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Melissa Margaret Majerus

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FACTORS AFFECTING THE ACADEMIC AND ATHLETIC SELF-DETERMINED
MOTIVATION OF NJCAA DIVISION III STUDENT-ATHLETES:
A MIXED METHODS STUDY

by

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A Dissertation

Submitted to the Graduate Faculty

of the

University of North Dakota

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for the degree of

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May
2016

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This dissertation, submitted by Melissa Majerus in partial fulfillment of the requirements for the Doctor of Philosophy from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

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PERMISSION

Title Factors Affecting the Academic and Athletic Self-Determined
Motivation of NJCAA Division III Student-Athletes: A Mixed
Methods Study

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Melissa M. Majerus
March 29, 2016

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ABSTRACT

Student-athletes who participate at Division III technical and community colleges across the country are a unique population of students who have special needs and interests. Their academic needs and interests likely led them towards a technical and community college education, but these students have also chosen to participate in athletics. Deci and Ryan's (1985) self-determination theory (SDT) of motivation has long been utilized to examine students' basic psychological needs (autonomy, competence, relatedness) and their impact on academic motivation (intrinsic, extrinsic, amotivation) and success; yet, little of this research has focused on community college students or student-athletes within a community college setting. In a recent pilot study, independent samples *t*-tests revealed that nonstudent-athletes, compared to student-athletes, had significantly higher self-reported grade point averages, perceived success, intrinsic motivation, and extrinsic motivation. A limitation was that several of the study's scales had poor reliabilities, prompting the use of improved measures in the current study. The current study employed new scales to examine the motivations of National Junior College Athletic Association (NJCAA) Division III student-athletes who, in stark contrast to their Division I and II counterparts, are not allowed to accept financial remuneration for their participation in intercollegiate athletics. More specifically, the purpose of this study was to examine the role basic psychological needs play in the

academic motivation of student-athletes compared to nonstudent-athletes, as well as how these needs impact student-athletes motivation for athletics.

A convergent parallel mixed method design was used to triangulate quantitative results with qualitative findings (Creswell & Plano Clark, 2011). Participants consisted of students at a Midwestern community and technical college ($N = 238$) completing an online survey containing Likert-style and open-ended questions. Independent samples *t*-test revealed that nonstudent-athletes had significantly higher levels of intrinsic motivation for academics compared to student-athletes, and student-athletes were found to have significantly higher levels of amotivation than nonstudent-athletes. Multiple regressions revealed that the level of autonomy, competence, and relatedness a nonstudent-athlete has for academics has a significant impact on their academic motivation. In contrast, multiple regressions did not reveal any significant findings for student-athletes levels of autonomy, competence, and relatedness for academics as a predictor of academic motivation. It was found that a student-athletes level of relatedness for athletics was a significant predictor of their level of athletic motivation.

Open-ended responses were analyzed using qualitative data analysis techniques of codes, and themes. The analysis of the open-ended responses produce codes which added to the depth and understanding from quantitative results. The qualitative analysis provided support for quantitative survey questions and results by allowing student-athletes and nonstudent-athletes to provide their own specific motivational factors.

The findings in this study helped to create support for the generalizability of research found in larger NCAA Division I universities to that of smaller NJCAA Division III institutions. Additionally this study helped to provide data and validate an updated

scale on sports motivation. Based on the results of this study it is hoped that instructors, coaches, advisors, and administrators will be better informed of the motivational needs of student-athletes in comparison to their nonstudent-athlete counterparts and take actions that target the specific academic needs of student-athletes.

CHAPTER I

INTRODUCTION

The role of sport and its impact on society has come a long way in the last century. According to Leonard (2016) sport's only role used to be within the physical education classroom, but now there are athletic teams on nearly every high school and college campus, college majors that focus on sport, and researchers and journals have taken notice of the impact of sport on society. A renewed focus on the role of the athlete in society has begun to surface (Leonard, 2016). Public perception is that professional athletes make millions of dollars from their athletic ventures, and even more money as spokes persons food products, cereal, and sports drinks (Bragg, Yanamadala, Roberto, Harris & Brownell, 2013). Indeed, the vast majority of these professional athletes started on their path to notoriety as intercollegiate student-athletes; but being a successful collegiate student-athlete does not necessarily equate to professional stardom according to the National Collegiate Athletic Association (NCAA),. Recent findings with the NCAA, state that student-athletes who compete at the premier Division I level of competition less than 2% of student-athletes will become a professional in their chosen sport ("Probability of Competing", January, 2015). An NCAA public service announcement states, "there are over 450,000 student-athletes in the NCAA and the majority of them will go pro in something other than sports." This statement carries even

more weight for the population of interest in this study, student-athletes in Division III of the National Junior College Athletic Association (NJCAA) since these student-athletes are not even competing within the NCAA, but within the junior college system.

The NJCAA consists of more than 60,000 students at 525 institutions of higher education (“NJCAA Marketing,” 2015). NJCAA institutions offer 30 sports for men and women. At many of the NJCAA institutions up to one-third of the student body are considered student-athletes (Emerson, Brooks, & McKenzie, 2009). Within the NJCAA resides Division III institutions who are not allowed to offer their student-athletes any type of financial remuneration for their participation in intercollegiate athletics. This is in stark contrast to Division I and Division II student-athletes where it is permissible for the institution to provide compensation for varying levels of tuition, housing, and living expenses. According to Emerson and colleagues, while many institutions claim that academics are the priority for their student-athletes, it is within Division III that the “claim for the educational value of athletic participation is the most clearly and forcefully articulated” (p.65).

President Barak Obama has stated that the pursuit of a post-secondary education is paramount to the future success of America and crucial to achieving the “American Dream” (April 24, 2009). A large body of research exists on academic success within higher education, while only some has focused on the collegiate student-athlete. When the additional expectations of being an athlete are placed on college students, critical differences in success may appear between student-athletes and their nonstudent-athlete counterparts. Carodine, Almond, and Gratto (2001) reported that student-athletes “all

face huge time commitments, physically grueling workouts, a high-profile existence, and demanding expectations. Even in the case of an academically gifted student, the combination of academic and athletic requirements can cause incredible strain” (p. 19).

Division III student-athletes choose to spend hours practicing and participating in competition for their college or university. They spend time away from their friends and family, away from working at paying job, or studying for courses to represent their chosen school on the court or field. With virtually no chance of becoming a professional athlete, no athletic-based financial assistance with tuition and living expense, and hours of sport-related expectations each day one might wonder why Division III student-athletes play. Certainly, Division III NJCAA student-athletes are a special population within the collegiate ranks, yet little research on this group has been conducted. Thus, the research problem addressed in this study was: what drives these Division III student-athletes to participate in athletics? It would seem that Division III student-athletes have found something unique in the sport that they give so much of their time to and it is likely that they play simply *for the love of the game*.

In this study, I will seek to understand both academic and athletic intrinsic motivation of student-athletes. Studies by Botelho and Agergaard (2011) and Schneider and Butcher (1993) have investigated the ‘for the love of the game’ phenomena through a qualitative lens, yet no study to date has used mixed methods to search out relationships between the motivational levels using both a quantitative score and a qualitative expression of motivation. ‘For the love of the game’ is a phenomena that Botelho and Agergaard (2011) described as someone who plays a sport competitively because they

truly enjoy it and it has become their passion. They describe it as a “labour of love” (p. 811). ‘For love of the game’ is a phenomena that has been researched in relation to both amateur athletic status and athletic competition and in an effort to better understand why an athlete would suffer challenging situations to continue competing in sports. With this in mind, this study evaluated the academic and athletic motivational levels of NJCAA Division III student-athletes using the lens of Deci and Ryan’s (1994) self-determination theory (SDT; see Figure 1).

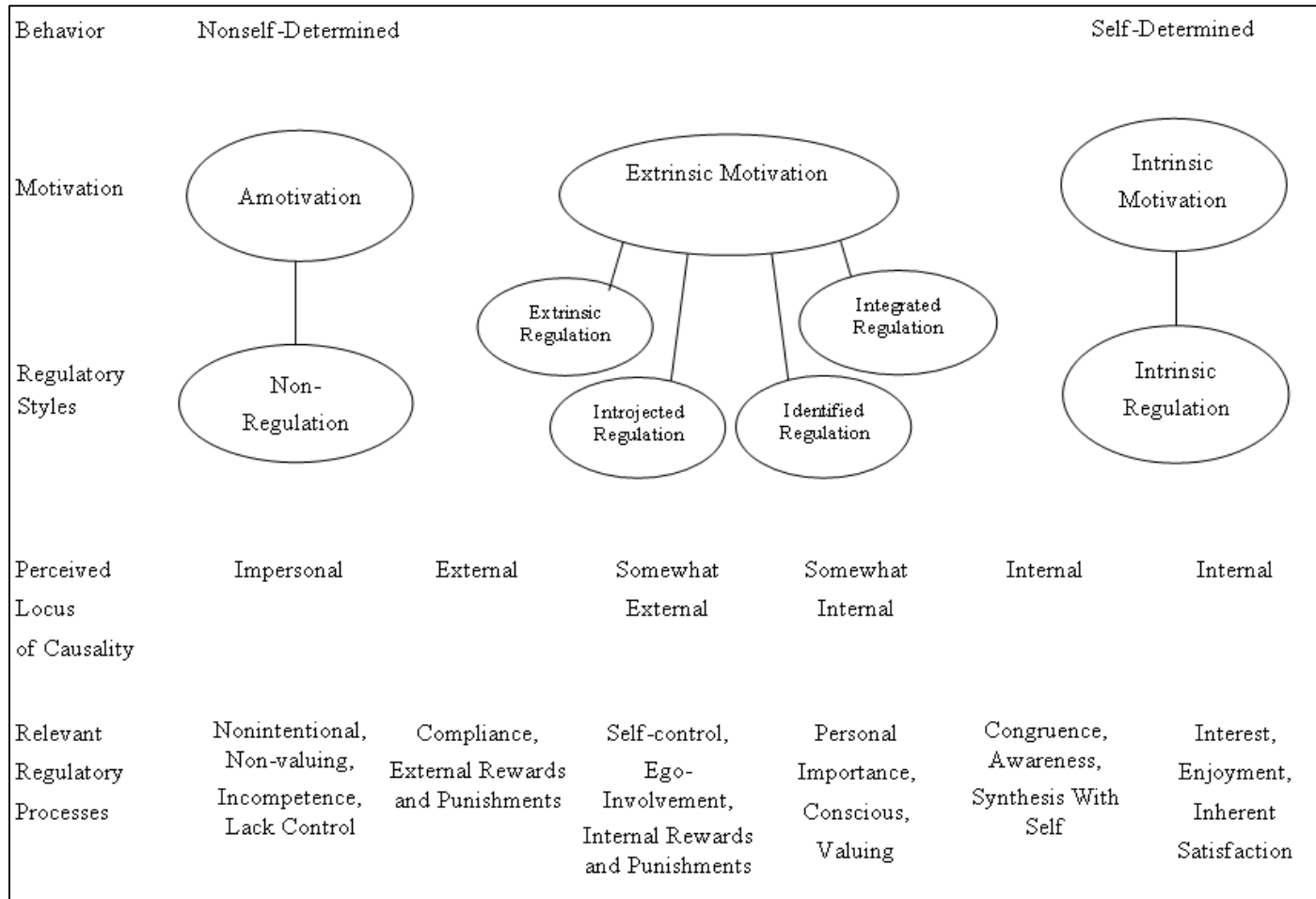


Figure 1. "Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being," by R. M. Ryan and E. L. Deci, 2000, *American Psychologist*, 55, p. 72.

Statement of the Problem

Collegiate athletics and the student-athletes they attract continue to thrive on college campuses across the nation (Hill, Burch-Ragan, & Yates, 2001; Meyer, 2005; Storch & Ohlson, 2009). The NCAA, which is the largest governing body for intercollegiate athletics, has made student-athlete academic success a priority and has been collecting data throughout the past 20 years on this subject. This data has led to increasing the academic eligibility standards for incoming freshman and transfers, implementing more strict requirements on progress towards graduation, and the development of an academic progress rate which seeks to measure the academic performance of athletic teams (Hosick & Sproull, 2012). The academic progress rate is a “term-by-term calculation of the eligibility and retention of all student-athletes. A score of a 1,000 means every student-athlete on that team stayed eligible and returned to school” (Academic Progress Rate Q & A, para. 4, 2014). As students either lose academic eligibility or do not return to school, the colleges and universities begin to lose points. The NCAA has implemented a minimum score of a 930 before athletic sanctions will be implemented. This minimum score promises a 50% graduation rate.

In spite of these efforts, the academic failures and under preparedness of collegiate student-athletes continues to fill the pages of scholarly journals and newspapers. Several studies have found that Division I student-athletes, in comparison to non-student athletes, often have lower GPAs, take longer to graduate, and experience lower graduation rates (Emerson et al., 2009; Mangold, Bean, & Adams, 2003;

Matheson, 2007). It is furthermore the belief of many professors and classmates that student-athletes emulate the “dumb jock” stereotype (Simons, Bosworth, Fujita & Jensen, 2007). Recent research has found that collegiate student-athletes have different needs and motivations for attending college (Jolly, 2012; Potuto & O’Hanlon, 2007; Simons, et al., 2007). According to Mega, Ronconi, and De Beni (2014) when students believe they are capable of doing well and succeeding in the classroom, they are likely to be more academically motivated. Therefore, in order for student-athletes to be academically successful it is necessary that we understand the motivations within the community college student-athlete. Therefore there must be research that understands the specific needs of Division III NJCAA student-athletes. Thus, this study utilizes the concepts present in Deci and Ryan’s (1994) self-determination theory (SDT) to analyze the academic and athletic motivations of NJCAA Division III student-athletes and their nonstudent-athlete counterparts.

Theoretical Framework: Self-determination Theory of Motivation

Self-determination theory describes the relationship between needs satisfaction and motivation within a given social context (Deci & Ryan, 1985, 1991). Ryan and Deci’s (2000) SDT places motivation on a continuum from intrinsic (internal) motivation to extrinsic (external) motivation and amotivation (lack of motivation). They posit that levels of intrinsic motivation can be predicted by the degree to which activities fulfill one’s need for autonomy (self-directing freedom or moral independence), competence (perception of having adequate ability), and relatedness (feeling connected with others). Ryan and Deci (2000) state that when an individual believes an action is self-determined

his or her actions are likely to become more motivated to perform or complete tasks. Circumstances that encourage and support a student's competence, autonomy, and relatedness have been found to illicit higher levels of motivation, increased performance, and greater wellness (Deci & Ryan, 2006).

For example, a student-athlete with a high level of intrinsic motivation for athletics would practice the skills of their sport on their own because they enjoy doing it and enjoy making themselves a better player. Such student-athletes would likely take practice seriously and prepare themselves both mentally and physically for games and they would not require a coach to remind them of upcoming games. In contrast, student-athletes with low levels of intrinsic motivation such as introjected motivation would likely require their coaches to continually remind them of their athletic commitments, they would rarely practice the skills of their sport without significant prompting from a coach. Students with introjected motivation may arrive late to practice, and they are likely to be unprepared for competition.

Within Deci and Ryan's (2000) basic psychological needs theory of motivation, research has also been performed on the thwarting of one's psychological needs and the potentially negative behaviors and outcomes. Ryan and Deci (2000) state that their theory not only addresses the positive impact of having one's needs met, but also the "...undermining, alienating, and pathogenic effects of need thwarting contexts" (p. 319). When students find themselves in an environment where they are judged or made to feel inadequate they are likely to experience needs thwarting. Recent research on needs thwarting by Bartholomew, Ntoumanis, Ryan and Thogersen-Ntoumani (2011) found

that students who had lower scores on the basic psychological needs satisfaction surveys did not always experience needs thwarting, but rather they were unhappy with the level to which their needs were being met. Needs thwarting is an emerging area of research within SDT, therefore this study will further investigate the impact needs thwarting has upon the academic and athletic motivations of student-athletes.

Much of the research involving SDT and athletics has focused on issues occurring within the athletic climate only such as burnout, coach interaction, and injury recovery (Chan, Spray, & Hagger, 2011; Joesaar, Hein, & Hagger, 2012; Van de Berge, Soenens, Aelterman, Cardon, Tallir, & Haerens, 2014). There is little research that uses SDT to understand the academic motivations of the collegiate student-athlete and even less research has focused on the community college student-athlete. As faculty and staff within the colleges and universities seek to improve the academic success and retention rates for all students, it is time to start investigating how we can target special populations within our colleges to provide everyone the greatest chance for academic success and achievement. Therefore, this study will draw connections among the academic and athletic motivations of community college student-athletes with the hopes of increasing their success.

Need for the Study

Community and technical colleges play a vital role in the education of its surrounding population. As those areas strive to grow and develop it is imperative that the missions and goals of these institutions are aligned with their ever-changing student population (Topper & Powers, 2013). In contrast to four-year colleges, community

colleges are populated at a higher rate by students from a wide age range, underprivileged socioeconomic class, racially or ethnically diverse background, and first-generation college students (Clotfelter, Ladd, Muschkin, & Vigdor, 2013). For many of these students, community colleges create an access point to higher education and as a student, they gain the possibility to participate in intercollegiate athletics. Horton (2009) believes that participation in athletics has the potential to help students build social skills, personal discipline, and academic focus. He states that the opportunities provided through athletics are “real and important and they cannot be easily counted or quantified” (Horton, 2009, p. 16). The challenge to quantify athletics impact on a student is one reason why little research can be found on the community college student-athlete.

This study sought to fill important gaps in the research regarding the academic motivations of student-athletes and nonstudent-athletes who attend NJCAA Division III community colleges. Much research has been done using the student-athletes from large Division I universities who are often provided full scholarships in return for their participation in university athletic teams (Gayles & Hu, 2009; McArdle, Paskus, & Boker, 2013; Ting, 2009). While this research on Division I student-athletes is important, it does not necessarily translate to the academic and athletic motivations or successes of the Division III community and technical college student-athlete. Grand differences exist between the NCAA Division I student-athlete and the NJCAA Division III student-athletes both on and off the court. The level of incoming student-athletes academic preparedness is one area where striking differences can be found. The large colleges and universities that NCAA Division I student-athletes attend have academic attainment

requirements that prospective students must meet prior to acceptance (*Remaining Eligible, (n.d.) NCAA.org*); whereas the vast majority of community colleges are considered “open enrollment” institutions, which means that all perspective students are accepted regardless of their academic standing. The only academic requirement for community colleges is that students must have either graduated from high school or have attained a graduate equivalency degree (NJCAA 2014-2015 Handbook). Additionally, community college student-athletes who perform for institutions within Division III are not allowed to accept financial compensation for their participation in intercollegiate athletics. Which is in stark contrast to the financial payment received by NCAA Division I student-athletes. Division I student-athletes are allowed to accept payment for full tuition, fees, room, board, and recently the NCAA passed a policy that allows colleges and universities to offer student-athletes scholarships that meet the “federal definition of ‘cost of attendance,’ which includes expenses such as academic-related supplies, transportation, and other similar items (Hosick, January, 18, 2015). These differences highlight the need for research specific to community college student-athletes. The current research on NCAA Division I student-athletes is not generalizable to student-athletes who compete within the NJCAA Division III league.

This study also contributes to the research literature by using a recently modified scale to evaluate athletic motivation, the Sports Motivation Scale (SMS)-II (Pelletier, Rocchi, Vallerand, Deci, & Ryan, 2013). The SMS-II was developed in recent years to combat reported problems with the current scale: multiple measures for intrinsic motivation, lack of a measure for integrated regulation, and several problematic items.

To rectify this situation, the SMS-II was constructed to bring the scale in-line with the current SDT framework and to improve survey efficiency by decreasing the number of items per subscale (Pelletier, Rocchi, Vallerand, Deci, & Ryan, 2013). While initial studies have shown the SMS-II to have good reliability, this study will further add to the validity and diversity of the populations measured with this scale. This study seeks to acknowledge that NJCAA Division III student-athletes are a special population within intercollegiate athletics and to better understand their academic and athletic motivations in an effort to increase and encourage their success on and off the court.

Purpose of the Study

The purpose of this study was to evaluate and compare the academic motivation of community college student-athletes versus nonstudent-athletes, as well as to understand student-athlete athletic motivation and how it impacts their academic and athletic success. This study uses Deci and Ryan's (1985) SDT as a framework (see Figure 1). Through the implementation of a convergent parallel mixed method design (QUAN + qual, see Figure 2), quantitative data assessed motivation and success levels, while qualitative open-ended questions explored the relationships between student's academic motivations and student-athlete's athletic motivations. Through analysis and triangulation of both data types, relationships between motivational levels in athletics and academics were examined. Through quantitative analysis student-athlete clusters were created to further probe the motivations of NCAA Division III community college student-athletes.

