (2005). Separation–individuation revisited: On the interplay of parent–adolescent relations, identity and emotional adjustment in adolescence. *Journal of Adolescence, 28*(1), 89-106. doi: 10.1016/j.adolescence.2004.07.003

Meeuwisse, W. H., Tyreman, H., Hagel, B., & Emery, C. (2007). A dynamic model of etiology in sport injury: The recursive nature of risk and causation. *Clinical Journal of Sport Medicine, 17*(3), 215-219.

Melendez, M. C. (2009). Psychosocial influences on college adjustment in division 1 student-athletes: The role of athletic identity. *Journal of College Student Retention: Research, Theory and Practice, 11*(3), 345-361. doi: 10.2190/CS.11.3.c

Michael, R. T., Gagnon, J. H., Laumann, E. O., & Kolata, G. (1995). *Sex in America: A definitive survey*. Boston, MA: Little, Brown.

Miller, P. S., & Kerr, G. A. (2003). The role experimentation of intercollegiate student athletes. *The Sport Psychologist, 17*(2), 196-219.

Mirowsky, J., & Ross, C. E. (2010). Well-being across the life course. In T. L. Scheid, & T. N. Brown (Eds.). *The handbook for the study of mental health: Social contexts, theories, & systems* (pp. 361-383). New York, NY: Cambridge University Press.

Morsunbul, U., Crocetti, E., Cok, F., & Meeus, W. (2016). Identity statuses and psychosocial functioning in Turkish youth: A person-centered approach. *Journal of Adolescence, 47*, 145-155.

Murphy, G. M., Petitpas, A. J., & Brewer, B. W. (1996). Identity foreclosure, athletic identity, and career maturity in intercollegiate athletes. *Sport Psychologist, 10*(3), 239-246.

Murray, M. A. (1997). *The counseling needs of college student-athletes.* (Doctoral dissertation). Retrieved from *ProQuest Dissertations and Theses*. (Accession Order No. AAT 304340796).

Myers, J. E., & Sweeney, T. J. (2008). Wellness counseling: The evidence base for practice. *Journal of Counseling & Development, 86*(4), 482-493.

Myers, J. E., Sweeney, T. J., & Witmer, J. M. (2000). The wheel of wellness counseling for wellness: A holistic model for treatment planning. *Journal of Counseling & Development, 78*(3), 251-266.

Neuber, K. A., & Genthner, R. W. (1977). The relationship between ego identity, personal responsibility, and facilitative communication. *Journal of Psychology, 95*(1), 45-49.

Newman, B. M., & Newman, P. R. (1976). *Development through life: A case study approach*. Homewood, IL: Dorsey Press.

Parham, W. D. (1993). The intercollegiate athlete: A 1990s profile. *The Counseling Psychologist, 21*(3), 411-429. doi: 10.1177/0011000093213005

Pearson, R. E., & Petitpas, A. J. (1990). Transitions of athletes: Developmental and preventive perspectives. *Journal of Counseling & Development, 69*(1), 7-10.

Perna, P. D. (1991). *Life satisfaction, psychosocial development and perceived mentoring at career termination of collegiate male athletes.* (Doctoral dissertation). Retrieved from *Proquest Dissertations and Theses.* (Accession Order No. AAT 303931176)

Petitpas, A. (1978). Identity foreclosure: A unique challenge. *Personnel & Guidance Journal, 56*(9).

Petitpas, A. J., & Buntrock, C. L. (1995). Counseling athletes: A new specialty in counselor education. *Counselor Education & Supervision, 34*(3), 212.

Petipas, A. J., Cornelius, A., & Van Raalte, J. L. (2008). Youth development through sport: It's all about relationships. In N. L. Holt (Ed.), *Positive youth development through sport* (pp. 61 – 70). New York, NY: Routledge.

Petitpas, A., Danish, S., Murphy, S., & McKelvain, R. (1992). A career assistance program for elite athletes. *Journal of Counseling & Development, 70*(3), 383-386.

Pillay, Y. (1998). *Racial identity as the predictor of psychological health in African-American college students.* (Doctoral dissertation). Retrieved from ProQuest Dissertation and Theses. (Accession Order No. AAT 304441473)

Pillow, D. R., Zautra, A. J., & Sandler, I. (1996). Major life events and minor stressors. *Journal of Personality and Social Psychology, 70*(2), 381-394. doi: 10.1037/0022-3514.70.2.381

Podd, M. H., Marcia, J. E., & Rubin, B. M. (1970). The effects of ego identity and partner perception on a prisoner's dilemma game. *Journal of Social Psychology, 82*(1), 117-126.

Proctor, S. L., & Boan-Lenzo, C. (2010). Prevalence of depressive symptoms in male intercollegiate student-athletes and nonathletes. *Journal of Clinical Sport Psychology, 4*(3), 204-220.

Richards, S., & Aries, E. (1999). The division III student-athlete: Academic performance, campus involvement, and growth. *Journal of College Student Development, 40*(3), 211-218.

Rogers, C. R. (1961). *On becoming a person: A therapist's view of psychotherapy*. Boston, MA: Houghton Mifflin.

Rotella, R. J., & Newburg, D. S. (1989). The social psychology of the benchwarmer. *Sport Psychologist, 3*(1), 48-62.

Ruengvirayudh, P., & Brooks, G. P. (2016). Comparing stepwise regression models to the best-subsets models, or, the art of stepwise. *General Linear Model Journal, 42*(1), 1-14.

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57*(6), 1069-1081. doi: 10.1037/0022-3514.57.6.1069

Ryff, C. D. (1995). Psychological well-being in adult life. *Current Directions in Psychological Science, 4*, 99. doi: 10.2307/20182342

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology, 69*(4), 719-727. doi: 10.1037/0022-3514.69.4.719

Ryska, T. A. (2002). The effects of athletic identity and motivation goals on global competence perceptions of student-athletes. *Child Study Journal, 32*(2), 109-129.

Salgado, L. N. (2011). *Project S.A.I.D.: Student-athlete identity development.* The University of Arizona). *ProQuest Dissertations and Theses,* Retrieved from http://search.proquest.com/docview/874158016?accountid=12954. (874158016).

Schwartz, S. J. (2005). A new identity for identity research: Recommendations for expanding and refocusing the identity literature. *Journal of Adolescent Research, 20*(3), 293-308. doi: 10.11771074355840527 4890

Schwartz, S.J., Côté, J.E., and Arnett, J.J. (2005). Identity and agency in emerging adulthood: Two developmental routes in the individualization process. *Youth & Society,* 37(2), 201-229. https://doi.org/10.1177/0044118X05275965

Schwartz, S. J., Adamson, L., Ferrer-Wreder, L., Dillon, F. R., & Berman, S. L. (2006). Identity status measurement across contexts: Variations in measurement structure and mean levels among white American, Hispanic American, and Swedish emerging adults. *Journal of Personality Assessment, 86*(1), 61-76. doi: 10.1207/s15327752jpa8601_08

Segen, J. C. (2002). *Concise dictionary of modern medicine*. New York, NY: McGraw. .

Settles, I. H., Sellers, R. M., & Damas, A. J. (2002). One role or two? The function of psychological separation in role conflict. *Journal of Applied Psychology, 87*(3), 574-582. doi: 10.1037/0021-9010.87.3.574

Sharma, S. (2012). Psychological distress among Australians and immigrants: Findings from the 2007 national survey of mental health and wellbeing. *Advances in Mental Health, 10*(2), 106-116.

Shehu, J., & Moruisi, M. (2011). Influence of sport on personal development and social investment among Botswana Olympic athletes. *International Review for the Sociology of Sport, 46*(3), 282-298.

Shorey, H. S., Snyder, C. R., Yang, C. R., & Lewin, M. R. (2003). The role of hope as a mediator in recollected parenting, adult attachment, and mental health. *Journal of Social & Clinical Psychology, 22*(6), 685-715.