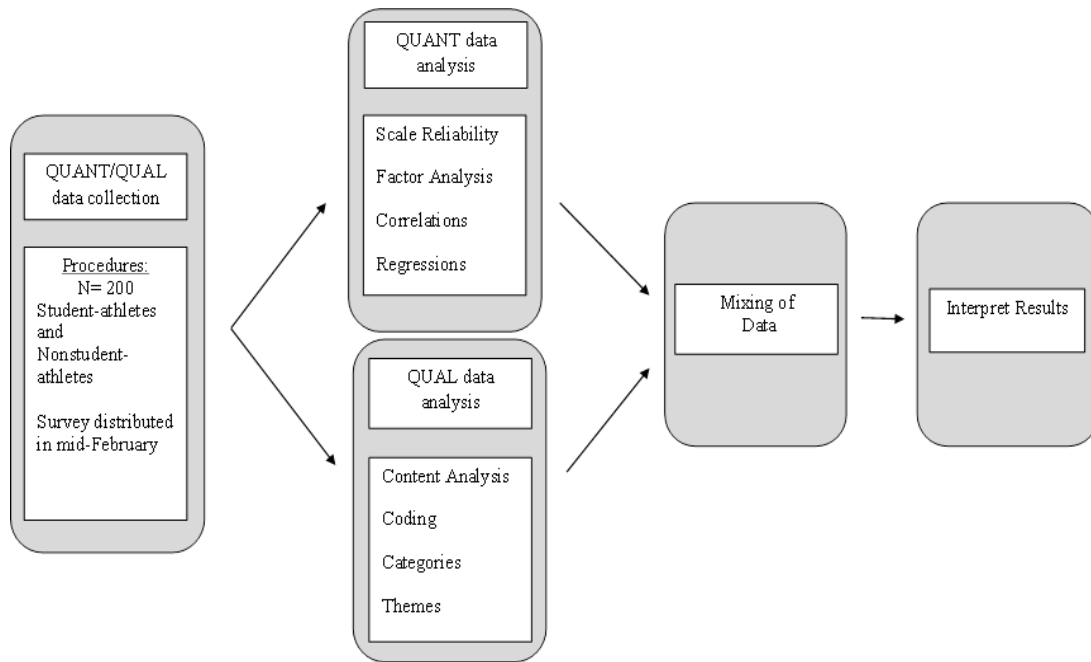


Figure 2. Convergent-parallel design for motivation of Division III NJCAA student-athletes and nonstudent-athletes.

Research Questions

This study investigated the following research questions among DIII students and student-athletes:

1. How do the academic basic psychological needs, motivation, and perceived success of student-athletes compare to those of nonstudent-athletes?
2. How do student-athlete and nonstudent-athlete academic basic needs and motivation predict their perceived success in academics? How does student-athletes athletic basic needs and motivation predict their perceived success in athletics?
3. How do students' basic psychological needs predict their academic motivation? How do student-athlete's basic psychological needs for athletics

predict their athletic motivation? What relationship does student-athlete academic motivation have with their athletic motivation?

4. How do student-athletes and nonstudent-athletes describe their motivation for academics? What differences exist between student-athletes and nonstudent-athletes in their descriptions of academic motivation? How do student-athletes describe as their motivations or reasons for competing in intercollegiate athletics?
5. What are there motivational patterns amongst student-athletes that can be used to create motivational profiles?

Summary

This study was designed to evaluate the academic and athletic motivations of intercollegiate student-athletes through qualitative and quantitative methods. This chapter consisted of an introduction to the state of the student-athlete within the United States along with a description of current student-athlete issues within the academic and athletic realms. This is followed by an introduction to self-determination theory as well as the need and purpose for the study. These items are followed by the research questions that will be addressed in further in Chapters III and analyzed in Chapter IV. Future chapters consist of: Chapter II which contains a review of the current literature; Chapter III discusses the pilot study that the current study is modeled after, the methodology for this study and participants and procedure; Chapter IV details the qualitative and quantitative data analysis utilized as well as various mixing points

throughout the study; and Chapter V highlights the results, limitations, future research possibilities, and implications of the current study.

CHAPTER II

REVIEW OF LITERATURE

The purpose of this dissertation was to examine the academic and athletic motivations of intercollegiate student-athletes. Self-Determination theory developed by Ryan and Deci (2000) was used as the theoretical framework for this mixed methods study. One of the mixing points for the study involved the creation and investigation of cluster profiles for student-athletes. This literature review chapter details the following concepts: the definition of a student-athlete; academic performance and motivation of student-athletes; student-athlete athletic motivation; an overview of SDT; and an analysis of prior SDT research relating to academic and athletic motivation.

Student-Athletes

Definition

Student-athletes are defined as students enrolled in member institutions who voluntarily choose to participate in intercollegiate athletics at the institution in which they are enrolled (Definition of Student Athlete, 2005). There are multiple leagues throughout the United States of America who provide a venue for intercollegiate athletic competition. The largest and most widely known league is the NCAA who provide athletic opportunity student-athletes at more than 1,200 four-year colleges and universities (NCAA, Who We Are, para. 3). These institutions vary widely in size and

from only a couple hundred students to large universities comprised of tens of thousands of students. The National Association of Intercollegiate Athletics (NAIA) also includes student-athletes who attend four-year colleges and universities, but NAIA institutions are typically much smaller in student-body size compared to NCAA colleges and universities. The NAIA consists of more than 250 colleges and universities and serves about 65,000 intercollegiate student-athletes.

As intercollegiate athletics grew in the United States athletic participation began to branch into the two-year community and technical college system. The NJCAA and various other smaller state associated leagues were born and currently include more than 630 institutions with over 78,000 student-athletes who compete in 12 men's and women's sports (Lawrence, Mullin, & Horton, 2009). The NJCAA was formed in 1938 when the NCAA refused to allow track and field athletes from several community colleges in California to compete in the NCAA Track and Field Championships (History of NJCAA, 2015, para. 1-2). The NJCAA participation varies greatly from year to year, due to the nature of the two-year student-athlete. Student-athletes competing for NJCAA member institutions must be enrolled full-time and must make adequate progress toward graduation each semester in order to have continued athletic eligibility (NJCAA rule book, 2015, para. 2). If a student-athlete does not meet the NJCAA's requirements towards graduation or achieve the minimum required GPA each semester, he or she becomes academically ineligible to compete in intercollegiate athletics.

Woodruff and Shallert (2008) argue that the "very term student-athlete implies an individual who is being asked to manage and succeed at the tasks that make up two

different realms of his or her life, athletics and academics” (p. 34). College is seen as a rite of passage for most young adults. It is a time when they are free from parental supervision and have a chance to grow, develop, and find their own way through their new world (Elkins, Braxton, & James, 2000). According to Potuto & O’Hanlon (2007) student-athletes, however, may not have these same freedoms due to the expectations associated with being a student-athlete. They state that many student-athletes often find that their class schedules, meals, study time, and free time are pre-scheduled for them. Their research has found that some NCAA student-athletes even feel as though their college major has been chosen for them. Despite these challenges and frustrations, there are still countless numbers of students who enter college with the intention of becoming an intercollegiate student-athlete (NCAA College Athletics Statistics, 2016).

Academics

Several studies show that student-athletes struggle to gain respect from fellow students and professors (Aries, McCarthy, Salovey, & Banaji, 2004; Emerson, Brooks & McKenzie, 2009; Curry & Maniar, 2003). Students-athletes report being questioned when they are absent or must leave a class early for competition. They frequently feel stress due to missed coursework and exams during their travels (Simons, et al., 2007). These issues may lead to academic problems for student-athletes. An NCAA sponsored survey found that academic success is important to NCAA Division III student athletes. The vast majority of Division III student-athletes cited that academics over athletics was the driving reason behind their college choice. These same athletes are also reporting that they miss less than three classes each semester due to athletics (NCAA GOALS,

2010). Yet, throughout the college ranks, academic discrepancies exist between student-athletes and their nonstudent-athlete cohort.

According to Rishe (2003), graduation rates among student-athletes and the remainder of their student cohort are very similar. Aries et al. (2004) and Keil and Robst (2000) conducted studies that revealed how student-athletes in highly selective Division III colleges achieved at a predictable rate based upon their entrance GPAs and SAT test scores. The NCAA reports in its summary of Graduation Success Rates (GSR) published in 2010 that student-athlete graduation levels over the last decade have increased and student-athletes are currently graduating at a higher rate than the rest of their student cohort. However, almost as quickly as this report was published, Eckard (2010) refuted this claim by stating that the data the NCAA uses to compute its GSR uses not only full-time students, but part-time students as well in its calculations for the student cohort group. It is the data from these part-time students, who typically take much longer to graduate, that skews the data in the NCAA's favor. The NCAA once again responded indicating the student's enrollment intentions are a personal decision, thus their data is accurate.

As this debate lingers many researchers remain just as determined to demonstrate that student-athletes are not graduating and performing at a level consistent with other students. Several studies found that student-athletes, especially male Division I basketball players, have lower GPAs, lower graduation rates, and increased time to graduation than their nonstudent-athlete counterparts (Mangold, Bean & Adams, 2003; Emerson, Brooks, & McKenzie, 2009; Matheson, 2007). Evaluation of exactly why there

is a disparity between student-athletes and their nonstudent-athlete counterparts is under much debate as well.

Fewer studies exist that utilize participants outside of NCAA Division I student-athletes, but in recent years there have been more publications focused on NCAA Division II and Division III student-athletes. These lesser known conferences have also begun media and advertising campaigns to spotlight the positive outcomes associated with being a student-athlete. Interestingly, a Boolean search for peer-reviewed research articles that address the academic life of NJCAA or two-year community and technical college student-athletes as participants revealed that none currently exist.

Athletics

In athletic circles, we frequently refer to our athletic programs as the “front porch” of our institution. This refers to the visibility that athletic teams and coach bring to the surrounding community, state and oftentimes nation through their participation in games, events, and meets. Success in athletics, leads to greater visibility, especially on the national stage, therefore it is not surprising that research involving intercollegiate student-athletes and athletic success is abundant. Research in the athletic arena includes investigating the relationship between an athlete’s motivational levels and coach’s influence (Adie, Duda, & Ntoumanis, 2012), parental involvement (Beamon & Bell, 2006), and various other external and social components such as: burnout (Creswell & Eklund, 2005), personality (Arthur, Woodman, Ong, Hardy, & Ntoumanis, 2011), and injury (Podlog & Eklund, 2005). As young athletes develop their athletic skills they also begin to develop beliefs about their own identity. They begin to look for confirmation

that the activities they are participating in and the level at which they are performing will lead to positive outcomes (Jõesaar, Hein, & Hagger, 2012). As student-athletes age and mature, they begin to form their sense of self and an identity as both a student and as an athlete. In a 2010 survey of student-athletes conducted by the NCAA it was found that student-athletes identified more strongly as an athlete than a student. In this same study, student-athletes also had higher levels of personal goals related to athletics and believed that sports experiences were more important part of their overall college experience than academic experiences. These findings suggest that the investigation of the motivational levels of a student-athlete should consider both the academic and athletic arenas. Therefore, this dissertation study used SDT to examine its motivation and its effects on student-athletes academic motivation, athletic motivation, and perceived success.

Self-Determination Theory

Deci and Ryan (2000) describe their theory as one that has taken a different approach to the explanation of motivation. Deci and Ryan's (2000) SDT has brought to light another motivational theory in which one's goals, their outcomes, and the fulfillment of one's basic psychological needs are all considered in regards to motivation. SDT in the educational arena focuses on student learning and encourages students to believe in their own academic abilities (Deci, Vallerand, Pelletier, & Ryan, 1991). The authors note that when an individual believes an action is self-determined, they have made a cognoscente choice, and his or her actions are likely to become more motivated to perform or complete tasks. Motivation is the interaction between the internal needs of human beings and the external forces of the world around us. Humans naturally want to

grow and master tasks, but in order for this to happen we require nutrients and support for our environment. It is this interplay between organism and environment that is the basis for STD's predictions about motivation, behavior, and well-being.

Research using SDT has found that intrinsic motivational levels can be predicted by the degree to which activities fulfill one's basic psychological needs of autonomy, competence, and relatedness. "Specifically, according to SDT, a critical issue in the effects of goal pursuit and attainment concerns the degree to which people are able to satisfy their basic psychological needs as they pursue and attain their valued outcomes (Deci & Ryan, 2000, p. 227)". Recent studies also suggest that the degree to which any of these three psychological needs is unsupported or thwarted within a social context will have a robust detrimental impact on wellness in that setting (Deci & Vansteenkiste, 2004; Reis, Sheldon, Gable, Roscoe, & Ryan, 2000; Ryan, 1995).

Basic Psychological Needs

Autonomy. Autonomy, or one's perceived level of personal independence, was found to be crucial to one's level of intrinsic motivation towards a given activity. Deci and Ryan (1980) found that when people engage in activities that offer rewards, punishment, or threats, they are less likely to engage in these activities for intrinsic reasons because they create a perceived external locus of control. Involvement in these externally controlled activities have shown to result in less creativity and diminished problem-solving ability. However, in studies that provide and encourage students and employees right to choose and make decisions, researchers noted increased levels of

intrinsic motivation, satisfaction, enjoyment, and well-being (Weinstein, Przybylski, & Ryan, 2012).

Competence. One's competence, or belief in their ability to perform and complete a task well, frequently predicts higher levels of intrinsic motivation (Patrick, Knee, Canevello, & Lonsbary, 2007). According to Deci and Ryan (2000) these higher levels of competence are related to positive feedback, which provides a perceived increase in competence to complete a task successfully. The inverse is also true; when negative feedback was given to students performing academic tasks, they tended to have lower levels of intrinsic motivation and performed poorly on exams and assignments in comparison to students who received positive feedback. (Filak, & Sheldon, 2003; Levesque, Zuehlke, Stanek, & Ryan, 2004; Ryan & Deci, 2009).

Relatedness. Relatedness in SDT refers to the level of association one experiences as they complete an activity. Although relatedness tends to have a less powerful impact on intrinsic motivation than autonomy and connectedness, its role is still a vital component to the preservation of intrinsic motivation (Deci & Ryan, 2000). Research shows that students are likely to have higher levels of intrinsic motivation when their instructors are perceived as warm and caring (Moller, Deci, & Elliot, 2010). Similar results have been observed in the athletic arena, as athletes are likely to report higher levels of intrinsic motivation when they perceive their coach to be more caring (Koh, Wang, Erickson, & Cote, 2012).

Needs Thwarting

Needs thwarting and its impact on motivation has been a subject of recent interest for many researchers. Just as we are likely to experience greater success and happiness when our basic psychological needs are met, Deci and Ryan (2000) state “needs play a necessary part in optimal development so that none can be thwarted or neglected without significant negative consequences” (p. 229). They state that need thwarting may lead to negative behaviors such as choosing alternate activities, rigid behavior, and increased feelings of ill-being.

It is important to note that specific actions or activities can significantly impact needs thwarting scores. Gunnel, Rucker, Wilson, Mack, and Zumbo (2013) state that basic needs thwarting is a fluid process and may not always be the result of a lack of basic needs satisfaction, therefore, it is likely that needs thwarting scores could vary over the course of semester. In a study by Evans, McPherson, and Davidson (2013) it was found that music students chose to discontinue practicing and playing their instruments when they experienced feelings of their psychological needs being thwarted. In this study, students’ responses to open-ended survey questions revealed that when students expressed concerns with their ability they were likely to stop playing their instrument.

A student who scores high on autonomy thwarting would be expressing their experience of a controlling classroom environment where they feel as though they have few personal choices. Competence thwarting is expressed by students who believe they are in an environment where their academic abilities are questioned or they are unsuccessful. Students who express high levels of relatedness thwarting believe their

instructors and classmates are cold and uncaring towards them. Research has been performed on the thwarting of basic psychological needs, but results vary greatly and continued research is necessary to tie findings to direct evidence (Bartholomew, et al., 2011; Broeck, Vansteenkiste, Witte, Soenens, & Lens, 2010; Deci & Ryan, 2011).

Motivational Types

Ryan and Deci (2000) describe motivation as one of the primary focuses of psychology and a key factor in success. They state that motivation has real world value because, “Motivation produces. It is therefore of preeminent concern to those in roles such as manager, teacher, religious leader, coach, health care provider, and parent that involve mobilizing others to act” (p. 69). Motivation, according to Ryan and Deci (2000) is based upon the degree to which we as organisms choose the associated actions. Figure 1 provides further details this theory where motivational types are organized based upon the degree to which they are self-determined. As behaviors move towards amotivation, the behaviors and actions become less self-determined (extrinsic). Amotivation is found on the far side of the figure and is frequently discussed as its own type of motivation.

Intrinsic motivation. SDT places motivation on a continuum from intrinsic motivation to extrinsic motivation and amotivation (lack of motivation). SDT describes persons who are intrinsically motivated as those who participate in behaviors for the satisfaction it provides or for the pleasure of participating in the activity. Intrinsically motivated individuals perform activities regardless of material rewards or constraints (Deci & Ryan, 1985).

Ryan and Deci (2000) describe the adoption of a value or regulation as internalization. In SDT, internalization is described as motivated process where individuals integrated an activity into their sense of self. This type of motivation can be seen Woodruff and Shallert (2008) study where they interviewed nine student-athletes who participated in a variety of sports (i.e. basketball, baseball, tennis, football, volleyball, and track and field). In Woodruff and Schallert's (2008) study of student-athlete motivation, they placed student-athletes who participated in activities for the "sake of the activities themselves and because he or she felt internally driven to do so" (p. 41) in the "love it" category. Individuals in this category mentioned their "love of the game" (p. 51) and expressed that they enjoyed playing their sport. This expression of "love of the game" exemplifies optimal internalization according to Ryan and Deci (2000).

Amotivation. On the opposite side of the SDT continuum from intrinsic motivation are amotivated individuals. Persons with amotivation either choose not to perform a behavior or do so without a goal in mind. Ryan and Deci (2000) state that when people are amotivated, they "either do not act at all or act without intent – they just go through the motions" (p. 72). Moving towards intrinsic motivation on the SDT continuum are classifications of persons with motivated behavior.

Extrinsic motivation. Between amotivation and intrinsic motivation on the continuum are extrinsically motivated behaviors. Individuals who are extrinsically motivated choose to perform an activity not out of interest but because they are likely to gain some type of external reward or avoid a negative consequence (Deci & Ryan, 1985).

Ryan and Deci (2000) expressed that many of the activities we participate in following early childhood are extrinsically motivated. They believe that we lose our intrinsic motivation due to “social demands and roles that require individuals to assume responsibility for nonintrinsically interesting tasks” (p. 60). This situation is depicted in Woodruff and Schallert’s (2008) study of student-athletes it was found that those who were extrinsically motivated were placed into the “talked into/getting something from it” category, meaning they likely participated in athletics because a family member or teammate convinced them to or they are participating in athletics because of a scholarship. These students made comments indicating that scholarship money and recognition from peers were important to them. They also expressed that they needed to participate in sport because it was expected of them. Ryan and Deci (2000) further divide extrinsic motivation into four categories: external, introjected, identified, and integrated.

External regulation. External regulation occurs when persons perform activities to meet external expectations or for reward. It is the least autonomous type of extrinsic motivation. Many people perform these activities because there is external control acting upon them and they feel as though they have to perform the activity. When a student runs a race to simply receive the medal at the end of the race, they are described as someone who is externally regulated to perform.

Introjected regulation. Introjected regulation occurs when persons participate to avoid the guilt associated with not performing the activity. This type of motivation is still externally controlled, yet participation brings fulfillment of an internal need for the individual (i.e. they do not feel guilty). Although introjected regulation has some intrinsic

qualities, the behavior is not fully completed as a part of one's self needs. When a student-athlete chooses to attend practice to avoid feeling guilty, they have introjected regulation (Mallett & Hanrahan, 2004).

Identified regulation. Identified regulation is a more autonomous form of extrinsic motivation. This motivation occurs when activities are in-line with a person's goals. Often, the student realizes the importance and need for a behavior and accepts that it's important to for them to complete the task or participate in the activity (Ryan & Deci, 2000). When a student takes their final English course, despite their dislike for English courses, because it is the last course they need to graduate and attain their desired degree, they have identified regulation.

Integrated regulation. Integrated regulation occurs when a person performs an activity because it is a part of who they are, they value it, and it fulfills their needs. These behaviors, although a part of the self, are still extrinsically motivated because the actions are completed to fulfill an obligation that is separate from the behavior. Despite integration or value to the self, the behavior is still not internalized (Ryan & Deci, 2000). An example of this is when a talented student-athlete who is vital to the team's future success continues to participate in athletics because they know they will be successful and it is what is expected of them.

Self-Determination Theory in Education

Academic Performance

SDT has been widely used within the field of education to study motivation as it relates to student learning, classroom environment, and the student-instructor

relationship. These vital areas have been found to impact not only a student's academic motivation, but academic performance such as GPA, test taking, and participation (Black & Deci, 2000; Ntoumanis, 2005; Ryan & Weinstein, 2009). Regardless of a student-athlete's motive or motivation for enrolling and attending college, the expectation of academic progress towards graduation remains a constant, therefore it is important to understand the impact all areas of education may have on student performance outcomes.

Academic environment. The academic environment encompasses topics such as subject matter and curriculum, peer interactions, and the overall classroom ambiance created by instructors. SDT researchers found that when a learning environment supports a student's basic psychological needs, the students have greater levels of intrinsic motivation, engagement, and learning (Black & Deci, 2000; Niemiec & Ryan, 2009; Vansteenkiste, Simons, Lens, Sheldon & Deci, 2004). Vansteenkiste et al. (2004) used experimental manipulation to determine that when students experienced an environment is an "autonomy-supportive learning climate it has significant effects for student becoming more fully dedicated and more genuinely engaged in learning activities" (p. 259). Similar findings have been reported in the area of language learning (Bork & Al-Busaidi, 2012; Golonka, Bowles, Frank, Richardson, & Freynik, 2014; Reinders & Loewen, 2013). Reinders and Loewen (2013) found that student-initiated topics can significantly impact a student's future learning.

Research on the role peer interaction and peer support plays in a student's academic performance has been performed on elementary, middle, and high school aged students as well as college-aged students (Wentzel, Battle, Russell, & Looney, 2010).

While the research widely supports positive peer interactions relating to positive academic outcomes it is important to note that college-age students vary from primary and secondary age students in that they typically no longer reside with their parents and therefore peers interactions may have a greater impact upon them (Rodriguez, Mira, Myers, Morris & Cardoza, 2013). According to Richardson and Skinner (1992) it is believed that college-aged peers are able to provide more direct assistance to each other. College peers share class notes and tips regarding course and instructor choices. Their residence proximity creates unique opportunities for study group formation, social interactions, and lifestyle experiences.