Simons, H. D., Van Rheenen, D., & Covington, M. V. (1999). Academic motivation and the student athlete. *Journal of College Student Development, 40*(2), 151-162.

Sparkes, A. C. (1998). Athletic identity: Achilles' heel to the survival of self. *Qualitative Health Research, 8*(5), 644-664.

Steiner, H., McQuivey, R. W., Pavelski, R., Pitts, T., & Kraemer, H. (2000). Adolescents and sports: Risk or benefit? *Clinical Pediatrics, 39*(3), 161-166.

Stephan, Y., & Brewer, B. W. (2007). Perceived determinants of identification with the athlete role among elite competitors. *Journal of Applied Sport Psychology, 19*(1), 67-79. doi: 10.1080/10413200600944090

Storch, E. A., Storch, J. B., Killiany, E. M., & Roberti, J. W. (2005). Self-reported psychopathology in athletes: A comparison of intercollegiate student-athletes and non-athletes. *Journal of Sport Behavior, 28*(1), 86-86.

Storch, E. A., Barlas, M. E., Dent, H. C., & Maisa, C. L. (2002). Generalization of social anxiety to sport: And investigation of elementary aged Hispanic children. *Child Study Journal, 32*(2), 81.

Tanner, J.L. (2006). Recentering during emerging adulthood: A critical turning point in the life span human development. In J. J. Arnett, & J. L. Tanner (Eds.), *Emerging adults in America: Coming of age in the 21st century* (pp. 21 - 58). Washington, DC: American Psychological Association.

Tasiemski, T., & Brewer, B. W. (2011). Athletic identity, sport participation, and psychological adjustment in people with spinal cord injury. *Adapted Physical Activity Quarterly, 28*(3), 233-250.

Tasiemski, T., Kennedy, P., Gardner, B.P., & Blaikley, R.A. (2004). Athletic identity and sports participation in people with spinal cord injury. *Adapted Physical Activity Quarterly*, 21, 364–378.

Thatcher, J., & Day, M. C. (2008). Re-appraising stress appraisals: The underlying properties of stress in sport. *Psychology of Sport & Exercise, 9*(3), 318-335. doi: 10.1016/j.psychsport.2007.04.005

Veit, C. T., & Ware, J. E. (1983). The structure of psychological distress and well-being in general populations. *Journal of Consulting and Clinical Psychology, 51*(5), 730-742. doi: 10.1037/0022-006X.51.5.730

Vijaykumar, S. D., & Lavanya, T. (2015). Vocational identity and ego strengths in late adolescence. *Annamalai International Journal of Business Studies & Research.* Special Issue, pp. 52- 59.

Vleioras, G., & Bosma, H. A. (2005). Are identity styles important for psychological well-being? *Journal of Adolescence, 28*(3), 397-409. doi: 10.1016/j.adolescence.2004.09.001

Wang, S., Shi, M., & Chen, H. (2010). *Chinese Journal of Clinical Psychology, 18*(2), 215-218.

Waterman, A. S., & Waterman, C. K. (1970). The relationship between ego identity status and satisfaction in college. *The Journal of Educational Research.64* (4), 165-168.

Waterman, C. K., & Waterman, A. S. (1974). Ego identity status and decision styles. *Journal of Youth and Adolescence*, 3(1), 1-6.

Watson, J. C., & Kissinger, D. B. (2007). Athletic participation and wellness: Implications for counseling college student-athletes. *Journal of College Counseling, 10*(2), 153-162. doi: 10.1002/j.2161-1882.2007.tb00015.x

Wiese-Bjornstal, D., Smith, A. M., Shaffer, S. M., & Morrey, M. A. (1998). An integrated model of response to sport injury: Psychological and sociological dynamics. *Journal of Applied Sport Psychology, 10*(1), 46-69.

World Health Organization (WHO). (2004). Urgent work needed to rebuild health care systems. *Sport Science & Physical Education Bulletin, 40,* 58-59.