Unfortunately, not all peer interactions are positive in nature. Multiple studies on cheating have investigated the influence of peers and the “norming” of cheating on college campuses (Jensen, Arnett, Feldman, & Cauffman, 2002; Murdock & Anderman, 2006; Whitley, 1998). Jordon (2001) found that students who believed that other peers were cheating were more likely to also admit to cheating themselves. Additionally, these students were also found to have higher levels of extrinsic academic motivation, which supports the research on the role of motivation on cheating behavior. Peer to peer interactions have also been found to impact college-age drinking behaviors. Studies have found that college-aged students are also impacted by the “norming” of alcohol consumption on college campuses. These behaviors often lead to poor academic performance, dating violence, and negative health effects (Hove, Parkhill, Neighbors, McConchie & Fossos, 2010; Knee & Neighbors, 2002; Neighbors, Walker & Larimer, 2003).

Instructor. Instructor behavior can have a dramatic impact on the motivation of students. As an instructor, it is always the hope that one will encounter a classroom full of highly motivated students, who are eager to learn. Skinner and Belmont (1993) state that “highly motivated children are easy to identify: They are enthusiastic, interested, involved and curious; they try hard and persist; and they actively cope with challenges and setbacks” (p. 571). Niemiec and Ryan (2009) detail the impact that basic psychological needs play upon a student’s learning, academic performance, and well-being. These concepts were realized in a study by Standage, Duda, and Ntoumanis (2005) who determined that the degree to which a student’s basic psychological needs were supported predicted their overall level of need satisfaction. Further research into specific needs was performed by Black and Deci (2000) where it was found that the degree to which a student’s level of autonomy was met impacted their academic performance in chemistry courses.

A study on faculty perceptions of student-athletes revealed that many instructors believe student-athletes require more of their time than nonstudent-athletes (Majerus, Stupnisky, Butz & Peterson, 2015). Several of the faculty members in that study stated during interviews that they were asked to modify or prepare additional coursework such as exams or assignments for student-athletes when they are absent for competition. One of the female tenured instructors discussed modifying assignments for student-athletes by stating, “the challenge to me, is how can I do that so it doesn't double the work load for me. If I'm having to come up with alternate assignments or I'm having to grade their work separately.” While faculty members felt challenged by student-athletes, they also

acknowledged that student-athletes face busy lives and travel schedules. A male pre-tenured instructor who was interviewed stated, "...it may be tiresome because there is training every day. Some of them, they start at four a.m. or five or six...depending on the schedule they run every day, they may be tired. They don't feel like studying." Several instructors stated that they believe the time student-athletes spend away from school for travel does make it more difficult for them to participate in group projects or to attain in-class participation points. Faculty report that as the use of technology advances, it has become easier to keep student-athletes involved even when they are not physically in class. One instructor even stated that "student-athletes are usually the most organized, the most focused...they are prepared."

Athletic Performance

The research regarding athletic motivations of intercollegiate student-athletes and SDT primarily consists of studies regarding the role of the coach, the overall athletic environment, and the individual athlete's psychological profile. One area of note is that much of this research has been conducted on either Division I intercollegiate student-athletes or secondary students. A notable gap in the research is the lack of studies that have utilized participants from NJCAA Division III colleges.

Athletic environment. The competitive level in which athletes participate and practice in have an effect on their athletic performance and motivation. Far less research in this area has utilized SDT. Vansteenkiste and Deci (2003) believe that the mass of research in this area is due to importance placed upon winning. Their study of intrinsic motivation and ego-involved persistence found that winners had higher levels of intrinsic

motivation than losers; increased feedback increased intrinsic motivation in losers; and perceived competence effected an athlete's level of enjoyment. Additional research has evaluated the role of burnout (Gould, Udry, Tuffey & Loehr, 1996), well-being (Reinboth & Duda, 2006), and injury (Podlog & Eklund, 2009) at the elite athletic levels. This research has also supported the impact of a student's basic psychological needs being met increased academic success.

Athletic scholarships add another layer to the competitive environment within intercollegiate athletics. Athletic scholarship is afforded to intercollegiate student-athletes who participate at the NCAA and NJCAA Division I and Division II level as well as for those student athletes who participate within the NAIA. Several studies have investigated the impact of athletic scholarship on intercollegiate student-athlete motivation (Amorose & Horn, 2001; Horn, 2000; Vallerand, 2007). Medic, Mack, Wilson, and Starkes (2003) evaluated the motivations of both scholarship and non-scholarship student athletes and noted that motivational differences for non-self-determined types of motivation were based upon scholarship status and gender. Horn (2000) conducted a study of Division I student-athletes and found that scholarship athletes reported higher levels of intrinsic motivation for sport, as did male student-athletes versus female student-athletes. Interestingly, in 2001, Amorose and Horn conducted another study where no differences were found in intrinsic motivation between scholarship and non-scholarship athletes. These studies all seek to find results that support findings by Ryan and Deci (2000) where it was found that if activities do not meet the basic psychological needs of an individual, they are unlikely to be intrinsically

motivated to perform it. If an individual chooses to continue to perform these activities, it is likely for other reasons, such as a scholarship.

Coaches. The coach on an athletic team, much like an instructor in a classroom, is the “main communicators of knowledge and skills, but also the enforcers of rules of conduct,” (Dewey, 1938, p. 121). With this thought in mind, SDT research and the role of the coach has investigated the coach-player relationship as well as the overall environment created by various coaching methods. Mageau and Vallerand (2003) sought to create a model of the coach-athlete relationship that would increase their intrinsic motivation as well as self-determined types of extrinsic motivation. The authors found that coaches who provide an autonomy-supportive environment are more likely to have athletes who are more intrinsically motivated.

Several authors noted that when a coach creates an environment that supports the basic psychological needs of their athletes, the athletes have higher levels of intrinsic motivation and self-determined types of extrinsic motivation (Gagne, 2003; Mageau & Vallerand, 2003; Reinboth, Duda & Ntoumanis, 2004). These studies found that behaviors such as: consistent feedback, giving athletes choices for rewards and punishments, encouraging athletes to self-monitor nutrition and off-season conditioning, and genuinely showing athletes that they are cared for, lead to higher levels of support for the athlete’s basic psychological needs.

Athlete profile. Coaches at nearly every level desire to win games. They realize that a key to athletics success is to field a team of not only skilled athletes, but athletes who are also motivated to succeed. While many coaches can teach skill, many struggle

to understand what it is that drives motivation within the athletes on their team. Mallett and Hanrahan (2004) sought to understand what motivates elite athletes. They interviewed 10 track athletes and these athletes believed their success was due to their high levels of self-confidence, the setting and achievement of personal goals, and the impactful role track played in their personal and professional life. In two tests of self-determined motivation on athletic performance, Gillet, Vallerand, and Paty (2013) surveyed tennis players and noted that athletes in the profile with the lowest levels of self-determined motivation had the poorest performance. They also reported that men had lower levels of self-determined motivation than women in their studies. An additional survey profiling athletes was performed by Chian and Wang (2008) found that athletes in their highly motivated cluster enjoyed sport the most, gave great effort, and had high levels of perceived athletic success.

Summary

Prior research has focused on the virtually all areas of the academic and athletic realities of NCAA Division I student-athletes, but absent are studies investigating these same areas for NJCAA student-athletes. It is vital that we expand our participant groups to test whether past research is generalizable across divisions and leagues as well. Additionally, it is important to understand what differences may exist amongst student-athletes. As mentioned in Chapter 1, the NCAA has recently implemented increased freshman academic eligibility standards and progress towards graduations requirements for all student-athletes (Q & A, n.d.). As researchers, instructors, and administrators strive to help student-athletes not only maintain athletic eligibility but become successful

throughout college we must search for ways to improve motivation. It is the hope that this study will help us to better understand how a student-athlete's athletic motivations play a role in their academic success. In Chapter 3, the pilot study on that led to the development of the current study is detailed as well as the current study's design, data collection, and data analysis.

CHAPTER III

METHODS

The purpose of this study was to evaluate and compare the academic motivation of community college student-athletes to nonstudent-athletes, as well as to understand student-athlete athletic motivation and how it impacts their academic success. This study used Deci and Ryan's (1985) SDT as a framework. Through the implementation of a convergent parallel mixed method design, quantitative data assessed students' motivation and success levels in both the academic and athletic domains, while open-ended questions asked for student's qualitative expression of what motivates them. Analysis of both data types was conducted to evaluate relationships between motivational levels in academics and athletics. A deeper understanding of the 'for the love of the game' phenomena as it relates to intrinsic motivation is also explored. In this chapter I will highlight the research questions addressed in this study as well as introduce the pilot study that was used as a base for the study. I will then discuss the study design, participants and procedures, data collection and measures used, as well as data analysis.

Research Questions

1. How do student-athletes compare to nonstudent-athletes in terms of basic psychological needs, motivation, and perceived success in academics?

2. How do students' (athletes and nonathletes) basic psychology needs and motivation for academics predict their perceived success in academics? How do student-athlete's basic needs and motivation for athletics predict their perceived success in athletics?
3. How do students' (athletes and nonathletes) basic psychological needs for academics predict their academic motivation in academics? How do student-athlete's basic psychological needs for athletics predict their motivation in athletics? What relationship does student-athlete motivation in academics have with their motivation in athletics?
4. How do students' (athletes and nonathletes) describe their motivation for academics? What differences exist between student-athletes and nonstudent-athletes in their descriptions of academic motivation? How do student-athletes describe as their motivations for competing in intercollegiate athletics?
5. What are the motivational differences among student-athletes that can be used to create motivational profiles?

Pilot Study

During the fall of 2013, a pilot study was conducted at a small Midwestern four-year university with nearly 650 students. This institution's athletic programs competed in the NAIA. Which includes 230 schools and nearly 60,000 student-athletes who compete in 13 different sports at various NAIA institutions around the country. These student-athletes were eligible to receive more than 500 million dollars in athletic scholarships (About the NAIA, para. 1). The aim of this study was to understand if

differences existed between student-athletes and nonstudent-athletes in regards to academic motivation, but also what impact athletic motivation had upon the academic motivation of student-athletes. SDT served as the conceptual framework and survey questions were used from the Academic Motivation Scale (AMS; Vallerand et al., 1992), Sports Motivation Scale (SMS; Pelletier & Tuson, 2005) and Perceived Success Scale (Hall et al., 2004).

In support of SDT, several significant positive correlations were found among the summed scales for the basic needs (autonomy, competence, and relatedness), motivation, and success for both student-athletes and nonstudent-athletes (see Table 1). Independent samples *t*-tests revealed that nonstudent-athletes had significantly higher reported grade point averages, perceived success, and intrinsic and introjected motivations than student-athletes.

Paired samples *t*-test comparing the basic needs of student-athletes in academics versus athletics showed that student-athletes reported less autonomy but more relatedness for athletics. These findings are supported by past research, such as a 2007 article on student-athlete autonomy in which Kimball (2015) reports that when student-athletes sign a “letter of intent” to play for a team, the student-athletes believe they are choosing to accept a “new identity and with this new identity comes a new lifestyle, a lifestyle of commitment and compromise” (p. 819). In Woodruff and Shallert’s (2008) article, support for higher relatedness was exhibited by multiple student athlete’s referring to their teams as their “sports families” (p. 48).

Table 1. Correlations between Age, Grade Point Average, Need Satisfaction, Motivation, and Perceived Success by Group for Pilot Study

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Age	--	-.16	-.14	.06	-.02	-.00	-.04	-.13	-.21	.14	-.08
2. GPA	-.02	--	.19	.15	.09	-.01	.03	-.02	.07	-.10	.55**
3. Autonomy	-.12	.04	--	.49**	.40**	.28*	.25*	.18	-.03	-.23*	.33**
4. Competence	.12	.11	.44**	--	.43**	.41**	.52**	.24*	.11	-.47**	.41**
5. Relatedness	.08	.11	.41**	.47**	--	.32**	.37**	.23*	-.06	-.43**	.18
6. Intrinsic	.10	.11	.17	.40**	.09	--	.68**	.52**	.23*	-.46**	.29*
7. Identified	.06	.21*	.20*	.47**	.22*	.57**	--	.49**	.38**	-.65**	.30*
8. Introjected	.09	.04	.00	.24**	.13	.59**	.62**	--	.23*	-.40**	.22
9. Extrinsic	.07	.17*	.06	.16	.20*	.23**	.51**	.37**	--	-.29**	.14
10. Amotivation	-.07	-.17*	-.38**	-.49**	-.38**	-.24**	.39**	-.08	-.82	--	-.32**
11. P. Success	-.01	.30**	.32**	.51**	.31**	.39**	.37**	.26**	.16	-.38**	--

Note. $N = 222$ participants. The student-athlete group ($n = 143$) correlation matrix is along the lower diagonal while the matrix for the nonstudent-athlete group ($n = 79$) is along the upper diagonal. P. Success = perceived success.

* $p < .05$, ** $p < .01$ (two-tailed).

While this study produced many results that were supported by prior research, some limitations were present (Comeaux & Harrison, 2011; Monacis et al., 2013; Woodruff & Shallert, 2008). Most importantly, while the scales used to assess academic and athletic success were found to be both valid and reliable, the autonomy and competence measures had poor internal consistency, and others such as extrinsic and identified motivation drifted outside the desired ranges when descriptive statistics were examined (see Table 2).

Table 2. *Descriptive Statistics for Academic Basic Needs and Academic Motivation in Pilot Study*

Scale	<i>N</i>	<i>M</i>	Range	<i>SD</i>	Skewness	Kurtosis	Cronbach's Alpha
Basic Needs							
Autonomy	218	32.5	19-46	5.3	-.06	-.33	.53
Competence	217	29.9	15-41	4.7	-.09	-.07	.58
Relatedness	216	42.0	19-56	7.2	-.52	.01	.82
Motivational Types							
Intrinsic	219	19.1	4-28	5.0	-.52	.54	.87
Identified	216	22.5	10-28	3.9	-.67	-.04	.75
Introjected	219	19.2	4-28	5.6	-.51	-.18	.86
Extrinsic	220	21.5	4-28	4.36	-.91	1.33	.71
Amotivation	221	8.3	4-28	5.18	1.48	2.12	.89
P. Success	216	29.6	7-42	6.5	-.49	.49	.89

Since the completion of this pilot, a new sports motivation scale (Pelletier et al., 2013) has been published and was used in the current study to assess the athletic motivation of student-athletes. The satisfaction scale used in the pilot study was also replaced with one that has shown to be more reliable (Van den Broeck, 2010). The AMS (Vallerand, et al., 1992) was retained for this study despite extrinsic motivation and amotivation showing higher than acceptable ranges of skewness and kurtosis. The perceived academic success scale (Hall, et al., 2004) behaved accordingly and was used

in this study. Additionally, open-ended questions were utilized to create motivational profiles. These profiles were used to triangulate the findings and advance the research in this area.

The participants in the current study are also from a different collegiate population. In the current study, the participants attended a Division III community and technical college where athletic scholarships were not available for student-athletes. This is in contrast to the student-athletes used in the prior study, who attended a NAIA four-year university where athletic scholarships were common. These varied populations brought forth varied athletic and academic motivations. In addition, diversifying the participants provides variety to the current research thus increasing the generalizability of the outcomes.

The Current Study

Mixed Methodology

This study utilized a convergent parallel mixed method design (QUAN + qual, see Figure 2). Several studies have evaluated the academic motivation of college students solely through quantitative assessments (Leal, et al., 2013; Liu et al., 2014; Stover et al., 2012) while others have used purely qualitative methods (Garn & Jolly, 2014; Vansteenkiste, Sierens, Soenens, Luyckx, & Lens, 2009, Woodruff & Shallert, 2008). In regards to athletic motivation of collegiate student-athletes, the research has also been mono-method (Gaston-Gayles, 2004; Martens & Webber, 2002; Woodruff & Shallert, 2008). To date no studies have examined the motivational levels of collegiate student-

athletes through the triangulation of both quantitative and qualitative data in the same study.

Until recently, research methodologies were solidly positioned as either qualitative or quantitative. Howe (1988) asserted this was due to the “incompatibility thesis – a belief that the compatibility between quantitative and qualitative methods is merely apparent and ultimately rests on the epistemological suspect criterion of what works” (p. 10). Over the past 30 years, this perspective has been contested, which made way for mixed methods, a more pragmatic approach to research in which the research question dictated the methodological approach (Onwuegbuzie & Leech, 2005). Mixed methods is when researchers combine qualitative and quantitative methods and concepts into one study (Johnson & Onwuegbuzie, 2004). The key advantage of mixed methods is, “the use of quantitative and qualitative approaches, in combination that provide a better understanding of research problems than either approach alone” (Creswell & Plano Clark, 2007, p. 5).

Mixed methods seeks to provide a wide-range of data and informed results in response to research questions (Johnson & Onwuegbuzie, 2004). In this convergent parallel design the goal was to utilize both open- and closed-ended questions to collect data on the research topic at the same time. According to Creswell and Plano Clark (2007), the use of both quantitative and qualitative method collection provides a more complete understanding of the phenomena being studied. Once the data is collected in a convergent parallel design, the data-validation variant is used realize how open-ended questions in a convergent parallel design are used to “confirm or validate the results from

the closed-ended questions” (p. 81). While the responses to the open-ended questions may not provide the thick and rich data associated with other qualitative data collections methods, they do provide “emergent themes and interesting quotes that can be used to validate and embellish the quantitative survey findings” (p. 81). For example, in an article on the impact of mass casualty incidents on forensic dentists by Webb, Sweet, and Pretty (2002), the researchers used the responses to open-ended questions relating to participants personal experiences to create ties with quantitative findings. It was found that individuals who reported positive experiences also recorded responses associated with positive themes such as: sense of achievement and camaraderie. This study created the opportunity for participants to provide both quantitative and qualitative data on the same concepts related to both academic and athletic self-determined motivation.

Procedure and Participants

Data collection began following approval from both the host institution and the University of North Dakota’s Institutional Review Board (see Appendix A). In early April 2015, I (the Researcher) contacted a variety of instructors and head coaches at the study’s institution. I asked to meet with their teams and classes for approximately 20 minutes over the course of the next 2 weeks. Data was attained from a variety of college level courses and several male and female athletic teams. Additionally, I asked instructors who did not have class time to allow students to take the survey to make an announcement that students could complete the survey when time allowed by clicking on a posted survey link on their learning management system webpage.

Surveys were completed on-line using the Qualtrics survey software. Participants were asked to choose the answer that most closely applies to their experiences and perceptions, and to answer the open-ended questions thoroughly and with as much explanation and depth as possible. Students were instructed not to complete the survey again if they had already completed it in a prior class.

Participants in this study were student-athletes and nonstudent-athletes at a Midwestern Community and Technical College ($N = 238$). The average age of the student-athletes was 19.57 and the nonstudent-athletes had an average age of 25.54. The student-athletes in this study compete in the Division III league of the National Junior College Athletic Association ($n = 69$). Seventy-seven percent of the potential student-athletes completed the survey. Those participants consisted of: seven volleyball players, six women's basketball players, seven men's basketball players, 16 softball players, and 33 baseball players. Additional demographic statistics will be discussed in Chapter IV. A power analysis was not performed as the sampling frame for this study was limited and every effort to recruit as many study participants as possible was made. Participation was voluntary for all student-athletes and nonstudent-athletes and no incentives were offered as it could have been construed as a violation of NJCAA rules.

Quantitative Measures

Survey questions used in analysis can be found in Appendix B. All participants answered 59 academics-related questions for the current study. The questions included: demographics (9 questions), an academic basic needs satisfaction scale (24 questions), an academic motivation scale (20 questions), and a perceived success in academics scale (6

questions). Student-athletes answered two additional demographic questions as well as questions on an athletic basic needs satisfaction scale (24 questions), a sports motivation scale (18 questions), and perceived success in athletics scale (8 questions).

Academic and athletic need satisfaction. Van de Broeck et al.'s (2010) work-related Basic Need Satisfaction scale was adapted to measure the three basic psychological needs of autonomy, competence, and relatedness. This scale was modified for both academics and athletics to specifically measure the degree to which participants believed their needs are being met within the college and/or their team environment. Participants were asked to indicate how true each of the statements is for them (1 = *Strongly disagree*, 7 = *Strongly agree*). The three basic psychological needs were measured with four questions each: autonomy (e.g., "I feel that my decisions in college reflect what I really want"), competence (e.g., "I feel confident that I can do things well in college"), and relatedness (e.g., "I feel that the people I care about in college also care about me"). Basic psychological needs thwarting for academics were also assessed with this scale. They were measured with four questions for the thwarting of the three basic psychological needs: autonomy thwarting (e.g., "In college, I feel forced to do many things I wouldn't choose to do."), competence thwarting (e.g., "I feel disappointed with my performance in college."), and relatedness (e.g., "I feel the relationships I have in college are just superficial."). Athletic need satisfaction and need thwarting was measured using similar questions focused on their athletic team versus their college environment (e.g. "On my team, I feel competent to achieve my goals" and "I have the impression that people I spend time with on my team dislike me.").

Academic motivation. The Academic Motivation Scale (AMS; Vallerand et al., 1992) was used to assess students' motivation toward academic success. Participants were asked to indicate to what extent each of the questions corresponded to the reasons, thoughts, and feelings regarding why they are going to college (1 = *Does not correspond at all*, 7 = *Corresponds completely*). All five of the AMS subscales were used, containing four items each: intrinsic motivation (e.g., "For the pleasure of broadening my knowledge about subjects that appeal to me"), identified regulation (e.g., "Because I think that a college education will help me better prepare for the career I have chosen"), introjected regulation (e.g., "To prove to myself that I am capable of completing my college degree"), external regulation (e.g., "In order to obtain a more prestigious job later on"), and amotivation (e.g., "Honestly, I don't know; I really feel that I am wasting my time in school").

Sport motivation. Student-athlete participants completed the Sports Motivation Scale (SMS-II; Pelletier et al., 2013) regarding why they participate in college athletics (1 = *Does not correspond at all*, 7 = *Corresponds completely*). The SMS-II consists of six subscales containing three items each: intrinsic motivation (e.g., "Because it gives me pleasure to learn more about my sport"), integrated (e.g., "Because practicing sports reflects the essence of whom I am"), identified (e.g., "Because I have chosen this sport as a way to develop myself"), introjected (e.g., "Because I feel better about myself when I do"), external (e.g., "Because people I care about would be upset with me if it didn't"), and amotivation (e.g., "So that others will be proud of me for what I do").

Perceived academic and athletic success. All student participants answered six items measuring their perceived success in college using a scale adapted from Hall et al.'s (2004) Perceptions of Academic Success scale (e.g. "How successful do you feel in gaining new knowledge and understanding from your courses"). Student-athletes also answered seven questions relating to how successful they believe they and/or their team will be in the upcoming season (e.g. "How successful do you feel you will be in winning games this season").

Quantitative Data Analysis

Statistical analysis of the data were performed using SPSS, and results are presented in Chapter IV. Independent samples *t*-tests were used to test if basic psychological needs, motivation, and perceived success differ significantly between student-athletes and nonstudent-athletes. While multiple regressions were performed for both student-athletes and nonstudent-athletes to test if basic needs and motivational levels predict their level of perceived academic success. Multiple regressions were also used to determine if a student-athlete's level of athletic success was predicted by their basic needs and motivational levels for athletics. Correlations were calculated to test the associations between basic needs, motivation, and perceived success for both student-athletes and nonstudent-athletes.

Qualitative Content Analysis

This study utilized content analysis to analyze the participant responses to the open-ended questions. Leech and Onweugbuzie (2008) describe content analysis as the process of researchers searching for similar concepts or "codes" within the data and

counting the frequency of each code. They further explain that once codes and frequencies are determined by the researcher, they are grouped into similar categories relating directly to the concepts described by each code. This process was done to better understand the academic and athletic motivations of the participants.

Content analysis began with an initial readings of the four open-ended responses to gain a sense of the concepts students shared. All participants answered the following questions regarding their academic motivation (“What motivated you to succeed in your college course?” and “What reduces your motivation to succeed in your college courses?”). Student-athlete participants answered two additional questions regarding their athletic motivation (“What motivates you to succeed athletically in your college sport?” and “What reduces your motivation to succeed in your college sport?”) This was followed by the creation of codes for each of the four questions for both student-athlete responses and nonstudent-athlete responses. The formation of categories for each population was then established.

To assure validity throughout the coding process a coding scheme was utilized. This scheme consisted of utilizing SDT and placing data in the codes associated with various motivational levels; Potter & Levine-Donnerstein, 1999). Qualitative reliability within this content analysis was attained in two forms: assuring data stability through recoding and via an external audit. The stability of the data was attained by the researcher coding and categorizing the raw data on multiple occasions (Krippendorff, 1980). Following the initial coding occasion, an external audit was done by requesting that an outside expert evaluate the raw data and consulting with them on established

codes and themes. After this audit, a second and third reading were performed by the researcher to assure data stability. The raw data and associated codes for all questions can be found in appendices A-F. All responses are sorted by student-athlete status. .

Mixed Data Analysis

This convergent parallel mixed method design employed the development of motivational profiles derived through a *k*-means cluster analysis. This allowed for the integration of quantitative and qualitative data as students-athletes were placed in profiles using their responses to quantitative questions relating to their intrinsic academic and athletic motivation. The profiles were interpreted through a qualitative content analysis procedure. According to Buck et al. (2009), profiles are created by grouping participants based on similar relationships between variables this grouping can highlight subtle differences from within groups. Similar mixed method studies have used this idea of merged profiles to create rich description that complements the use of both quantitative and qualitative data sets (Lee & Green, 2007; Rosenberg, Lewandowski & Siegel, 2015).

While mixed methods is still an emerging field of research, it is through triangulation where we see advantage and benefits of mixed method – but also some of the field’s challenges. An advantage, as Creswell and Plano Clark (2007) explain, is that triangulation is the “convergence, corroboration, and correspondence of results from the different research methods” (p. 62). They further expound that a key to mixed methods research is being open to new insights that become available as the data is triangulated and mixed. An ongoing challenge, as Onwuegbuzie and Johnson (2006) explain, is to address some of the common yet conflicting nomenclature between the two orientations:

Because mixed research involves combining complementary strengths and nonoverlapping weaknesses of quantitative and qualitative research, assessing the validity of findings is particularly complex; we call this the problem of integration (p. 48). The problem of integration motivates us to ask questions such as the following: Is it misleading to triangulate, consolidate, or compare quantitative findings and inferences stemming from a large random sample on equal grounds with qualitative data arising from a small purposive sample? (p. 54)... use of the word validity in mixed research can be counterproductive... In this respect, a possible term that might be acceptable to both quantitative and qualitative investigators is legitimation (p. 55).

Onwuegbuzie and Johnson (2006) define legitimation as, “the extent to which the relationship between the quantitative and the qualitative sampling designs yields quality meta-inferences” (p. 56). They further describe, that through legitimation, researchers attempt to make statistical generalizations from the study participants to a larger related population. Legitimation seeks to solve issues related to meta-inferences that are made when large samples of quantitative data are integrated with the inferences associated with a smaller subset of qualitative data from the same sample population. Onwuegbuzie and Johnson (2006) explain that when meta-inferences are made from large quantitative samples and smaller qualitative subsets it may not be acceptable for the findings to relate directly to inferences found within the qualitative data. They state that due to the “unrepresentative sample from the qualitative phase, the ensuing meta-inference might be

poor (statistically speaking, which, in turn would affect statistical generalizability” (p. 57). Through a convergent parallel mixed methods design, researchers seek to gain a greater understand of a phenomena through both quantitative and qualitative data gathered from the same target population (Creswell & Plano Clark, 2007).

In an attempt to grow the body of mixed methods research, this convergent parallel design seeks to make inferences through the triangulation of the quantitative self-determined academic and athletic motivational scores and the qualitative content gained through open-ended questions relating to the academic and athletic motivations of student-athletes and the academic motivations of nonstudent-athletes. The use of the qualitative and quantitative data from the same sample population will provide additional validity to the inferences and finding associated with this study. These findings will create a greater generalizability relating to the academic and athletic motivations associated with the target population of student-athletes and nonstudent-athletes who attend NJCAA Division III technical and community colleges.

Summary

In this chapter, the research questions were restated followed by a summary of the finding and limitation of the pilot study that preceded and informed the current study. This was followed by an explanation of the methodology and design used in the current study. The participants and procedures along with the explanation of the data collection process came next. Finally, the measures that were used as well as the types of data analysis procedures implemented for both quantitative and qualitative data was

elaborated. Additionally, the data mixing points were further disseminated. The results of these analyses are presented in Chapter IV.

CHAPTER IV

FINDINGS

Research Questions

1. How do student-athletes compare to nonstudent-athletes in terms of basic psychological needs, motivation, and perceived success in academics?
2. How do students' (athletes and nonathletes) basic psychology needs and motivation for academics predict their perceived success in academics? How do student-athlete's basic needs and motivation for athletics predict their perceived success in athletics?
3. How do students' (athletes and nonathletes) basic psychological needs for academics predict their academic motivation in academics? How do student-athlete's basic psychological needs for athletics predict their motivation in athletics? What relationship does student-athlete motivation in academics have with their motivation in athletics?
4. How do students' (athletes and nonathletes) describe their motivation for academics? What differences exist between student-athletes and nonstudent-athletes in their descriptions of academic motivation? How do student-athletes describe as their motivations for competing in intercollegiate athletics?

What are the motivational differences among student-athletes that can be used to create motivational profiles?

Quantitative Analysis

Participant Characteristics

Participants in this study included 238 students. Student-athletes comprised 29% of the overall sample size ($n = 69$). Among participants, Health Sciences was the most common major ($n = 154$), which includes students in nursing, paramedicine, dental hygiene, dental assistant, biomedicine, and sonography. Ninety-three participants reported a desire to attain an associate of arts degree, 23 intended to major in accounting/business management, while five students had majors within trades and industry.

Several notable differences between student-athletes and nonstudent-athletes existed in the participant demographic data. While there were more nonstudent-athletes surveyed, a higher percentage of student-athlete participants (15.9%) identified as being from a diverse race and noted that English is their second language (10.1%). Additionally, 93 percent of the student-athletes were enrolled as full-time students, versus 81.7 percent of the nonstudent-athletes. Table 3 displays survey participant demographic data divided by student-athlete status.

Table 3. *Survey Participant Demographic Information*

Characteristics	<i>n</i>	%
Student-Athletes	69	29
Gender		
Male	40	58
Female	29	42
Enrolled Full-Time	64	93
Diverse Race (non-White)	11	15.9
English as a Second Language	7	10.1
Work at least 10 Hours per Week	36	52.2
Nonstudent-Athletes	169	71
Gender		
Male	73	43.2
Female	95	56.2
Missing	1	.6
Enrolled Full-Time	138	81.7
Diverse	13	7.7
English as a Second Language	8	4.7
Work at least 10 Hours per Week	122	72.2

Scale Validity and Reliability

As mentioned in the previous chapter a pilot study found that several of the scales used to measure motivation and basic needs did not meet many of the criteria for scale normality and reliability. Therefore, in this study new scales were utilized. These scales have been found to be valid and reliable in prior research (Pelletier et al., 2013; Van den Broeck, 2010). Data normality were evaluated through frequency distributions, means, standard deviations, skewness, and kurtosis (Table 4 and Table 5). It was found that all scales fell within the acceptable ranges for both skewness and kurtosis (Byrne, 2010; Lei & Lomax, 2005). Standard deviations varied for all scales and many did fall outside of typically acceptable ranges of +1 to -1 which expresses the varied responses to both

academic and athletic motivation and basic needs variables (Mertler & Vannatta, 2010). The poor scale reliabilities noted in the pilot study were improved with the use of new scales. Scale reliabilities for academic basic needs and basic needs thwarting as well as academic motivation and success were all shown to have good or acceptable reliability (DeVellis, 2012). However, the scale reliabilities for athletic basic needs and needs thwarting and athletic motivation and success were all reliable or approaching reliability (ranges between .6 and .8) therefore it was determined that all scale questions would be included. Table 4 provides a summary of summed scales regarding academic motivation, academic basic needs, and perceived success in college while Table 5, provides summaries for the athletic basic needs, athletic motivation, and perceived athletic success of student-athletes.

Table 4. *Descriptive Summary of Study Variables*

Variables	No. of Items	<i>M</i>	<i>SD</i>	Range	Skew	Kurtosis	α
Basic Need Satisfaction							
Autonomy	4	20.27	4.48	5-28	-.49	.38	.77
Autonomy Thwarting	4	15.29	4.73	4-28	.24	-.03	.71
Competence	4	22.02	4.25	4-28	-.77	.85	.87
Competence Thwarting	4	11.13	5.00	4-28	.59	-.07	.79
Relatedness	4	20.01	4.70	6-28	-.24	-.28	.87
Relatedness Thwarting	4	10.75	4.72	4-28	.63	.08	.77
Academic Motivation							
Intrinsic	4	20.52	4.78	4-28	-.43	.21	.86
Identified	4	22.17	4.76	4-28	-.81	.54	.85
Introjected	4	19.97	5.79	4-28	-.84	.68	.88
Extrinsic	4	21.03	4.41	4-28	-.70	1.03	.66
Amotivation	4	9.02	5.54	4-28	.94	-.05	.88
Perceived Success	6	31.91	7.68	6-42	-1.09	1.58	.95

Table 5. *Descriptive Summary of Athletic Study Variables*

Variables	No. of Items	<i>M</i>	<i>SD</i>	Range	Skew	Kurtosis	α
Athletic Basic Need Satisfaction							
Autonomy	4	19.92	4.58	10-28	-.03	-.45	.76
Autonomy Thw	4	13.41	5.90	4-25	.03	-1.13	.81
Competence	4	22.17	4.64	11-28	-.47	-.72	.83
Competence Thw	4	12.72	6.03	4-25	.17	-1.03	.78
Relatedness	4	21.42	5.00	10-28	-.21	-1.12	.84
Relatedness Thw	4	12.96	6.74	4-25	.15	-1.27	.87
Sports Motivation							
Intrinsic	3	16.00	3.98	7-21	-.39	-.97	.77
Integrated	3	16.75	3.60	9-21	-.41	-1.05	.73
Identified	3	16.37	3.45	7-21	-.33	-.44	.62
Introjected	3	11.89	4.48	3-21	-.10	-.40	.61
External	3	9.85	4.45	3-21	.31	-.44	.62
Amotivation	3	9.23	5.06	3-21	.57	-.67	.77
Perceived Athletic Success	7	37.47	9.87	7-49	-1.17	1.35	.94

Note. Thw = thwarting.

Research Questions

Question 1 - Academic Comparisons

Independent samples *t*-tests were performed to determine how the academic basic psychological needs, academic motivation, and perceived success of student-athletes compares to those of nonstudent-athletes. This data is summarized in Table 6. The *t*-tests performed on basic psychological needs revealed that relatedness thwarting significantly differed between student-athletes compared to nonstudent-athletes. Leven's test for equality of variances was found to be violated for competence and relatedness thwarting, therefore a *t* statistic not assuming homogeneity of variance was reported. The unequal group sizes may have contributed to this result thus making definitive results more challenging. However, results indicated that student-athletes had significantly

higher levels of relatedness thwarting than nonstudent-athletes (i.e. “*I feel the relationships I have in college are just superficial*”). This means student-athletes believe that the relationships they have in their academic life are not personally fulfilling. This may be due to poor quality in-class interactions students have with instructors and classmates. In several studies student-athletes expressed that their nonstudent-athlete classmates rarely choose to work with them during in-class activities and they believe their instructors perceive them to be nothing but jocks (Curry & Maniar, 2005; Yopyk & Prentice, 2005). These findings were echoed by Harrison, Martin, and Fuller (2015) who also found that student-athletes are more likely to identify as athletes than students. Non-significant results were found for autonomy, autonomy thwarting, competence, competence thwarting, and relatedness.

Table 6. *Comparison of Student-Athlete and Nonstudent-Athlete on Need Satisfaction, Motivation, and Perceived Success*

Dependent Variable	Independent Variables		Mean Difference	<i>t</i>	<i>df</i>	<i>p</i>
	Student-Athlete <i>M (SD)</i>	Nonstudent-Athlete <i>M (SD)</i>				
Basic Ac Needs						
Autonomy	19.46 (4.05)	20.61 (4.61)	-1.15	-1.78	231	.08
Autonomy Thw	15.39 (4.69)	15.20 (4.74)	.19	.28	228	.78
Competence	21.43 (4.93)	22.30 (3.90)	-.87	-1.27	97 [†]	.21
Compet. Thw	11.73 (5.36)	10.84 (4.81)	.89	1.24	232	.16
Relatedness	20.49 (4.11)	19.87 (4.89)	.62	.91	229	.36
Relatedness Thw	12.14 (4.96)	10.18 (4.50)	1.96	2.88	229	.00**
Ac Motivation						
Intrinsic	19.33 (3.74)	21.03 (5.07)	-1.70	-2.82	164	.01**
Identified	21.92 (4.36)	22.30 (4.90)	-.38	-.54	226	.59
Introjected	20.06 (4.75)	19.95 (6.19)	.11	.14	155	.89
Extrinsic	21.23 (4.64)	20.96 (4.35)	.28	.42	226	.67
Amotivation	11.59 (6.53)	7.93 (4.93)	3.65	4.09	89 [†]	.00**
P. Ac Success	31.18 (7.37)	31.79 (7.81)	-.61	-.55	229	.59

Note. [†]*p* < .05 for Levene's test for homogeneity of variances. Thw = thwarting.

The *t*-test performed on perceived success in academics was non-significant. This was surprising considering the significant differences found between student-athletes and nonstudent-athletes on relatedness thwarting, intrinsic academic motivation, and academic amotivation. It was unexpected that there were no significant differences for motivations that fall on either side of the academic motivation continuum. It was also unexpected that this study did not produce significant perceived academic success results, similar to those found in Deci and Ryan's (1985) self-determination theory.

Question 2 - Perceived Success Predictions

Correlations between student-athletes and nonstudent-athletes academic basic needs and academic motivations produced numerous significant relationships (see Table 7). Variables all related to each other as expected. Strong inverse relationships were seen for the needs supporting variables (autonomy, competence, and relatedness) and amotivation (Adie, Duda, & Ntoumanis, 2008; Bartholomew, et al., 2011; Ryan & Deci, 2000). All of the psychological basic needs thwarting variables had inverse relationships with intrinsic, introjected, and identified motivation, which are considered to be on the positive or intrinsic side of the motivation continuum. Conversely, the needs thwarting variables were shown to have positive relationships with extrinsic and amotivation, which are motivations on the negative or extrinsic side of the continuum. While strong relationships between these variables is a positive outcome as it supports the validity of the measures and the theory, they were also concerning as strong correlations amongst variables is a sign of potential multicollinearity in later regression analyses. It was

anticipated that perceived academic success would produce significant correlations in the current study as many were present in the pilot study, yet very few were found.

A multiple regression was performed to determine if basic need supporting, needs thwarting, and motivation predict students' perceived success in academics. It was found that, for the overall model, academic basic psychological needs and academic motivation variables accounted for a significant amount of the variance in perceived success in academics, $F(11, 179) = 5.44, p < .05, R^2 = .19$ (see Table 8). Despite the significant overall model result, it appeared that the strong intercorrelations among the need satisfaction and need thwarting variables resulted in multicollinearity among the predictors and reduced their individual predictive power. Multicollinearity is defined as “the problems created when independent variables are very highly correlated with each other” (Mergler & Vanatta, 2010, p. 345). Due to this finding, another regression was performed without the basic needs thwarting variables. The basic psychological need thwarting variables were specifically chosen to be removed (as opposed to need supporting) based upon the emerging status of the need thwarting research making them a lower priority for investigation in the current study.

Table 7. *Correlations Matrix: Nonstudent-athletes (upper diagonal) and Student-athletes (lower diagonal)*

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Autonomy	-	-.39**	.61**	-.41**	.48**	-.39**	.56**	.49**	.63**	.27**	-.43**	.28**
2. Autonomy Tw	-.19	-	-.27**	.41**	-.23**	.39**	-.29**	-.01	-.15	.14	.38**	-.09
3. Competence	.72**	-.28*	-	-.61**	.38**	-.34**	.49**	.32**	.44**	.15	-.39**	.30**
4. Competence TW	-.42**	.47**	-.69**	-	-.23**	.39**	-.28**	-.06	-.11	.08	.33**	-.39**
5. Relatedness	.57**	-.32**	.65**	-.46**	-	-.65**	.39**	.36**	.34**	.18*	-.21**	.29**
6. Relatedness TW	-.47**	.48**	-.63**	.74**	-.53**	-	.24**	-.15	-.19*	.01	.21**	-.21**
7. Intrinsic	.36**	.20	.15	-.16	.16	.22	-	.56**	.75**	.44**	-.48**	.20*
8. Introjected	.13	-.29*	.08	-.11	.20	-.20	.56**	-	.66**	.58**	.28**	.15
9. Identified	.35**	-.26	.24	-.33**	.32*	-.40**	.58**	.53**	-	.58**	-.59**	.18
10. Extrinsic	.16	.01	.16	.27*	.23	-.28*	.34**	.32*	.75**	-	.30**	.04
11. Amotivation	-.06	.32*	-.22	.39**	-.19	.29*	-.16	-.13	-.53**	-.34**	-	.24
12. PS college	.45**	-.16	.56**	-.43**	.29	-.21	.17	.10	.11	-.04	-.12	-

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

Table 8. *Regression Interactions of Basic Needs Supporting, Needs Thwarting, and Academic Motivation on the Perceived Academic Success of All Students*

Variable	<i>B</i>	<i>SE B</i>	β	<i>p</i>
Psychological Needs				
Autonomy	.26	.19	.14	.18
Autonomy Thw	.32	.14	.18	.02*
Competence	.13	.20	.07	.51
Competence Thw	-.53	.16	-.33	.00**
Relatedness	.47	.16	.26	.00**
Relatedness Thw	.28	.16	.17	.07
Academic Motivation				
Intrinsic	.06	.16	.03	.72
Identified	-.04	.23	-.02	.85
Introjected	.03	.12	.02	.78
Extrinsic	-.19	.16	-.10	.23
Amotivation	-.14	.14	-.01	.33
<i>R</i> ²				.25

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

The additional multiple regression was performed to determine if basic psychological need satisfaction and motivation predict all students' perceived success in academics. Basic psychological needs and motivation accounted for a significant amount of the variance in perceived success in academics, $R^2 = .18$, $F(8, 192) = 5.34$, $p < .01$. This analysis showed that both competence and relatedness positively predict academic success (see Table 9). Interestingly, autonomy was not found to positively predict perceived academic success in this study. This is likely due to multicollinearity as recent research has found that levels of autonomy tend to be a primary driver of academic success (Addie, Duda, & Ntoumanis, 2008; Linnenbrink & Pintrich, 2002; Parker, Summerfeldt, Hogan, & Majeski, 2004). Additionally, multicollinearity may have also

affected the predictions of the motivation variables as no significant regression coefficients were found between the variables and perceived success (see Table 7).