Williams, D. J. (2007). *An examination of athletic identity, sport commitment, time in sport, social support, life satisfaction, and holistic wellness in college student-athletes*. The University of North Carolina at Greensboro). *ProQuest Dissertations and Theses,* 203. Retrieved from http://search.proquest.com/docview/304832631?accountid=12954. (304832631).

Witmer, J. M., & Sweeney, T. J. (1992). A holistic model for wellness and prevention over the life span. *Journal of Counseling & Development, 71*(2), 140-148.

Yang, J., Peek-Asa, C., Corlette, J. D., Cheng, G., Foster, D. T., & Albright, J. (2007). Prevalence of and risk factors associated with symptoms of depression in competitive collegiate student athletes. *Clinical Journal of Sport Medicine, 17*(6), 481-487.

Yang, M. J. (2012). *Moving forward: Addressing stress, positive resources, and gender*. University of Maryland, College Park). *ProQuest Dissertations and Theses,* 130. Retrieved from http://search.proquest.com/docview/1032692177?accountid=12954. (1032692177).

Appendix A

Letter of Request

Coach~

Will Soto is a Counseling doctoral student who has been working with some of your student-athletes over the past 18 months. He is currently working on his dissertation that requires research and needs the help of our student-athletes.

Will has developed a web based survey that is intended to determine whether "the strength of an athlete's identification with the role of athlete, along with the sense of who they are in terms of their formed values/beliefs in certain life domains (i.e., occupation, politics, religion, relationships), can predict the psychological health (i.e., distress or well-being) of college athletes."

The survey can be completed on the 4th floor of Peden around the lunch hour, with an offer of lunch for the participating student-athletes. He does not necessarily require all of your student-athletes to participate, and will coordinate a convenient time/date with you. Once the results are tabulated, he is more than willing to share the results with you.

Will will be in contact with you soon to make the appropriate arrangements.

Thank you for your support of this educational endeavor!

Kind Regards,

Appendix B

Ohio University Consent Form

Title of Research: **Athletic Identity and Ego Identity Status as Predictors of Psychological Health among Intercollegiate Athletes.**

Researcher: William Soto – PhD Student

Introduction

You are being asked to participate in a research project described below. Please take your time to decide whether you would like to participate in this study. Please review the attached consent form in order to understand the possible benefits and risks involved with your participation. Feel free to contact the researcher for clarification of words or terms that are not clear or familiar to you.

This form explains how your personal information will be used and protected. Once you have read this form and your questions about the study are answered, you will be asked to sign it. This will allow your participation in this study. You should receive a copy of this document to take with you.

Explanation of Study

This investigation was designed by the researcher in order to learn about how athletic identity and an individual's values and beliefs relate to an athlete's psychological

health. If you agree to participate in this study, you will be asked to report on how you identify with your role of athlete. You will also be asked to rate your position on certain values and ideas that make up your belief system. Additionally, you will answer some questions about your psychological health. The survey ends with a demographic questionnaire. You should not participate in this study if you are under the age of 18 or you do not feel comfortable reporting about your experiences and involvement with athletics.

Your participation in the study will last approximately 30-35 minutes.

Risks and Discomforts

While recalling your experiences about past life events, you may experience some discomfort. You have the right to stop your participation in the study at any time.

Benefits

This study may inform college personnel and service providers such as Counselors serving this unique population.

Confidentiality and Records

Your participation in this study is completely anonymous. Your demographic information and responses to the questions will not be identifiable to anyone including the researcher.

Additionally, while every effort will be made to keep your study-related information confidential, there may be circumstances where this information must be shared with:

* Federal agencies, for example the Office of Human Research Protections, whose responsibility is to protect human subjects in research;
* Representatives of Ohio University (OU), including the Institutional Review Board, a committee that oversees the research at OU

Compensation

Due to NCAA compliance regulations, you will not be compensated with money or gifts. However, you will be able to enjoy a food reception after your complete the survey.

Contact Information

If you have any questions regarding this study, please contact Dr. Christine S. Bhat, (740) 593-4425, bhat@ohio.edu or William Soto (937-248-4268), soto@ohio.edu.