Table 9. *Regression Interactions of Basic Psychological Needs and Academic Motivation on Perceived Academic Success of All Students*

Variable	<i>B</i>	<i>SE B</i>	β	<i>p</i>
Psychological Needs				
Autonomy	.18	.19	.10	.34
Competence	.44	.17	.24	.01**
Relatedness	.28	.14	.16	.04*
Academic Motivation				
Intrinsic	.01	.16	.01	.94
Identified	-.13	.22	-.08	.55
Introjected	.05	.12	.04	.68
Extrinsic	-.16	.16	-.09	.33
Amotivation	-.15	.12	-.01	.23
<i>R</i> ²				.18

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

This research question also addressed if a student-athlete's athletic basic needs and athletic motivation predicted their perceived success in athletics. Correlations revealed several positive relationships amongst the variables (see Table 10). Of particular interest are strong positive correlations between intrinsic athletic motivation and athletic autonomy, athletic competence, athletic relatedness, and perceived athletic success. This finding shows additional support for Deci and Ryan's (1985) self-determination theory as well as echoing findings by Pelletier et al. (2013).

A multiple regression was performed to determine if athletic motivation, basic athletic needs, and basic athletic needs thwarting predicts perceived success for athletics, however it was non-significant $F(12, 39) = 1.962, p > .05, R^2 = .38$ (see Table 11); thus, none of the individual predictor variables were significantly associated with athletic

success. Similar concerns of multicollinearity existed due to the multiple correlations found between athletic needs, needs thwarting, and athletic motivation (see Table 10), and therefore an additional regression was performed without the athletic needs thwarting variables. This regression yielded similar non-significant results $F(9, 45) = 2.06, p > .05, R^2 = .29$ (see Table 12). It was expected that athletic basic needs and athletic motivation would significantly predict athletic success due to the positive correlations and the significant findings from the prior pilot study.

Table 10 *Correlations Matrix for Student-Athlete Athletic Basic Needs and Sports Motivation*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Intrinsic	-												
2. Integrated	.68**	-											
3. Identified	.57**	.74**	-										
4. Introjected	.29*	.38**	.35**	-									
5. External	.23	.24	.11	.60**	-								
6. Amotivation	.08	.16	.11	.68**	.75**	-							
7. Autonomy	.47**	.65**	.61**	.24	.20	.02	-						
8. Autonomy Thw	-.12	.06	.04	.45**	.46**	.68**	-.03	-					
9. Competence	.43**	.52**	.52**	.07	-.11	-.23	.71**	-.33**	-				
10. Competence Thw	-.07	-.01	-.00	.47**	.44**	.65**	-.02	.74**	-.40**	-			
11. Relatedness	.56**	.47**	.42**	.09	.24	.01	.69**	-.28*	.62**	-.26*	-		
12. Relatedness Thw	-.22	-.05	-.03	.34**	.33**	.56**	-.15	.76**	-.28*	.67**	-.45**	-	
13. PS Athletics	.38**	.42**	.41**	.17	.21	.19	.36**	-.68	.35**	-.11	.40**	-.00	-

Note: TW = *thwarting*; PS = *perceived success*

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

Table 11. *Regression Analysis of the Interactions of Basic Athletic Needs Supporting, Athletic Needs Thwarting, and Athletic Motivation on Perceived Athletic Success*

Variable	<i>B</i>	<i>SE B</i>	β	<i>p</i>
Psychological Needs				
Autonomy	.30	.56	.13	.61
Autonomy Thw	-.51	.41	-.29	.22
Competence	-.06	.54	-.03	.91
Competence Thw	-.59	.39	-.33	.14
Relatedness	.21	.51	.10	.68
Relatedness Thw	.47	.38	.29	.22
Athletic Motivation				
Intrinsic	.21	.55	.08	.71
Integrated	.90	.76	.32	.28
Identified	-.24	.72	-.08	.75
Introjected	-.24	.48	-.10	.62
Extrinsic	.06	.52	.02	.91
Amotivation	.99	.62	-.47	.12
<i>R</i> ²				.38

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

Table 12. *Regression Analysis of the Interactions of Athletic Basic Psychological Needs and Athletic Motivation on Perceived Athletic Success*

Variable	<i>B</i>	<i>SE B</i>	β	<i>p</i>
Psychological Needs				
Autonomy	-.26	.52	-.12	.62
Competence	.50	.46	.23	.29
Relatedness	.25	.41	.13	.54
Athletic Motivation				
Intrinsic	.20	.47	.08	.68
Integrated	.66	.66	.24	.33
Identified	.16	.66	.06	.81
Introjected	-.49	.45	-.22	.29
Extrinsic	.20	.49	.09	.69
Amotivation	.64	.49	-.31	.20
<i>R</i> ²				.29

Question 3 - Motivation Predictions

Academics. This research question sought to determine if the supporting and thwarting of student's basic psychological needs for academics predicts their intrinsic motivation in academics. A multiple regression analysis was performed and the results determined that basic psychological needs explain a significant amount of the variance in the intrinsic motivation of all students, $F(6, 200) = 11.64, p < .00, R^2 = .26$ (see Table 13). The regression analysis showed that autonomy ($\beta = .36, p < .05$) significantly predicts students' intrinsic academic motivation. The other basic needs and needs thwarting variables produced non-significant results.

Table 13. *Regression Analysis of the Interactions of Basic Needs Supporting and Needs Thwarting on Intrinsic Academic Motivation*

Variable	<i>B</i>	<i>SE B</i>	β	<i>p</i>
Psychological Needs				
Autonomy	.40	.09	.36	.00**
Autonomy Thw	-.14	.07	-.13	.06
Competence	.10	.11	.09	.35
Competence Thw	-.15	.09	-.16	.25
Relatedness	.09	.08	.09	.27
Relatedness Thw	.06	.09	.06	.47
R^2				.26

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

In an effort to continue to grow the research on basic psychological needs thwarting and motivation I decided to keep the thwarting variables in the regression and run additional analysis sorting by student-athlete status. Table 14 shows the outcome when cases were sorted for student-athlete status, a significant effect was not found, $F(6, 50) = 1.57, p > .05, R^2 = .16$. Alternatively, for the nonstudent-athlete group basic

psychological needs explained a significant amount of the variance for intrinsic motivation $F(6, 142) = 11.42, p < .00, R^2 = .33,$

Table 14. *Regression Analysis of the Interactions of Basic Needs Supporting and Needs Thwarting on Intrinsic Academic Motivation of Student-Athlete and Nonstudent-Athletes*

Variable	Student Athletes				Nonstudent-Athletes			
	<i>B</i>	<i>SE B</i>	β	<i>p</i>	<i>B</i>	<i>SE B</i>	β	<i>p</i>
Psychological Needs								
Autonomy	.45	.18	.45	.02*	.34	.11	.29	.00**
Autonomy Thw	-.12	.12	-.14	.35	-.13	.09	-.12	.13
Competence	-.22	.19	-.28	.27	.29	.13	.23	.03*
Competence Thw	.03	.17	.04	.86	.01	.10	.07	.94
Relatedness	-.04	.17	-.04	.83	.22	.10	.21	.03*
Relatedness Thw	-.13	.16	-.17	.43	.18	.11	.16	.10
<i>R</i> ²				.16				.33

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

The analysis determined autonomy, competence, and relatedness all positively predicted motivation. These results continue to support the findings associated with Deci and Ryan’s (2000) self-determination theory and the role basic psychological needs play in predicting intrinsic academic motivation. Since non-significant results were found for student-athletes it reinforces the fact that differences do exist between student-athletes and nonstudent-athletes within the academic arena.

Athletics. Strong correlations were found amongst the student-athlete’s basic needs for athletics and the athletic motivational types more closely aligned with intrinsic motivation (intrinsic, integrated, and identified; see Table 10). Conversely, the motivations on the extrinsically-based end of the motivational spectrum (Introjected, External, and Amotivation) produced significant positive relationships with the needs thwarting of all basic needs (i.e. “*On my team I feel like a failure because of the mistakes I make.*”). The correlations amongst motivations and basic needs also showed many

strong relationships that provide additional support for Deci and Ryan's (2000) self-determination theory of motivation, which postulates that when one's basic psychological needs are met individuals are likely to have more intrinsically based motivations.

This question further investigates whether the athletic basic psychological needs of the student-athletes predicts their athletic motivation (see Table 15). A multiple regression analysis found that athletic basic psychological needs explained a significant amount of the variance in a student-athlete's athletic intrinsic motivation, $F(6, 50) = 5.23$, $p < .00$, $R^2 = .39$.

Table 15. *Regression Analysis of the Interactions of Basic Psychological Needs and Needs Thwarting on Intrinsic Athletic Motivation of Student-Athletes*

Variable	<i>B</i>	<i>SE B</i>	β	<i>p</i>
Psychological Needs				
Autonomy	.10	.16	.12	.54
Autonomy Thw	.06	.13	.09	.65
Competence	.19	.16	.23	.25
Competence Thw	.10	.12	.14	.42
Relatedness	.29	.14	.38	.04*
Relatedness Thw	-.03	.12	-.06	.77
<i>R</i> ²				.29

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

The regression analysis showed that only relatedness significantly predicted motivation. This finding further supports the research which has found that positive relationships with teammates and coaches produce lower levels of burnout along with higher levels of motivation, satisfaction, engagement, and well-being (Alvarez, Balaguer, Castillo, & Duda, 2009; Blanchard, Amiot, Perreault, Vallerand, & Provencher, 2009; Harris & Smith, 2009).

Qualitative Content Analysis

This survey afforded all participants the chance to respond to two open-ended questions regarding their academic motivation. The first question asked students, “what motivates you to succeed in your college courses?” and the second question asked students, “what reduces your motivation to succeed in your college courses?” Student-athletes answered two additional questions regarding their athletic motivation, “what motivates you to succeed athletically in your college sport?” and “what reduces your motivation to succeed in your college sport?” The raw student data responses can be found in appendices A-F. The first question was answered by 234 of the participants and elicited 4,338 words. The second question was answered by 226 of the student participants and produced a total response of 3,502 words. Sixty-five student-athlete participants answered the question related to increased motivation in athletics producing a response of 1,025 words and 64 student-athletes answered the final question relating to reduced motivation in athletics in which they shared responses totaling 550 words. Content data analysis was performed to answer additional research questions and to provide key mixing points for quantitative and qualitative analysis.

Content Analysis

Through content analysis I sought to understand how student-athletes and nonstudent-athletes describe their motivations for academics and how student-athletes describe their motivations for athletics. Participant’s raw data responses to open-ended survey were added to an excel spreadsheet for organization and analysis (see Appendices A-F). Responses were sorted via SPSS based upon student-athlete status. All open-ended question responses were then read once to create familiarity of the data. A second

reading was then performed in an attempt to “connect specific data with larger substantive processes and theoretical interpretations” (Wertz et al., 2011, p. 174). This reading was done with a focus on the self-determination theory of motivation. Following the second reading for content patterns associated with SDT it became apparent that several codes of responses were present within the raw data responses. I then began coding the data. The task of data coding for content analysis, according to Potter and Levine-Donnerstein (1999) consists of recognizing patterns and recording it on a data sheet. I created a coding scheme relating to SDT and began organizing responses. All responses were organized based upon a coding scheme which “consists of rules that tell coders how to put their observations into the correct data categories” (Potter & Levine-Donnerstein, 1999, p. 266). This coding scheme was created to align with SDT and all responses were sorted based upon the content and the type of motivation they referred to. For example, one student stated, “I’m really interested in the field I am going into so that is what motivates me to succeed and do well in my classes,” in response to what increases their academic motivation. This statement was given the code “want to learn” and it was determined that this code described intrinsic motivation.

The open-ended questions elicited responses that ranged from one word (i.e. “money”, “sports”, and “future”), to a sentence (i.e. “The tuition I’m paying, to be able to play baseball, and to better my education.”) or several sentences, for example:

Upon discharge from the Navy there was not many occupations that interested me with the experience that I had without continuing my education. Having a father, and two brothers all three of which completed degrees in electrical engineering at

UND and seeing the lifestyles which they live now. Another motivator is proving wrong those that don't think I can make it.

The majority of the responses consisted of a five to eight words that made up a sentence fragment or a short phrase (i.e. “Bad lectures, too much criticism”; “When I do bad in classes”; and “Tiredness and becoming lazy”). The majority of participant’s responses mentioned multiple items that either increased or decreased their academic motivation. Each of these items were counted as separate codes during analysis.

The second and subsequent readings produced 12 different codes for the first open-ended question (what motivated them academically) and 11 different codes for the second question (what reduces their motivation academically). The analysis of the additional two open-ended questions posed only to student-athletes regarding their athletic motivations produced six codes for the third question (what motivated them athletically) and six codes for the fourth question (what reduces their athletic motivation). Following an external audit each code was named for the concepts described by participants as they answered the open-ended question in the survey. The code, their definitions, type of motivation they describe, and an example code can be found in Tables 16, 17, 18, and 19.

Table 16. *Qualitative Codes, Definition, Motivational Type, and Examples for “Factors that Increase Academic Motivation”*

Code	Definition	Motivational Type	Response Example
Get a good job	The attainment of a job or a good job	Extrinsic	“...able to get a good job coming out of college.”
Earn a degree	Associated with the desire to finish the coursework necessary to graduate	Identified	“To earn the degree I want.”
Want to learn	Focused on the desire to know or understand the coursework	Intrinsic	“Understanding the classwork...”
Self	Mention the desire to perform for oneself	Introjected	“I want to be proud of what I achieve.”
Make money	Directly mentioning desire to have money	Extrinsic	“Having a successful life with money.”
Family	Associated with performance based upon the impression left upon children, parents, etc.	Introjected	“...for my family to be proud of me.”
Fear	Contains academic and/or financial failures	Extrinsic	“The fear of having a fruitless future.”
Cost of tuition	Associated with the expense of tuition/credits or the desire not to waste money	Extrinsic	“The fact that I’m paying an arm and a leg.”
Get into program	The need to achieve academic success in order to be accepted into a desired major or program	Identified	“I want to do well so I can get into the nursing program.”
Success	Being the best one can be and achieving personal goals	Introjected	“To be successful later in life.”
Eligible for athletics	Desire to continue participating, playing or remaining eligible for sports or athletics	Introjected	“To continue to be able to play sports.”

Table 17. *Qualitative Codes, Definitions, Motivational Type, and Examples for “Factors that Reduce Academic Motivation”*

Code	Definition	Response Example
Busy	Relating to students not having enough time to complete all the tasks they need to	“Lack of time.”
Course doesn’t apply to major	Referrals to general education courses that they feel don’t apply to their program or area of interest	“... having to take general courses that I am not interested in.”
Instructor	Issues with the way instructors teach and interact with students	“Teachers that are not engaging and interesting...”
Tired	Students expressed being exhausted and lazy or about early classes	“Not getting enough sleep...”
Nothing	Students state or inferred that things or situations did not reduce their motivation	“Nothing, I always want to do my very best.”
Homework	Amount of work, time, and expectations associated with classes and programs.	“The stress related to taking classes (homework: including writing papers, having to take many tests, and having to learn the material very quickly).”
Stress	Too many demands, stress, and not enough time.	“Balancing school, work and other activities (stress).”
Party	Spending time with friends, significant others, and alcohol	“hanging out with friends, partying.”
Family	Distance from home, time spent away from home, and issues associated with family problems	“The time away from my family.”
Grades	Performing poorly on an exam or falling behind in coursework and the need to get good grades	“If I’m not doing good in a class, it makes me feel like maybe I’m not going to succeed.”
Work	Time spent working.	“Working long hours and having to get up very early to go to work...”

Table 18. *Qualitative Codes, Definition, Motivational Type, and Examples for “Factors that Increase Motivation in your Sport”*

Code	Definition	Motivational Type	Response Example
Being the best	Mentions of practicing skills in an effort to perform at an optimal level	Intrinsic	“My determination to do my best at everything I do.”
Winning	Desire to be a successful in games	External	“I want to win, plain and simple.”
Teammates	Description of relationships with others on their team	Identified	“Be there for my team and be the best I can be.”
Playing at the next level	Desire to continue playing at a higher level of competition	External	“To play and move onto a Division I school”
Personal pride	Mentions of personal enjoyment and satisfaction	Integrated	“Personal pride and enjoyment.”
Love of the game	Comments notating love of the sport or game	Integrated	“Playing the sport I love with great teammates.”

Table 19. *Qualitative Codes, Definition, and Examples for “Factors that Decrease Motivation in your Sport”*

Code	Definition	Response Example
Tired	Expressing the fatigue associated with being busy and too little sleep	“Being tired”
Losing	Desire to be a successful team and not lose games	“Losing more than I win.”
Teammates	Description of relationships with others on their team	“Some teammates that I don’t get along with.”
Personal issues	Struggles with issues at home or stress regarding struggles in life	“... family and friend issues get in the way.”
Coaching	Mentions of struggles associated with coaches or coaching decisions	“...Playing for a coach who is never pleased.”
Nothing	Comments notating the lack of things getting in the way of success	“Nothing reduces my motivation to succeed.”

Upon completion of coding, the task of creating categories began. This was done by readdressing the coding scheme which utilized the concepts within SDT. Codes with similar motivations were grouped together and names were given to the categories that described the included codes. Three categories were developed for both factors that increase academic motivation and factors that decrease academic motivation (see Table 20 and Table 21).

Table 20. *Categories, Codes, and Examples of What Increases Students’ Academic Motivation*

Category 1 – Finance		
Code	Frequency	Example
• Get a good job	87	“So I can get a good paying job to fulfill my dreams.”
• Success	18	“For my career and to live a successful life.”
• Make Money	17	“Knowing that good grades will lead to more money and a better college experience.”
Category 2 – Academics		
Code	Frequency	Example
• Earn a degree	53	“Graduating and getting good grades”
• Want to learn	22	“I’m really interested in the field I am going into so that is what motivates me to succeed and do well in my classes.”
• Fear	22	“Knowing that I will have to redo it if I fail.”
• Stay eligible for athletics	18	“To be able to play sports...”
• Get into program	7	“I want to do well so I can be accepted into the nursing program.”
Category 3 –Relationships		
Code	Frequency	Example
• Self	17	“What motivates me to succeed is being proud of myself for setting 4.0 goals and succeeding...”
• Family	12	“My children. Showing them that it’s possible.”

Table 21. *Categories, Codes, and Examples of What Reduces Students' Academic Motivation*

Category 1 – Finances		
Code	Frequency	Example
• Stress	30	“Balancing school, work and other activities (stress).”
• Work	15	“Having a job and being tired by the time I get home.”
Category 2 – Academics		
Code	Frequency	Example
• Instructor	49	“When the school or instructor is unprepared or uncooperative.”
• Homework	46	“When I can't understand something after spending many hours trying to learn the material.”
• Course doesn't apply	20	“Laziness, and homework that has nothing to do with what I want to do in life.”
• Nothing	20	“Nothing really.”
• Grades	6	“Bad grades.”
Category 3 – Relationships		
Code	Frequency	Example
• Busy	30	“So busy all the time.”
• Tired	26	“Lack of sleep.”
• Party	15	“I get side-tracked with friends not in school, boyfriend Or working out that brings my focus away from school”
• Family	7	“The time away from my family.”

Question 4 - Descriptions of Motivation

Academics. Both student-athletes and nonstudent-athletes reported that getting a good job ($n = 17$ student-athletes and $n = 70$ nonstudent-athletes) and earning a degree ($n = 17$ student-athletes and $n = 36$ nonstudent-athletes) are key motivators for their academic success. These were the two most frequently mentioned codes. Several nonstudent-athletes reported items that described a truly intrinsic motivation for learning that they “enjoy learning,” “want to understand the coursework,” and “have a drive for knowledge.” These responses were coded as “want to learn” ($n = 22$). The desire to not “end up on public assistance” and “re-taking courses,” were also motivators for some nonstudent-athletes. These actions describe extrinsic motivations and were coded as

“fear” ($n = 11$) because it was determined that participants were describing items they are either afraid of (end up on public assistance) or are afraid may hold them back from achieving their goals (re-taking courses). Student-athletes describe their motivation for academics fairly evenly between the extrinsic motivation of the need to simply “stay eligible” ($n = 18$) and the identified motivation of a desire to “earn their degree” ($n = 17$).

A couple of interesting differences were realized between student-athletes and nonstudent-athlete’s descriptions of their academic motivations. Nonstudent-athletes rarely mentioned the need to make or earn “money.” When they did, it consisted of statements similar to, “I want to secure myself financially.” In contrast, student-athletes stated that motivations to succeed in college courses were, “having a successful life with money” or simply their motivation was simply state as, “money.” Additionally, several nonstudent-athletes cited the cost of tuition ($n = 7$) as a motivator for academic success, whereas only two student-athletes mentioned the costs associated with tuition as an academic motivation for success. These differences may be due in part to the outside obligation associated with some of the demographical difference found between student-athletes and nonstudent-athletes. The average age of the student-athletes was 19.57 years versus 25.54 years for nonstudent-athletes. This coupled with a difference in enrollment status (student-athletes = 93% fulltime versus nonstudent-athlete = 81.7% fulltime) could explain some of the motivations associated with money. Nonstudent-athletes may be working substantial hours in addition to attending college, as 72.2 percent noted that they worked at least 10 hours per week.

Two other notable differences were realized during analysis. First, several nonstudent-athletes described situations which I chose to code as fear ($n = 11$) as the reason for their increased motivation in academics. Some of the nonstudent-athlete described their “fear” as issues that focused on classes or assignments (i.e. “Knowing that I have to re-do it if I fail”) while others stated issues associated with social support services (i.e. “Not wanting to end up on public assistance”). Some of these responses may be due to many of the education to work programs that are present at many of the community and technical colleges throughout the U.S., while the academic related concerns with failure are likely due to the low admittance rate associated with many of health-related majors.

Finally, “sports” and the “eligible for athletics” were recorded as the most common academic motivators for student-athletes ($n = 18$). This was not surprising as research has found that student-athletes frequently report that they identify more closely with being an athlete rather than being a student (Killeya-Jones, 2005; Simons, Bosworth, Fujita, & Jensen, 2007; Yopyk & Prentice, 2005). Student-athletes know that if they do not maintain the appropriate grade point average as well as adequate progress towards graduation, they will not be eligible for intercollegiate athletic participation.

Categories for increased academic motivation. The first category for increased academic motivation (see Table 20) incorporates the codes associated with “getting a good job,” “success,” and “make money”. This category was labeled “finance” because the responses related to the desire to earn money. The finance category included 119 codes for both student-athletes and nonstudent-athletes and encompasses the categories

that participants used to express their desire to be successful in order to earn money. The second category was labeled “academics” and it includes the codes of “want to learn,” “earn a degree,” “get into program,” “fear,” and “stay eligible for athletics.” This category consisted of 122 related codes for all student participants. This category describes the scholastic outcomes students associated with increased academics success. The third and final category for increased academic motivation was labeled “personal and relationships” and includes codes for “family” and “self.” This category included 29 codes and describes the various intrapersonal relationships students’ experience (see Appendices A and B).

Categories for reduced academic motivation. The category “finances” is the first category associated with reduced academic motivation (see Table 21). It includes issues relating to the financial burden many college students feel regarding paying college and living as a college student. This category includes the 35 codes for work and stress described by student-athletes and nonstudent-athletes. The second code category for reduced academic motivation was labeled “academics” and includes the codes of “instructor,” “homework,” “course doesn’t apply,” “nothing,” and “grades.” This category contained 115 codes that relate to the reduction of a student’s academic motivations due to issues they face in their classes or at school. The final category was labeled “side-tracks” and addresses the codes associated with the interpersonal relationships and activities students cited as reasons they had reduced academic motivation. The 75 codes in the side-tracks category include: “busy,” “tired,” “party,” and “family” (see Appendices C and D)

These categories created a key data mixing-point by providing tangible reasons for the increase and reduction of motivation from both student-athletes and nonstudent-athletes (Creswell & Plano-Clark, 2011). Additional alignments can be seen in the ties between survey questions on the AMS and open-ended responses. For example, survey questions relating to identified motivation (i.e. Because eventually it will enable me to enter the job market in a field that I like.), have striking similarities to the code for earn a degree. Additional motivation types and codes can be found in Tables 16 and 17.

Athletics. The final portion of this research question sought to understand what student-athletes describe as their motivations or reasons for competing in intercollegiate athletics (see Table 18) as well as what reduces their motivation for athletics (see Table 19). Six codes were produced through the analysis of the question “What motivates you to succeed athletically in your college sport?” These codes were: being the best, winning, teammates, playing at the next level, personal pride, and love of the game (see Appendix E). The code mentioned most frequently by student-athletes report was “be the best” ($n = 21$). In this same vein, several students expressed that “personal pride” ($n = 6$) motivates them in the athletic arena. Both of these codes produced several statements that pointed directly towards the student-athlete having an intrinsic motivation to succeed in athletics, such as: “My determination to do my best at everything I do”; “I always strive to do my best, and reaching my full potential is something that motivates me”; and “personal pride and enjoyment.” The code “win” came in a close second ($n = 20$) and although the desire to win is not typically considered to be a true example of intrinsic motivation, it has been

found to facilitate an increase in intrinsic motivation (Reeve, Olson, & Cole, 1985; Tauer & Harackiewicz, 2001; Vansteenkiste & Deci, 2003).

Student-athletes were asked, “What reduces your motivation to succeed in your college sport?” (see Table 19). This question created six different codes: tired, losing, teammates, negativity, coaching, and nothing (see Appendix F). The most frequently reported code “nothing” ($n = 22$). Response examples were: “I don’t really feel like there is anything that reduces my motivation;” “Not much;” and “nothing.” This was not surprising as so many student-athletes reported their reasons for success as items that were highly intrinsic. Also, as a former coach, I was not surprised to see codes for “coach” and “teammates” included as reasons for reduced motivation. As mentioned in Chapter II, much research has been done on the role coaches and teammates play in an athlete’s motivation.

Categories for increased athletic motivation. Following the analysis of the codes for increased athletic motivation, three categories emerged: athletic success, soul, and relationships (see Table 22). The largest ($n = 49$) was labeled, “athletic success,” and contains the codes where student-athletes expressed their desire to be successful in their sport. The codes included in this category were: “being the best,” “win,” and “playing at the next level.” The next largest category, “soul,” contains 18 codes from “love of the game,” and “personal pride.” This category includes the statements in which student-athletes describe participation in their sport as an inner drive. The final category was labeled “relationships” and includes the 13 codes associated with “teammates.”

Table 22. *Categories, Codes, and Examples of What Increases Student-Athletes' Athletic Motivation*

Category 1 – Athletic Success		
Code	Frequency	Example
• Being the best	21	“I always strive to do my best, and reaching my full potential is something that motivates me.”
• Win	20	“I want to win, plain and simple.”
• Play at the next level	8	“To be able to play D1 baseball in the future...”
Category 2 – Soul		
Code	Frequency	Example
• Love of the game	12	“Playing the sport I love...”
• Personal pride	6	“Personal pride and enjoyment.”
Category 3 – Relationships		
Code	Frequency	Example
• Teammates	13	“The fact that I am on a team and I love the sport I play and my teammates.”

Table 23. *Categories, Codes, and Examples of What Reduces Student-Athletes' Athletic Motivation*

Category 1 – Personal		
Code	Frequency	Example
• Nothing	22	“I don’t really feel like there is anything that reduces my motivation.”
• Tired	6	“Being tired and not playing my best in certain games.”
Category 2 – Team		
Code	Frequency	Example
• Negativity	8	“When I work hard and I don’t get any credit.”
• Losing	6	“Losing more than I win.”
• Teammates	5	“Some teammates that I don’t get along with.”
• Coach	5	“Playing for a coach who is never pleased.”

Code categories for reduced athletic motivation. Two different categories were created from the six codes for reduced athletic motivation. The largest category named “personal” contains 28 different codes from “nothing” and “tired” (see Table 23). This category includes items that the student-athletes have personal control over. The second category, “team,” includes the 24 items from the codes: “negativity,” “losing,” “teammates,” and “coach.” The responses in this code category all relate to interactions, behaviors, and outcomes involving their intercollegiate athletic team.

The student-athlete responses for both academics and athletics are also used as the data is mixed following the quantitative creation of student-athlete clusters. The codes developed in the prior question will once again play a role in analyzing the profiles created by the *k*-means cluster analysis. This mixing point creates one of the main premise behind the development of this study and provides an opportunity for triangulation of the data.

Question 5 - Student-Athlete Profiles

A k-means cluster analysis was performed using student-athlete responses on questions assessing intrinsic academic motivation and intrinsic sports motivation, to determine if there were motivational differences amongst student-athletes that could be used to create motivational profiles. Intrinsic motivation scores were used because they are considered the ideal motivational state. Both intrinsic sports motivation and intrinsic academic motivation scores were used in the cluster analysis. Both of the variables were standardized and a pre-defined three cluster solution was performed. Three clusters were chosen in an effort to create a low, medium and high group of student-athlete motivation levels. The cluster analysis created groups of 18, 28, and 17 student-athletes respectively. These clusters were accomplished within five iterations and the final cluster centers created from the standardized summed scales are represented in Table 24.

Table 24. *Final Cluster Centers for Student-Athlete Groups*

Variable	Low-Sport/ Moderate Academic (<i>n</i> = 18)	Moderate-Sport/ Low-Academic (<i>n</i> = 28)	High-Sport/ High-Academic (<i>n</i> = 17)
Intrinsic Motivation Scale	-.06	-.59	1.15
Intrinsic Sports Motivation Scale	-1.29	.33	.87

Note. *n* = 63 student-athletes

Love of the game. One of the hopes of this research was to better understand and further explain the “love of the game” phenomena expressed by the code “love of the game.” This code was noted by multiple student-athletes ($n = 12$). They noted this through statements that directly mentioned the word, “love” within their response to “what motivates you to succeed athletically in your college sport?” Examples of student-athlete responses include: “my love for baseball,” “I love to play,” and “wanting to get better every day at the sport I love.” Additionally, through further analysis of this phenomenon it was expected that student-athletes who played for the love of the game would have higher levels of intrinsic sport motivation. The clusters created through the k-means analysis placed the majority of students who cited the code love in cluster 2 ($n = 28$). This was the largest of the three clusters and students notated the code seven times throughout their responses. Student-athletes in cluster 1 mentioned the code love twice and cluster 3 mentioned the code three times. Further dissemination of the clusters can be found in the proceeding paragraphs.

Cluster 1 Low-Sport + Moderate-Academic. Cluster 1 ($n = 18$) consists of student-athletes with the lowest reported levels of intrinsic sports motivation and moderate levels of intrinsic academic motivation. The most surprising finding in this cluster was in response to “what reduces your motivation to succeed in your college sport,” 44 percent of the student athletes reported the code of “nothing.” This was surprising because this cluster of student-athletes had the lowest reported levels of intrinsic motivation for sport, yet they had responses such as: “Nothing. Ball is life;” “Nothing, winning is everything;” and “Nothing, I want to be the best player on the

field.” In regards to academics, cluster 1 student-athletes most frequently reported the code “earn a degree.”

Cluster 2 Moderate-Sport + Low-Academic. This was the largest cluster ($n = 28$) and consisted of student-athletes reporting the lowest intrinsic motivation scores for academic motivation and moderate levels of intrinsic sports motivation. As mentioned earlier, this cluster had the greatest number of student-athletes notate the code love regarding what increased their athletic motivation, while the most frequently mentioned code was “being the best” (i.e. “I want to be the best I can be.”). Their most frequently cited codes for reduction of motivation was: “losing” (i.e. “losing and fatigue”); “tired” (i.e. “being tired”); and “negative” (i.e. “not being paid to play when you have things to pay for). While the student-athletes in this cluster reported the lowest levels of intrinsic motivation for athletics, their desire to “earn a degree” was the most frequently cited academic motivator while “teachers” (i.e. “Teachers that don’t put in the best effort they can to help me succeed”) and “being tired” (i.e. “Not getting enough sleep...”) were the most frequently listed codes for reduction in academic motivation. These responses to academic motivations were as expected considering this cluster had the lowest level of intrinsic motivation for academics.

Cluster 3 High-Sport + High-Academic. This cluster ($n = 17$) contains student-athletes who reported the highest levels of both intrinsic academic and athletic motivation. The two most frequent codes recorded from these student-athletes in response to, “what increases your motivation to succeed in your college courses,” was “earn a degree” and “sports.” To earn a degree was expected, while the code for sports

(i.e. “The sport I am in motivates me to do well in my classes so I can stay in the sport.”) was interesting and unexpected for this group as I would have expected a higher number of intrinsic codes such as success for student-athletes in this cluster. Cluster 3 members reported codes for being the best and pride most frequently. These responses were expected as was the code for, nothing. The code nothing was cited most often by Cluster 3 student-athletes in response to the question addressing what reduces their motivation for academics. All of these responses are qualitative reinforcements of the high reported levels of intrinsic motivation for academics and athletics.

From an athletic standpoint, the cluster 3 student-athletes reported codes for being the best and pride most often in responses to what increases their motivation to succeed in their sport. In response to motivational reducers, the code for nothing had the most notations, but it was closely followed by the code for coaches/teammates. Since this group of student-athletes’ responses were associated with the highest levels of both intrinsic motivation for academics and athletics they will be further broken down and discussed in the following chapter.

As a former coach, it was my desire to recruit and mentor student-athletes who desired to perform well both in the classroom and on the court. Additionally, all quantitative and qualitative research questions will be further discussed in the following chapter. In mixed methods research it is the integration and synthesis of the quantitative data with the qualitative data (Creswell & Plano-Clark, 2011) that create the necessary mixing points and the triangulation of the data that leads to the creation of new discoveries. The interpretation of this is detailed in Chapter V along with further

discussion of the applicability of self-determination theory on analyzing the academic and athletic motivation of Division III NJCAA student-athletes.

Summary

In this chapter, the research questions were presented. This was followed by a detailed description of the participant characteristics and scale validity and reliabilities. The results and analysis utilized for each of the research questions were then discussed. The quantitative findings were discussed first, followed by the qualitative findings, and finally the results from the mixed methods cluster analysis was presented. A summary of these findings, followed by a discussion of the results, recommendations to educators regarding the use of this research, and limitations of the study are presented in Chapter V.

CHAPTER V
SUMMARY, DISCUSSION, AND LIMITATIONS

Summary

The purpose of this study was to investigate the academic motivations of intercollegiate student-athletes versus their nonstudent-athlete counterparts at a Midwestern NCAA Division III Community and Technical College. The athletic motivations of student-athletes were also evaluated in terms of their impact upon academic motivation and perceived academic success. Additionally, qualitative responses were collected and students were clustered into profiles based upon their academic and athletic motivations as the “love of the game” concept was explored. Academic and athletic motivation were assessed using the framework of Deci and Ryan’s (1985) self-determination theory. In this chapter, I will describe the major findings of the study as they relate to the current research literature and explore ways in which this study supports and differs from the literature. The mixing points in this study are addressed as I seek to find the answers to the research questions using both quantitative and qualitative methods. Following the discussion of the findings, recommendations for instructors, coaches, and advisors regarding the needs of successful student-athletes are explored. Limitations of the current study will then be discussed followed by future directions for additional research.

Research Question 1

How do student-athletes compare to nonstudent-athletes in terms of basic psychological needs, motivation, and perceived success in academics?

At first glance it might seem as though student-athletes and their nonstudent-athlete counterparts are similar. They are from the same age cohort, they reside in similar environments, and attend similar classes at the same institution, but this study found some intriguing differences. According to Kimball (2007), “by ‘signing the line,’ student-athletes are choosing to accept a new identity. With this new identity comes a new lifestyle, a lifestyle of commitment and compromise” (p. 819). This quote highlights many of the struggles student-athletes may face when they choose to become an intercollegiate student athlete. One of those struggles tends to be the relationships they create and the way they are perceived by nonstudent-athletes. Independent samples *t*-test performed on the academic basic psychological needs of the participants in this study found that student-athletes reported significantly higher levels of relationship thwarting within their college courses than their nonstudent-athlete counterparts (*i.e. I have the impression that people I spend time with in college dislike me.*). Miller and Kerr (2002) noted that student-athletes were likely to miss out on many of the social components of college life as they sought to meet the demands of their academic and athletic requirements. This may cause student-athletes to feel as though their peers do not respect them as students and only see them as student-athletes (Potuto & O’Hanlon, 2007).

Through the analysis of student-athlete responses to open-ended questions, I noticed that instructors and the way student-athletes describe instructor interactions may also be contributing to student-athletes reporting a significantly higher level of relationship thwarting in their college courses. The code for “instructors” received the second highest number of mentions, and responses such as, “Teachers that don’t put in the best effort they can to help me succeed,” and “Teachers that don’t work with me and help me,” are likely to add to the increased level of student-athlete thwarting.

Additional *t*-tests were performed on the variables associated with academic motivation. It was found that student-athletes had significantly lower levels of intrinsic academic motivation and significantly higher levels of academic amotivation. Interestingly, other studies have not directly compared the academic motivations of student-athletes versus nonstudent-athletes. Instead they have focused on the academic preparedness of incoming student-athletes as well as the career and social focus of student-athletes versus nonstudent-athletes (Christy, Seifried, & Pastor, 2008; Le Crom, Warren, Clark, Marolla, & Gerber, 2009; Letawsky, Schneider, Pedersen, & Palmer, 2003). Additionally, very few studies can be found on Division III student-athletes, and what research does exist consists of NCAA Division III student-athletes and evaluates the lifestyle and expectations associated with very elite private colleges (Goss, Jubenville & Orejan, 2006; Miller & Kerr, 2002; Navarro, 2015).

Responses to the open-ended question regarding “what increases your motivation to succeed in your college courses?” varied greatly from student-athletes to nonstudent-athletes. Several nonstudent-athletes produced a code related to learning, whereas none

of the student-athlete participants mentioned the code “learning.” Nonstudent-athlete responses to the code for learning consisted of: “I want to know the most I can for when I get a job;” “Pride, self-respect and a sincere drive for knowledge more so than a ‘grade’. I want to succeed in a new career and what I am learning is the building blocks for that;” and “For most of my classes I legitimately enjoy learning the content.”

Strikingly, the most commonly mentioned code for student-athletes in regard to increasing academic motivation was “sports.” Student-athletes frequently choose to attend a college or university because they are recruited by a coach at that institution. They attend to play on the college’s intercollegiate athletic team. While they may also plan to earn a degree and be successful academically, according to their response, sports rendered the most responses in this study. Thus, the desire to play their sport appeared to increase their motivation to succeed in their college courses. This is especially true for student-athletes who were in the moderate-sport + low-academic cluster. These student-athletes report the lowest levels of intrinsic academic motivation (see Table 24). Their responses consisted of statements such as: “To be able to continue to play sports;” “I want to stay eligible for baseball;” and “Good enough grades to play sports.”

The reality that student-athletes report significantly lower levels of intrinsic academic motivation and significantly higher levels of academic amotivation are disturbing as they highlight what researchers have found at NCAA Division I institutions. This brings to the forefront the challenge that coaches and athletic advisors have been battling for decades, intrinsic motivations of student-athletes are different from that of nonstudent-athletes. This realization creates additional points for the parody of student-

athletes across the divisional levels. Therefore we need to begin creating programming at the NJCAA Division III level that helps to address the varied motivational needs of our student-athletes.

Research Question 2

How do students' (athletes and nonathletes) basic psychology needs and motivation for academics predict their perceived success in academics? Do student-athlete's basic needs and motivation for athletics predict their perceived success in athletics?

It was found that basic psychological needs and motivation account for a significant amount of the variance in perceived academic success. Due to perceived issues with multicollinearity, a secondary regression that did not include the needs thwarting variables found competence and relatedness positively predict academic success. These findings build on those initially found by Ryan and Deci (2002) in regards to the role relatedness plays in academic motivation and success. Research from youth to adulthood has discussed advantages associated with positive and supportive relationships in regards to academic success (Freeman, Anderman, & Jensen, 2007; Furrer & Skinner, 2003; Wentzel, 1998). In a study on the creation of relationships and its effects on college students, Larose, Tarabulsy, and Cyrenne (2005) found that when college students form strong and positive relationships with their instructors it has a positive effect on their social adjustment and institutional attachment. Within a community and technical college system students, especially students who are enrolled in specific academic programs, are likely to experience mentoring relationships with their

instructors. Community and technical college classrooms are small with few class sizes over 30 students and technical programs typically allow only 24 students into each program (SCTCC Factbook, 2015). One student stated, “my motivations are my instructors and my fellow peers.”

While there is support for self-determination theory (Deci & Ryan, 2000) the results from this study also presented some challenges. The concerns with multicollinearity produced peculiar results, which forced the removal of the thwarting variables in a supplementary analysis. While basic psychological needs thwarting has only been a subject of research for less than a decade, some exciting research has been done. Research by Bartholomew et al. (2011) report that when needs are thwarted, individuals are unhappy with the degree to which their basic psychological needs are being met. For example, when a student experiences competence thwarting, they may feel as though their instructor believes they are not smart enough to pass the course. Students with autonomy thwarting may feel as they have no freedoms or sense of choice within their class. Relatedness thwarting occurs when a student feels disconnected from his or her classmates.

While there are many positive reasons to attend a community and technical college, the realities of this institutions specific behaviors need to be considered as well during analysis. The strong associations of thwarting variables were not particularly surprising as I know many of the technical programs and especially the health-related programs such as sonography, paramedicine, and practical nursing have very strict guidelines regarding not only coursework, but student’s dress and behavior. These

programs pride themselves on high board pass rates and retention, and there are often very low acceptance rates. Therefore while students may be very motivated to succeed they may also feel as though they have no control over the way their coursework is done, or how they are able to behave and interact in class. Student comments from these courses highlight what students describe as an atmosphere of competition (i.e. “Competition. If I'm trying to get into a very competitive program I work that much harder to beat out the competition;” and “I want to be able to have a good GPA so that my program can see this and know that I worked hard to get where I am at.”). With these observations in mind, it was disappointing that the analysis did not produce more expected results that were in-line with prior research on perceived academic success.

Research Question 3:

How do students' (athletes and nonathletes) basic psychological needs for academics predict their academic motivation in academics? Do student-athlete's basic psychological needs for athletics predict their motivation in athletics? What relationship does student-athlete motivation in academics have with their motivation in athletics?

This study produced results from nonstudent-athletes directly in-line with the research associated with basic psychological needs and self-determination theory (Deci & Ryan, 2000). It was found that all three basic psychological needs (autonomy, competence, and relatedness) significantly predicted motivation. Deci and Ryan (2000) state, “people will tend to pursue goals, domains, and relationships that allow or support their need satisfaction. To the extent that they are successful in finding such opportunities, they will experience positive psychological outcomes” (p. 230). It has

been found that academic motivation is positively impacted when one's basic psychological needs are supported (Garn, Matthews, & Jolly, 2010; Ratelle, Guay, Vallerand, Larose, & Senecal, 2007; Sierens, Vansteenkiste, Goossens, Soenens, & Dochy, 2009).