If you have any questions regarding your rights as a research participant, please contact Jo Ellen Sherow, Director of Research Compliance, Ohio University, (740) 593-0664.

By signing below, you are agreeing that:

- you have read this consent form (or it has been read to you) and have been given the opportunity to ask questions and have them answered

- you have been informed of potential risks and they have been explained to your satisfaction.
- you understand Ohio University has no funds set aside for any injuries you might receive as a result of participating in this study
- you are 18 years of age or older
- your participation in this research is completely voluntary
- you may leave the study at any time. If you decide to stop participating in the study, there will be no penalty to you and you will not lose any benefits to which you are otherwise entitled.

Signature_____ Date_____

Printed Name_____

Appendix C

OHIO
UNIVERSITY
Office of the Vice President for Research

E-MAILED
APR 23 2013

13E144

Office of Research Compliance
RTEC 117
Athens, OH 45701-2979

T: 740.593.0664
F: 740.593.9838
www.research.ohiou.edu

A determination has been made that the following research study is exempt from IRB review because it involves:

Category 2 - research involving the use of educational tests, survey procedures, interview procedures or observation of public behavior

Project Title: Athletic Identity and Ego Identity Status as Predictors of Psychological Health among Intercollegiate Athletes

Primary Investigator: William Soto

Co-Investigator(s):

Advisor: Christine Bhat
(if applicable)

Department: Counselor Education and Supervision

Rebecca Cale 04/23/13

Rebecca Cale, AAB, CIP
Office of Research Compliance

Date

The approval remains in effect provided the study is conducted exactly as described in your application for review. Any additions or modifications to the project must be approved (as an amendment) prior to implementation.

Appendix D

OHIO UNIVERSITY
Office of the Vice President for Research

E-MAILED 11/12/13

A 13E144

Office of Research Compliance
RTEC 117
Athens, OH 45701-2979

T: 740.593.0664
F: 740.593.9838
www.research.ohiou.edu

The amendment, detailed below, and submitted for the following research study has been approved by the Institutional Review Board at Ohio University.

Project: Athletic Identity and Ego Identity Status as Predictors of Psychological Health among Intercollegiate Athletes

Amendment: Change number of participating campuses to one (Ohio University)

Primary Investigator: William Soto
Co-Investigator(s):

Advisor: Christine Bhat
(if applicable)

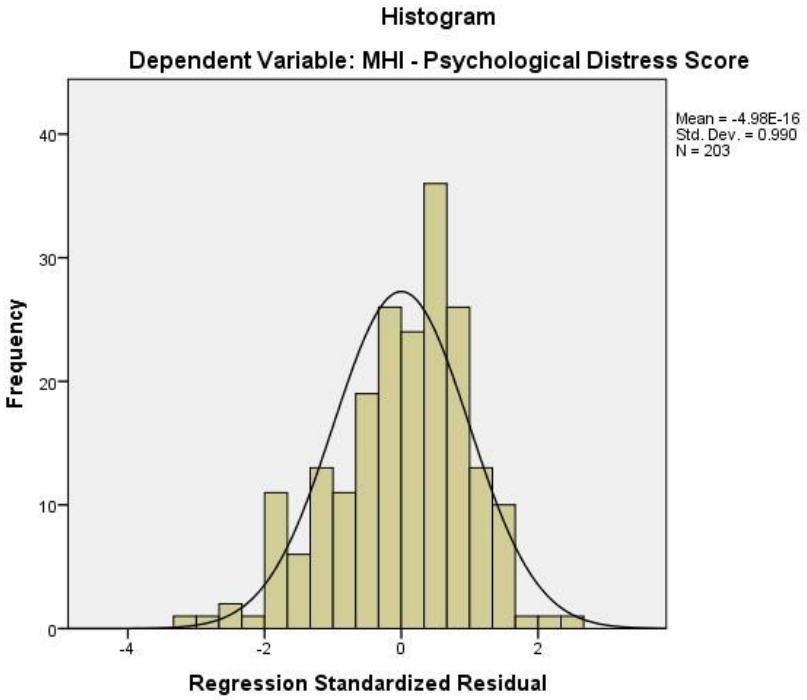
Department: Counselor Education and Supervision

Robin Stack

Robin Stack, CIP, Human Subjects Research Coordinator
Office of Research Compliance

Nov. 12, 2013
Date

Appendix E


Histogram
Dependent Variable: MHI - Psychological Distress Score
Mean = -4.98E-16
Std. Dev. = 0.990
N = 203
Frequency
40
30
20
10
0
-4
-2
0
2
Regression Standardized Residual

Appendix F

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	136.852	10.234		13.372	.000	116.670	157.035					
	MOR_SCORE	-1.108	.233	-.360	-4.750	.000	-1.568	-.648	-.361	-.321	-.304	.712	1.404
	ACH_SCORE	.238	.218	.080	1.092	.276	-.192	.668	.144	.078	.070	.762	1.312
	FOR_SCORE	-.379	.207	-.122	-1.826	.069	-.788	.030	-.206	-.129	-.117	.922	1.085
	DIFF_SCORE	.508	.259	.152	1.965	.051	-.002	1.019	-.092	.139	.126	.681	1.467
	AIMSCORE	-.540	.186	-.189	-2.895	.004	-.907	-.172	-.231	-.202	-.185	.960	1.042
2	(Constant)	143.865	7.971		18.049	.000	128.146	159.584					
	MOR_SCORE	-1.164	.228	-.378	-5.107	.000	-1.613	-.714	-.361	-.341	-.326	.748	1.337
	FOR_SCORE	-.353	.206	-.113	-1.713	.088	-.760	.053	-.206	-.121	-.109	.934	1.071
	DIFF_SCORE	.415	.244	.124	1.699	.091	-.067	.897	-.092	.120	.109	.765	1.307
	AIMSCORE	-.530	.186	-.186	-2.846	.005	-.898	-.163	-.231	-.198	-.182	.962	1.039
3	(Constant)	146.094	7.899		18.494	.000	130.516	161.671					
	MOR_SCORE	-.984	.203	-.319	-4.852	.000	-1.384	-.584	-.361	-.325	-.312	.952	1.050
	FOR_SCORE	-.343	.207	-.110	-1.656	.099	-.751	.065	-.206	-.117	-.106	.935	1.070
	AIMSCORE	-.511	.187	-.179	-2.733	.007	-.879	-.142	-.231	-.190	-.176	.966	1.035
4	(Constant)	143.201	7.737		18.508	.000	127.944	158.459					
	MOR_SCORE	-1.049	.200	-.340	-5.246	.000	-1.443	-.655	-.361	-.348	-.338	.989	1.011
	AIMSCORE	-.558	.185	-.195	-3.010	.003	-.924	-.193	-.231	-.208	-.194	.989	1.011
5	(Constant)	122.136	3.366		36.280	.000	115.498	128.774					
	MOR_SCORE	-1.112	.203	-.361	-5.482	.000	-1.511	-.712	-.361	-.361	-.361	1.000	1.000

a. Dependent Variable: MHI_PD_SCORE

Appendix G

YEAR * PLAYINGSTATUS Crosstabulation

Count

		PLAYINGSTATUS				
		1 Starter	2 Second String	3 Third String	4 Other/Please enter below	Total
YEAR	1 First Year (Freshman)	17	13	11	13	54
	2 Second Year (Sophomore)	38	12	2	9	61
	3 Third Year (Junior)	26	8	1	4	39
	4 Fourth Year (Senior)	26	7	1	6	40
	5 Fifth Year	3	2	0	1	6
Total		110	42	15	33	200

Appendix H

RECRUITED * PLAYINGSTATUS Crosstabulation

Count

		PLAYINGSTATUS				
		1 Starter	2 Second String	3 Third String	4 Other/Please enter below	Total
RECRUITED	1 Yes	104	35	9	26	174
	2 No	7	7	6	8	28
Total		111	42	15	34	202

Thesis and Dissertation Services