In contrast, a non-significant outcome for basic psychological needs predicting academic motivation was found for student-athletes. This finding was disappointing because a gap in the research exists concerning the use of academic motivation in predicting the academic success of student-athletes at the NJCAA Division III level. Several studies have addressed this concept, but it has been primarily at the NCAA Division I level (Gaston-Gayles, 2004; Simons, et. al, 1999; Simons & Van Rheenen, 2000). Gaston-Gayles (2004) found that although the typical predictors of scores on college entrance exams and high school GPA are strong predictors of academic performance, academic motivation was important in determining future academic success. While non-significant findings existed in this study, it will still help to grow the research base for student-athletes outside of the NCAA Division I level.

As we seek to find ways to encourage student-athlete success both on and off the court, this question also sought to evaluate the role basic psychological needs for athletics impacts athletic motivation. It was found that relatedness is a significant predictor of athletic motivation. Prior research supports these findings as well as comments made by student-athletes who self-reported that their teammates increase their motivation in their chosen sport. One student-athlete stated, "I want to be the best I can be for myself and my team." Several student-athletes also mentioned that not only do their teammates

increase their motivation for sport, but that they also desire to, “make others (teammates) better.” This strong connection to teammates and the friendships created through athletics are primary reason some athletes choose to participate in sports (Weiss & Ferrer-Caja, 2002). This strong connection may be a key to not only student-athlete athletic success, but if we can find a way to integrate a student-athletes academic and athletic worlds, it may lead to academic success as well.

Research Question 4

How do students’ (athletes and nonathletes) describe their motivation for academics? What differences exist between student-athletes and nonstudent-athletes in their descriptions of academic motivation? How do student-athletes describe as their motivations for competing in intercollegiate athletics?

The most common code reported by student-athletes and nonstudent-athletes regarding their academic motivation centered on a career and/or degree completion focus. Comments such as: “better job opportunities,” “getting done and having a real job,” and “graduation.” Students also simply mentioned the term, “success,” in response to “what motivates you to succeed in your college courses.” Frequently, their responses included the term success and one student reported that their motivation for academic success was, “my career and future to live a successful life.” These were all responses that are in-line with the student body that typically makes up technical and community colleges. The student body consists of both traditional-aged students and nontraditional students with an average age of 26.2 but a most common age of 19 (SCTCC Factbook, p. 11). Traditional-aged students who have chosen to attend community and technical colleges

do so because they wish to complete a technically-based program (i.e. automotive technician, welding, or computer information technology) or they are completing courses for their associate in arts and plan to transfer to an institution to complete their bachelor's degree. Nontraditional students are attending this college because they are returning to college for a change in career, to further their education within their chosen career path, or because they are lifelong learners taking courses that interest them.

Several differences were realized between student-athletes and nonstudent-athletes in regards to how they describe their motivations for academics. The most reported code for student-athletes was "sports." Student-athletes are aware that successful completion of 12 credits each semester as well as a cumulative grade point average of 2.0 is mandatory for continued athletic eligibility. Additionally, these students were recruited to participate in their chosen sport, therefore it is likely that one of their key reasons for attendance and motivations for college are their participation in athletics. This is exemplified in responses such as, "In order to play on the team you need to maintain a GPA of 2.0, so that is one of my biggest motivators," "if I get good grades, I get to keep playing, if my grades are bad, I can't play," and "the sport I am in motivates me to do well in my classes so I can stay in the sport."

Other differences noted can be attributed to a common stereotype associated with student-athletes. Some student-athletes believe that they are likely to become a professional athlete or their role models are rich and famous professional athletes, therefore they may desire a similar lifestyle. Research at NCAA Division I institutions have found that student-athletes who identify more strongly as athletes are less likely to

focus on academic success (Gason-Gayles, 2004; Harrison, et al., 2014; Yopyk & Prentice, 2005). Student-athlete comments such as: "...passion for being a major league baseball player or at least play at a good college with a scholarship..." and "To play at the next level," lead me to believe that some NJCAA Division III student-athletes are likely to have similar beliefs. It is critical that coaches realize this as they likely have the best chance of convincing students-athletes to focus on their academic success as much as their athletic success.

One of the hypothesis associated with this study was the expectation that the student-athletes would describe that they participate in intercollegiate athletics for the "love of the game." As described in Chapter I, NJCAA Division III compete in athletics without any financial gain, many compete in front of only friends and family rather than huge stadiums full of thousands of fans. Their names are not uttered by ESPN analysts and as previously mentioned, their hopes of going pro will likely be dashed. So why do these students make the choice to compete in intercollegiate athletics? It's for the "love of the game."

According to several student-athletes, what motivates them to succeed at their sport is, love of the game. This question sought to understand how student-athletes describe their motivations for participating in intercollegiate athletics. There has been little research on the "love of the game phenomena," but what does exist has been detailed in Chapter I. The code, "love of the game," produced responses from student-athletes such as: "wanting to get better every day at the sport I love;" "my love for

baseball;” and “I love the game...” Teammates and a desire to “be there for my team” was also noted by many student-athletes.

Research Question 5

What are there motivational differences among student-athletes that can be used to create motivational profiles?

When student-athletes were placed into clusters based upon their intrinsic motivation for academics and athletics there were some interesting differences that can be attributed to their responses to the open-ended survey questions. Student-athlete responses were sorted by cluster membership and responses to “what motivates you to succeed athletically in your college sport” and “what reduces your motivation to succeed in your college sport,” as well the two academic motivation questions. The group in the high-sport + high-academic cluster, was the smallest group and consisted of the student-athletes with the highest overall levels of both intrinsic academic motivation and intrinsic sports motivation. In regards to their academic motivations, this group had the highest percentage of student-athletes who reported the code for “playing” their sport. These were reflected in responses that consisted of “If I get good grades, I get to keep playing baseball. If my grades are bad, I can’t play,” “sports,” and “my sport so I can play here...” At first glance, one might think that these responses were directed towards athletic motivation rather than academic motivation; instead these findings likely suggest that if we want student-athletes to be academically motivated, we must understand the role their sport plays in their lives. Despite the focus on cluster 3 student-athletes there

was a fair amount of parody found throughout the student-athlete clusters as student-athletes report codes “be the best,” “teammates,” and “love of the game,” nearly equally across the clusters.

Recommendations

Practical solutions to address academic differences found between student-athletes and their nonstudent-athlete counterparts are vital. Throughout colleges and universities the role of the academic advisor is becoming more important. Academic advisors assist students in choosing classes that meet both their personal and professional goals. Advisors use the standard academic reference points of college entrance exams, GPA, and course performance to guide their advisees, but “sport-specific” advisors have found their way into the larger and more elite NCAA Division I and II leagues. These advisors understand the role sport plays in the lives of the student-athletes they advise. They know when the student-athletes will practice and play and can create an academic schedule that will complement rather than hinder their busy life. It is likely that other leagues need to consider this academic advising model.

Being the instructor of a student-athlete can certainly be challenging, yet the code for instructors was reported by all students multiple times as a reason students feel a reduction in academic motivation. Students should not feel like their teacher doesn’t care about them or isn’t willing to help them. While the reality of being everyone’s “favorite” teacher is unlikely, it is time for instructors to focus on the basic psychological needs of their students. Instructors can do simple things to connect with their entire class such as provide weekly times for brief check-ins with students, provide clear and explicit

directions for assignments, and make themselves available for office hours where students can get clarification or tutoring. Instructors can also immerse themselves within the campus community by attending sporting events, band concerts or plays, and attending student-driven initiatives. Acknowledging the challenges students have in a class and providing sound solutions are an integral part of creating a caring classroom atmosphere.

Instructors are not the only individuals who have an impact on students-athletes and nonstudent-athletes in the classroom. Peer to peer interaction can be just as important in terms of increasing or decreasing academic motivation. While student-athletes rarely mentioned other students in their open-ended responses, nonstudent-athletes frequently mentioned being better than others and competing with other students as a reason they have increased academic motivation. While academic competition is typically considered to be healthy, peer competition may quickly turn into a negative. It is equally important for instructors to monitor the interpersonal interactions in their classroom.

In regards to developing more successful student-athletes, much of the focus needs to be on the coaches of the intercollegiate athletic teams of the college or university. More often than not, the student-athletes on an athletic team are specifically recruited by the coaches. Coaches are aware of the recruit's academic and athletic needs. This study provides evidence to support the importance of acknowledging the ties between a student-athlete's academic and athletic motivations. Coaches can do this by providing specific times for student-athletes to receive tutoring and advising, providing

examples and the expectation of communicating with instructors, and frequently discussing the importance of academics with the their team. Additionally, coaches could begin using motivational surveys at the beginning of the season to assess where their team's motivations are and what they may need to do to increase the likelihood their players will exhibit intrinsic motivations for both academics and athletics.

Limitations and Future Research

One of the primary limitations of this study was the use of open-ended survey questions to collect qualitative data on the academic motivation of student-athletes and nonstudent-athletes and the athletic motivations of student-athletes. While the vast majority of participants answered the questions regarding what increases and decreases their motivation, many of the responses were short and consisted of one to three words. It was rare that a response was a complete sentence or more than one sentence. While one of the goals of the study was to gather qualitative data from as many participants as possible, the responses did not contain data that was thick and rich. This made it difficult to properly place responses into codes and to create categories. Future research could interview several participants in hopes to gain further elaboration regarding the academic and athletic motivations of NJCAA Division III intercollegiate student-athletes.

An additional limitation from this study was the recruitment of participants from a single campus. Despite the institution's size and diversity, it is recommended that a similar study be conducted on additional NJCAA Division III campuses in the future to assess generalizability. Another limitation was that the basic psychological needs thwarting scale is fairly new and it has not undergone the scrutiny and repetitive testing

of older more well-known scales. While the scales were all shown to be valid and reliable the multicollinearity concerns were an obvious limitation in this study. However, validating these promising scales did make needed contributions to the literature. This study's mixed methods design provided a unique research perspective, yet the qualitative data collected was brief in comparison to data that is traditionally attained from interviews. The amount of data collected from open-ended responses also created challenges in terms of collecting enough varied responses to truly develop qualitative categories and themes.

With the limitations in mind, surveying student-athlete and nonstudent-athlete participants NCJAA Division III institutions to further substantiate the generalizability of research performed at NCAA Division I schools is highly encouraged. Additionally, other methods and analysis could be explored such as: interviews of both student-athlete and nonstudent-athlete participants, additional exploration using the K-Means Cluster results as well as consideration of other clustering techniques, deeper dives into the quantitative analysis including structural equation modeling, and adding instructor and advisor surveys to broaden the scope of inquiry.

Finally, while the love of the game phenomena was investigated, further qualitative interviews and the creation of a quantitative measure would add to the current research and deepen the understanding of this theory amongst student-athletes. It is my belief that the love of the game is one of the key reasons student-athletes across all levels continue to participate in intercollegiate athletic in colleges and universities. I believe

that if we as educators can recognize this drive in many of our student-athletes we will help them to be as successful in the classroom as they are on the athletic field.

APPENDICES

Appendix A

"Open-ended" Question - Raw Data	Code(s)
I am motivated to succeed in my college courses by looking towards the future. I would like to get a good paying job so that I can support myself.	Success, Get a Good Job
Having a successful life with money	Success, Make Money
To be successful later in life	Success
I want to be the best and smartest in my class	Success
I want to get into the Sonography Program and I want to be able to put good grades on my resume! I want to get a good job when I'm older and make a lot of money.	Get into Program, Get a Good Job, Make Money
My family and Jesus Christ motivates me to succeed.	Family
Success for the future	Success
Money	Make Money
Successful Future	Success
I want to stay eligible for baseball and get good grades for when I move on to my major.	Eligible for Athletics, Get into Program
Getting good grades to achieve my goals to getting in my major.	Get into Program
Wanting to get a degree and being able to get a good job coming out of college	Earn a Degree, Get a Good Job
to be able to continue to play sports	Eligible for Athletics
challenge myself to get a good gpa	Self
I want to do well so I can be accepted into the nursing program.	Get into Program
To get my degree done and get an education.	Earn a Degree

what motivates me to I want to be a good student	Self
Because i know that if I have a good GPA in collgee it will be way easier for me to get a good job in a good field and that will help me make some money which is my ultimate goal. To have a steady job and make good money	Get a Good Job, Make Money
My sport so I can play here and at another college and money.	Eligible for Athletics, Make Money
To Continue To Be Able To Play Sports And Get My AA Degree.	Eligible for Athletics, Earn a Degree
To graduate	Earn a Degree
i want to do good. and employers like good grades and hard workers.	Self, Get a Good Job
Being able to get into my program in the future.	Get a Good Job
I want to do good in school so I can get a really good career when I am done with school.	Get a Good Job
I'm motivated by getting good grades and scholarships to get into my program of study and get a good job.	Get into Program, Get a Good Job
Sports	Eligible for Athletics
My motivation to succeed in college is mostly my family. My mom stresses the importance of a college degree and my dad has 3 2-year degrees. I've seen how successful my aunts are with degrees so that motivates me a little more.	Family
Good grades. I want to be able to be proud of my schookwork and it looks good to others.	Self
The tuition I'm paying, to be able to play baseball, and to better my education.	Eligible for Athletics, Earn a Degree
Getting a degree	Earn a Degree
i pay for this	Success
Good teachers motivate me to do good, get good grades and therefore end up with a great job!	Get a Good Job
My future and my past.	Success
In order to play on the baseball team you need to maintain a GPA of 2.0 so that is one of my biggest motivators. My teammates is something that motivates me as well. If i cant play, i let them down.	Eligible for Athletics, Family
I want to be easily accepted into my program	Get into Program

First off just to be able to get my degree with good grades, Second is so I am able to play baseball.	Earn a Degree, Eligible for Athletics
To get good grades so I get into the program and then get a good job.	Success, Get a Good Job
Getting good grades is extremely important to me. I want to be successful in my career and I know that takes hard work and dedication.	Get a Good Job
my Family motivates me	Family
That it is the foundation for the rest of my life, and I am paying for it.	Self, Earn a Degree
Future	Success
I'm a person integrates with many skills in sport and study. What motivates me is to get a scholarship at a university and also because I plan to be a major league baseball.	Eligible for Athletics
Im the only one in 5 genarations to go to college	Family
What the future holds for me. If I do better in college, I will live a better life after school	Success, Earn a Degree
good enough grades to play sports	Eligible for Athletics
Because I want to be the best I can be	Success, Self
for my career and future to live a succesful life	Get a Good Job, Success
get a better future for me and my family	Family, Success
Sports, education purposes	Eligible for Athletics
i want to succeed so that i can get my degree and move onto a fou7r year college so that i am able to pursue a cqareer in teaching	Earn a Degree, Get a Good Job
Move on to a four year university and to eventually get into professional school.	Earn a Degree
i just want to get my classes finished so i can go ino my program already	Get into Program
Gaining a degree as well as making sure that I have a better future.	Earn a Degree, Success
That I need to have good grades to play.	Eligible for Athletics
Baseball!!	Eligible for Athletics

I want my professors to think well of me and be impressed by my work. The desire to graduate with a good GPA.	Earn a Degree
The goal of finally finishing school with a degree and getting a well paying job.	Earn a Degree, Get a Good Job
Myself	Self
Knowing that good grades will lead to more money and a better college experience.	Make Money
Get into another school.	Earn a Degree
Baseball	Eligible for Athletics
Being eligible to play sports and get my degree.	Eligible for Athletics, Earn a Degree
If I get good grades, I get to keep playing baseball. If my grades are bad, I can't play	Eligible for Athletics
Having a successful career	Get a Good Job
To pass my courses to get my credits to get my degree	Earn a Degree
The sport i am in motivates me to do well in my classes so i can stay in the sport.	Eligible for Athletics
Volleyball and the fact that I am paying for my own education	Eligible for Athletics, Self
The ability to move forward at get a good paying job in order to support myself and my family in the future.	Get a Good Job, Success
Myself. I want to get a good job.	Self, Get a Good Job

Student-Athlete Responses to: "What motivates you to succeed in your college courses?"

Appendix B

Nonstudent-Athlete Responses to: "What motivates you to succeed in your college courses?"

"Open-ended" Question - Raw Data	Code(s)
Not wanting to end up on public assistance.	Fear
To earn the degree that I want. so i can be successful in life	Earn a Degree, Success
better job opportunities	Get a Good Job
I don't want to waste my parents money on nothing, and I am beginning to actually want to learn and understand new things.	Fear, Want to Learn
I know I am paying a lot of money for my classes, therefore I don't want to waste it. I am also taking 2 classes, online, that count for my degree, which is very important to me, I'd say that motivates me.	Want to Learn, Earn a Degree
To finish my degree and transfer to state college and finish state college so I can get a good job	Earn a Degree, Get a Good Job
Thinking about the future and what I would like my life to be like. The better the grades I get the more motivated I am because I feel better about myself when I do well.	Success, Self
What mainly motivated me is that I want to do well in the career that I love	Get a Good Job
getting good grades, making the deans list or presidents lists and making my parents happy. Money and a good job after graduation.	Family, Make Money, Get a Good Job
My career choice.. I am going to be a teacher for the deaf and that's my goal and it keeps me going.	Get a Good Job
Knowing that this is what I need to do if I want to be financially set in the future.	Success
Receiving over a 3.0	Success
Growing up my family didn't have much and I always knew I didnt want to live that kind of lifestyle when I got older. I'm a first generation college student and I knew getting an education would help ensure a better future.	Fear, Success
Getting done and having a real job.	Earn a Degree, Get a Good Job
I want to secure myself finicially.	Make Money

I want to get at least a four year degree so that I can hopefully get a good paying job in the future doing something that I enjoy.	Earn a Degree, Get a Good Job
Currently to get done with this school	Earn a Degree
So i can get a good paying job to fulfill my dreams	Get a Good Job, Success
If I don't fail I don't have to retake any classes	Fear
I want to be able to have a good GPA so that my program can see this and know that I worked hard to get where I am at.	Get into Program, Success
My children. Showing them that it's possible	Family
I want to feel comfortable going into class when taking a test, knowing that I know the material. I want to know the most I can for when I get a job.	Want to Learn
I really wanted a career in sonography	Get into Program
thinking a head to getting a good career. and my classmates help challenge me.	Get a Good Job
Getting good grades, to be proud of myself, for my family to be proud of me. Also, paying out of pocket for my schooling!	Self, Family
Understanding the classwork and getting good grades	Want to Learn
Many student loans. Need to succeed to care for my daughter and disabled veteran husband. If not I have no way to pay back student loans.	Fear, Get a Good Job
i want to learn how to be successful at my job	Success
To get a good job. to help my family and to have a better life in the future. another thing is that I will be the first to get a degree in my family.	Success, Family
Knowing that I am in competition with other students. I don't like to not do well so seeing good grades motivates me.	Want to Learn
Graduation	Earn a Degree
To get good grades so I can get in to a 4 year school and get the degree I want for a career that interest me.	Earn a Degree, Get a Good Job
My Family, Basketball and the life style I want to live in the futrue. Also be the frist male in my family to not only start college but to finish college.	Earn a Degree, Family
Having to pay everything out of pocket and no help My soon to be born baby My parents effort to make a difference in my life	Fear, Family

Upon discharge from the Navy there was not many occupations that interested me with the experience that I had without continuing my education. Having a father, and two brothers all three of which completed degrees in electrical engineering at UND and seeing the lifestyles which they live now. Another motivator is proving wrong those that don't think can make it.	Get a Good Job, Self, Want to Learn
A brighter future, And making my mom proud.	Family, Success
Knowing that I will have to redo it if i fail.	Fear
My personal goals, future plans, and family.	Success, Family
I want to get the best grades I can get, I want to be able to tell family & friends that I am getting all A's	Success, Family
The need to have a better job in the future to be able to support my family.	Get a Good Job, Success
Hands on experience. Learning things I know I will actually be doing in my work force. The teachers being involved and giving constructive criticism and positivity. To graduate with good grades.	Earn a Degree, Success
My future career.	Get a Good Job
What motivates me is knowing that I will pass my classes and that I am able to move on with my education.	Earn a Degree
The fact that I have to have it for the rest of my life.	Success
Determination, Good Grades, and striving to achieve better and better things, being successful	Success
Knowing that I am working towards a reasuring job.	Get a Good Job
knowing I will have a good job when I'm done	Get a Good Job
I want to know more about energy and electronics	Want to Learn
To graduate and get a good job.	Earn a Degree, Get a Good Job
Having few assignments at a time. No distractions in the environment. Being able to easily understand the matierial.	Success
I want to have a career in dental assisting in the future and I know that in order for that to happen I have to do well in school.	Earn a Degree, Get a Good Job
Being able to see that my life will be better once I get my degree. Also I choose a major I have an interest in.	Success, Get a Good Job, Want to Learn
The future career I will be working towards.	Get a Good Job

My Family.	Family
Team work at labs, getting the work done	Want to Learn
I am motivated by the need to prove i can secsede. To prove that i am capible of rising above my mental disorder.	Success
What motivates me to succeed is being proud of myself for setting 4.0 goals and succeeding, succeeding for my parents, future family, boyfriend, and to show it on my resumes.	Self, Family
Competition. If I'm trying to get into a very competitive program I work that much harder to beat out the competition. Playing games in class for reviews really gets me to study extra hard so I can try to win the game. Also, having fun in class while learning really keeps me interested and motivated to continue.	Get into Program, Success, Want to Learn
What motivates me is knowing that if I continue to try hard and do my best that someday I will eventually work for my dream job which happens to be a the forensic science department.	Get a Good Job
Learn material and finish courses	Earn a Degree
I'm really interested in the field I am going into so that is what motivates me to succeed and do well in my classes.	Want to Learn
money	Make Money
My teacher told me I will never be good at it /pass	Success
Providing a good example for my kids, helping them to have faith in their personal abilities and value when they grow, by seeing my faith in mine. Also to be able to make more to provide better for them, and in a way that is fulfilling and builds character.	Family, Success
Family Better paying job	Get a Good Job, Family
A good future	Success
My professors	Family
Getting out of this shit hole	Earn a Degree
A good paying job. seeing good grades	Get a Good Job
The thought of working in a good dental office with good hours and pay.	Get a Good Job
The need for a job.	Get a Good Job

That i will get a degree and move on to get a good job.	Earn a Degree, Get a Good Job
Comfortable environment, friendly staff, challenging classes	Success
The possibility of passing.	Earn a Degree
Degree	Earn a Degree
Obtaining my degrees.	Earn a Degree
A LIGHT A THE END OF THE TUNNEL	Earn a Degree
My family and myself	Family, Self
My family and friends.	Family
My mom	Family
I am motivated to make a decent living for myself and succeed in my occupation.	Get a Good Job, Success
I want to be done with school and start working.	Earn a Degree, Get a Good Job
To be better then others	Success
I am motivated to go to college because I want a full time career that I enjoy doing and that pays enough money for me to be successful and comfortable.	Get a Good Job, Want to Learn, Success
To get my degree, graduate, and get a job.	Earn a Degree, Get a Good Job
Learning	Want to Learn
How much school costs and getting a job in the future	Fear, Get a Good Job
Knowing its my career on the line and it makes me want to do very well. I focus on a 4.0 every semester.	Get a Good Job
Not wanting to end up on public assistance.	Fear
Being done with school & getting a job.	Earn a Degree, Get a Good Job
Pride, self respect and a sincere drive for knowledge more so than a "grade". I want to succeed in a new career and what I am learning is the building blocks for that. Anything less than 100% is not moving forward in the right direction.	Want to Learn, Self, Get a Good Job

To know everything I need to know so I can make sure that every life that I'm caring for is handled safely and professionally.	Want to Learn
Knowing I will be able to find a career that is more than just a job.	Get a Good Job
Landing a great job.	Get a Good Job
Wanting to graduate and become a dental hygienist. I always have cared about me education.	Earn a Degree, Get a Good Job
I motivate myself due to observations of political and society trends. With help from remembering past personal/political events and some study of ancient history.	Self, Fear
Graduation	Earn a Degree
To be the first in my family to go through college and have a career. I also want to be a good influence for my kids.	Family, Get a Good Job
Getting my degree finished and getting back to work.	Earn a Degree, Get a Good Job
Wanting to get good grades, because I want to get my PHD, and need the grades to get it.	Earn a Degree
I want to graduate	Earn a Degree
My future and how it rides on how well I do in college.	Success
Being a paramedic	Get a Good Job
Being able to provide for my family in the future.	Success, Family
Job to pay off debts	Get a Good Job
Fear	Fear
At my age, and going back to college after 18 yrs, I want to get done as fast as I can.	Earn a Degree
Just want to get out into my career field.	Get a Good Job
for most of my classes I legitimately enjoy learning the content. However for others my motivation is maintaining my gpa, or succeeding in my future workplace	Want to Learn, Get a Good Job
Thinking about life after college and having a successful career in my field.	Success, Get a Good Job
To get good grades and learn as much as possible to be able to bring it with me to my future employer	Want to Learn, Get a Good Job

Looking ahead at future jobs	Get a Good Job
What motivates me is the responsibility to learn the material and hopefully apply what I learned to my everyday life	Want to Learn
To be successful in life	Success
knowing that I need to know this information to succeed in my career, and so I am able to educate my patients!	Get a Good Job
To better myself both mentally and financially. I want to do better than my past relatives. I also want to be able to rely on myself instead of other people to support myself.	Fear, Self
I really want a 4.0 GPA, obtaining a C is not an option for me. I want to proud of what I achieve.	Self
A future with a backbone!	Get a Good Job
The need to do well and earn a degree to have a steady career.	Get a Good Job
To keep my GPA up.	Earn a Degree
I want to get the career that I'm in school for.	Get a Good Job
to better my life	Self
Do get a great career	Get a Good Job
Because I owe it to my parents and it will allow me to do what I want in the future and possibly land a job.	Family, Get a Good Job
Just proving to myself I can do well. Make my family proud of the effort I put into things.	Self, Family
Self pride and wanting to get a better paying job	Self, Get a Good Job
personal drive, feeling of gratification, gives me a prupose	Self
Obtaining a good paying and personally satisfying job when I am finished.	Get a Good Job, Self
Make the big money	Make Money
Intrinsic goals i set for myself keeps me motivated	Self
The fear of having a fruitless future.	Fear
my motivations are my teachers and my fellow pures	Family
I want to learn the most that I can to become a great nurse.	Want to Learn
The end	Earn a Degree
Being the first in my family to graduate college.	Family

Wanting to have a job as a Dental Assistant.	Get a Good Job
The prospect of being able to find a well paying job.	Get a Good Job
Setting my goals and striving to pass classes with a B or better.	Earn a Degree
family, friends, improving on self	Family, Self
I think that plenty of things motivate me to succeed in my college courses but I would have to say that the instructors play a huge role in that and as well as myself as an individual knowing that I'm here for my future career so I make school my first priority.	Family, Self
Finishing college to find a good job.	Earn a Degree, Get a Good Job
Wanting a good job when im older	Get a Good Job
I want to do well so I can get my degree and work as a paramedic. The classes we take now apply directly to the field we will work in so it's very important to learn and be able to apply what we learn so that motivates me as well.	Get a Good Job, Want to Learn
My grandpa motivates me to succeed in college courses	Family
Starting a career	Get a Good Job
To get back to the earning level I was at before the 2008 recession, having had to take lower paying jobs and now that I'm trying to get back into the middle class, my past career experience is being ignored by employers.	Get a Good Job
Getting a good job and good grades	Get a Good Job
Advancing in career	Get a Good Job
The fact that i'm paying an arm and a leg.	Fear
A better future	Success
Graduating and getting good grades	Earn a Degree
Have always had a value on my education, Knowing if i put in the hard work now it'll benefit me in my future career,	Want to Learn, Get a Good Job
Getting all A's. Doing my best and learning all that I can to be successful in my next career.	Want to Learn, Success, Get a Good Job

That I want to graduate and be successful at life.	Earn a Degree, Success
Trying to get my AA Degree and I would like to get better opportunities in life.	Earn a Degree, Success
Getting a good job	Get a Good Job
Knowing that this is what I want to do with my future and I want to be successful. I also know that if I fail, I might not get another chance.	Success, Fear
Getting good grades shows me that with everything else on my plate I can do it. I am looking forward to succeeding at school to make new career path an easy transition. I enjoy learning and seeing how much I can actually accomplish.	Success, Get a Good Job, Want to Learn
The fact that i have a big chance at making a lot of money	Make Money
Getting a career after graduating.	Get a Good Job
I want a good job that pays well and I enjoy it.	Get a Good Job
What motivates me to do well in college is that I want to eventually go to University of Minnesota and get my large veterinary degree or animal nutritionist degree.	Get a Good Job
The goal of keeping up my GPA. The goal to end with a degree to come aside my Husband financially. To be able to find a good job if needed in my lifetime.	Get a Good Job
Knowing that I have accomplished something that I have always wanted jn life.	Self
Looking at the future and know I don't have to continue in my current career and I can expand and learn a new skill. My last career was unsatisfying. I am hoping for a more meaningful and interesting career.	Get a Good Job
I hate having to struggle through life.	Fear

Appendix C

Student-Athlete Responses to:

"What reduces your motivation to succeed in your college courses?"

"Open-ended" Question – Raw Data	Code(s)
What reduces my motivation is time. It takes a lot of time out of my day. Sometimes I can't go places that I want to because of school work, That reduces my motivation.	Busy
When the class doesn't apply to my major, or I want to go do something fun for once	Couse doesn't apply to major
Netflix and Time restraints	Busy
Rude professors	Instructors
I don't always like going to class when there's bad weather, or when I feel that class is pointless. I don't like when teachers waste a ton of time talking about our homework after we've finished it. Like when we get a reading assignment, the point of reading it is to have it done before class but when the teacher practically reads it to us in class (for the lesson) I have no motivation to do my homework or participate in class when I already know what the readings were about. An overload of homework is also not very motivating. I take classes here and at state and here there is 50 times as much homework and almost no tests where at state, there's not much homework, but lots of tests. I feel they give you exactly what you need to know and don't bother with the busy work but here there's a lot of busy work. I get good grades at both campuses but I feel that excess homework is not motivational...	Couse doesn't apply to major, Instructors, Homework
When I start to think about the negative things that are going on in my life.	Stress
Nothing	Nothing
Friends	Party
Busy	Busy

Nothing, winning is everything.	Nothing
Teachers that don't put in the best effort they can to help me succeed.	Instructors
when i am tired	Tired
going out to a party other then doing homework	Party
work, being tired, social life.	Work, Tired, Party
The cost and demanding schedule.	Busy
So busy all the time.	Busy
nothing	Nothing
Just being too tired. I work hard babysitting, working at Callan's Furniture, playing baseball and mainting a good GPA. It is tiring and stressful.	Tired, Work, Stress, Homework
lots of homework, bad teachers, boring classes, or classes that don't involve anything I want to do in the future	Homework, Instructors, Couse doesn't apply to major
Waking Up And All The Work.	Busy
a teacher that doesnt give a crap about you	Instructors
Rude professors and exhausting classes.	Instructors, Homework
Having to work a lot and feeling really overwhelmed with a busy schedule.	Work, Busy
Teachers that don't work with me and help me.	Instructors
Being tired	Tired
The main thing that reduces my motivation is having bills to pay for right now.	Stress
The lack of sleep I get and the little free time I have	Busy, Tired
My own lazyness.	Tired
Fatigue	Tired

time	Busy
Not enough sleep and difficult teachers	Tired, Instructors
financial stress	Stress
What reduces my motivation to succeed in class is the fact that we play the game for free here and sports is the only reason that i am at the school. If i was strictly a student, i would have a lot more motivation but because im here for baseball, it gets challenging.	Busy
It is a lot of time and work	Busy
Nothing I want to do my very best in every course.	Nothing
Sleep deprived, too stressed, family issues, social life interferes	Tired, Stress, Party, Family
Lack of time.	Busy
being so far from home	Family
None	Nothing
Pointless classes we have to take	Course doesn't apply to major
nothing discourages me . actually all that is around me motivated to move forward with my career.	Nothing
nothing	Nothing
Assignments that I think are pointless.	Homework
the time that i have to study	Homework
Stupid teachers	Instructors
when the teachers are hard to understand. and aren't good at explaining things	Instructors
when i start to get lazy	Tired
Early classes, family issues	Tired, Family
lack of sleep	Tired
N/A	Nothing

bad grades	Grades
The workload	Busy
nothing	Nothing
Right now, nothing but without baseball my motivation to succeed in college won't be the same	Nothing
Teachers who do not give feedback or praise for good work.	Instructors
Na	Nothing
Partying	Party
Homework	Homework
long hours in a classroom	Busy
Tiredness and becoming lazy.	Tired
Going to class and doing homework	Homework, Busy
The higher grading scale, and high level of stress	Stress, Grades
When I have unhelpful, rude and annoying teachers	Instructors
Not getting enough sleep and teachers that are hard to understand or work with.	Tired, Instructors
Stress	Stress
Nothing, I always want to do my very best.	Nothing
Myself. I sometimes would rather have fun than do school work.	Party

Appendix D

Nonstudent-Athlete Responses to:
 "What reduces your motivation to succeed in your college courses?"

"Open-ended" Question - Raw Data	Code(s)
Stress	Stress
The amount of work that i have to do be able to pay bills	Work
complacency	Tired
Something that reduces my motivation is reading and writing, most of college is just reading and writing but I don't exactly enjoy doing it.	Homework
When my teacher has poor teaching skills and isn't willing to help me to succeed. That makes me feel like I don't need to try as hard because they wont help me any ways.	Instructors
The level of pointlessness to the courses. I read books in my free time that teach me 10 times as much useful information than most classes teach me.	Course doesn't apply to major
When I'm not understanding and having a hard time in the class.	Homework
When I can't understand something after spending many hours trying to learn the material	Homework
the teacher Gajen Ram.	Instructor
The process, and math.	Homework
When I am required to take courses that do not apply to my major directly, such as general education courses.	Course doesn't apply to major
Frustrations with class work, being tired, wanting to go out with friends, wanting to watch netflix shows	Homework, Tired, Party
Stress, when life happens and things get out of whack its hard to concentrate on school, especially being so far from home.	Stress, Family
Having to come and sit in class for 4 hours at a time.	Busy
When the school or instructor is unprepared or uncooperative.	Instructor

The amount of work that it entails inside and outside of class. The different forms of grading that each professor has and having to take general courses that I am not interested in.	Homework, Course doesn't apply to major
Un professional instructors	Instructor
The time needed to spend	Busy
When I have to take courses that don't pertain to my job and are not necessarily interesting	Course doesn't apply to major
The only time I start to slack when it comes to school is closer to the end of the school year, I lack motivation to keep my grades up because I have been in school and doing homework for how long its hard to continue that motivation for so long.	Busy, Homework
The need for so many study hours.	Homework
I get side tracted with friends not in school, boyfriend Or working out that brings my focus away from school	Party
Bad lectures, too much criticism.	Instructor
lack of clarity on homework assignments and tests.	Homework
Outside factors such as watching tv, electronics, wanting to hang out with friends, etc.	Party
Differences in instructor expectations and teaching abilities	Instructor
Unclear instructors, classes where it is redundant.	Instructor
miss communication	Instructor
Seeing my bill each year and thinking about having to pay it back with interest.	Stress
Having a job and being tired by the time I get home	Work, Tired
Doing bad on a test	Grades
A lot of it seems to be repeated from class to class. It is time consuming and takes a lot or work and dedication to to stay on top of it all.	Course doesn't apply to major, Homework
Being sick weather	Stress

Unfair treatment of students by instructors that show favoritism, each of us learns differently and I don't like how some are penalized because they are more quiet.	Instructor
Laziness, and homework that has nothing to do with what I want to do in life.	Course doesn't apply to major
School work outside of the classroom.	Homework
When instructors or peers do not take the course or information seriously.	Instructor
Lack of time	Busy
working long hours and having to get up very early to go to work make me very tired when I get off so all I want to do is sleep when I get home instead of do homework	Work, Tired
Learning things I don't think will help me in my work force or what I know I won't be doing. Really hard things I don't understand without the teacher helping me is not my favorite.	Course doesn't apply to major, Instructor
The time away from my family.	Family
If they class doesn't really interest me I have a hard time motivating myself in that class.	Course doesn't apply to major
The fact that I have spent so much time in school already and just want to be done.	Stress
Life distractions.	Stress
If i dont understand what im learning.	Homework
When I do bad in classes	Grades
nothing	Nothing
na	Nothing
Nothing	Nothing
Working too much. Creates stress, fatigue and mental strain.	Work, Tired, Stress
Working around 35 hours a week and trying to find time around that schedule to get homework done and still have somewhat of a life outside of work and school.	Work, Homework, Party

Right now, I am very frustrated by the lack of funding opportunities to me compared to students that don't speak English as a primary language, also students of color are offered more funding opportunities than myself. I see this as a hamper in my education because I might have to quit college to work. This I see as discrimination. Why are the non-English speaking students allowed to go to college and meet an exemption of getting cash assistance and food support and don't even have to work to meet those exemptions.	Stress
The few classes I have that literally teach me nothing.	Course doesn't apply to major
-Teachers who don't teach in a way I can understand - Difficulty of Class Course -Procrastination	Instructor, Homework
Seeing other students getting a free ride. Getting their tuition paid for by government grants and sports. It is tough to work hard at school and work to have good grades and pay bills while watching other students being able to have their tuition paid for no real reason of working hard they just sort of get it handed to them.	Stress
Stress, lack of sleep	Stress, Tired
I have ADD, ASD, anxiety, and phoneticly spell. it is near impossible for me to focus on random tasks, and sometimes those tasks are schoolwork related.	Stress
Just the amount of work I need to put into each course and having to make money about 30-40 hours on top of that.	Work, Homework
Teachers who have you just read the chapters and teach yourself really make it hard for me to want to even try. A teacher is supposed to teach. I understand having us do research papers and do some self-learning outside of school, but a teacher who has you do all of the learning at home and then they just test you on it make it really hard to stay motivated. Why would I care about learning when the teacher doesn't care about teaching?	Instructor
The amount of years it takes me before I will be done with college gets to me sometimes. I will be 26 by the time that I graduate college and can start looking for a job. It scares me because I would like to start having a family by then and I	Homework, Busy

know that it would be very hard to continue with college while having kids. Also I have distractions in life that get me sidetracked and want to do everything else besides school work.	
Lots of homework	Homework
lack of competent peers	Stress
We aren't even considered full time and all I do is study and go to class.	Homework, Busy
Feeling judged, pressure from too many people/places/responsibilities at once, knowing that I cannot perform my best at everything, feeling like my performance drags others down.	Stress
Balancing school, work and other activities (stress)	Stress, work, Homework
Teachers that don't care	Instructors
Alcohol	Party
Comming to this shit hole	Instructors
Overwhelmed by projects at the end of the semester.	Homework
stress	Stress
Lack of dedication by instructors.	Instructors
When the teachers give so much homework and they then expect it to get done for the next day. They act like we don't have other classes that have homework due on the same day.	Homework, Instructors
distractions, outside environment, poor teachers, etc..	Party, Instructors
An overly heavy workload.	Homework
Driving.	Busy
Being out of high school for 5 years and not done with college.	Homework
TOO MANY TESTS IN ONE WEEK	Homework
Topics I don't really comprehend well	Grades
Being busy with work and various activities.	Busy

Stress	Stress
Teachers that are not engaging and interesting me reduces my motivation.	Instructors
Scolding	Instructors
I get discouraged when I get overwhelmed with homework, but I remind myself what I am doing this for and if I stay ahead of the work, everything will work out.	Homework
Large amount of homework	Homework
Teachers that aren't very good at teaching and get mad when you ask questions	Instructors
Working. I am married and have a Mortgage and a child on the way. I wish I could work more and go to school.	Work, Family
Setbacks or getting behind in my courses.	Homework, Family
A lack of consistency in grading, teachers that are old school using a shame based approach as if pain is the only great way to learn a lesson. A lack of confidence in myself when I fail to grasp quickly new concepts the require much more work on my own in order to master that concept.,	Instructors, Stress
Classes that I don't find interesting	Course doesn't apply to major
Sometimes if a teacher doesnt expect a lot I will just do the minimum instead of really showing my potential	Instructors
Lack of instructor motivation. Lack of challenge in course.	Instructors, Course doesn't apply to major
Knowing that it is almost summer.	Tired
The fact that college is a business, it's run like a business, and it creates an atmosphere of typical business politics. Sad.	Stress
Teachers not being encouraging	Instructors
If I'm not doing good in a class, it makes me feel like maybe I'm not going to succeed.	Grades
family commitments. financial considerations.	Family, Stress

When there are too many distractions going on, especially when studying at home.	Party
Nothing	Nothing
The workload being as much as it is.	Homework
Not much	Nothing
The stress of every day life.	Stress
The preparedness of instruction and execution of said instruction	Instructors
Lack of challenge	Course doesn't apply to major
nothing really.	Nothing
low expectations and standards. when you can get a 97% in a class with very little studying its hard to be motivated to study	Course doesn't apply to major
Nice weather	Party
I have to work a lot to be able to pay bills so school can sometimes be a Hassel	Work
liberal teachers that dont let you have your own opinion	Instructor
It mostly has to do with the teacher that presents the material. I have had several instructors who presented the material poorly such as not involving the class, no sense of humor, or just rambling on.	Instructor
when there are major problems in my life	Stress
getting negative comments feedback from instructors	Instructor
The amount of hours I work a week, after work I feel especially lazy and tend to put school work on the back burner after a shift at work. Teachers also have an effect on if i want to succeed in their classes as well. A unorganized class makes me not want to learn the information or even try at all.	Work, Tired, Instructor
2 of my poor teachers this semester make it hard for me to come to class and want to learn from them. I am usually an	Instructor

excellent, but my attitude to two of my classes this semester is really low due to the delinquents that SCTCC has hired.	
Personal time in having to spend on homework.	Busy, Homework
Not having enough time to spend on leisure activity	Party
The lack of clarity of the homework assignment.	Homework
The stress	Stress
nothing	Nothing
stress	Stress
Lack of interest in the subject.	Course doesn't apply to major
Depression, social status issues, lack of interest.	Stress, Course doesn't apply to major
When things are hard to understand	Instructor
hanging out with friends, partying	Party
The stress related to taking classes (homework: including writing papers, having to take many tests, and having to learn the material very quickly).	Homework
being lazy	Tired
Bad instructing	Instructor
The childish environment. Every room here is a flash back to grade school. There are even Disney posters in the library.	Instructor
What reduces my motivation is the lack of sleep and outside activities that are not school related.	Tired, Course doesn't apply to major
The assignments that take hours to complete. I loose the interest in the topic which in return does not help me to learn to my fullest potential.	Homework
other things	Busy
Working a lot.	Work
Wanting to sleep.	Tired

Wanting to participate in family/friend activities.	Party
My inability to understand the material.	Homework
Having to work each day, then coming home exhausted and just wanting to sleep.	Work, Tired
the multiple tests in a week	Homework
Financial difficult	Stress
Wanting to have fun while in college	Party
sometimes the challenge of the courses can make me feel discouraged. Low test scores also can be a struggle but I just try to stay positive and work hard towards improving my academic performance.	Grades
the early hours of the classes reduces my motivation	Tired
Being overloaded with school and work	Homework, Work
Having my instructors teach the course after the quiz has been given.	Instructor
Bad grades and bad days	Grades
Finances	Stress
Teachers that don't seem to care enough or have the ability to teach me the way I think I should be taught or answer my questions thoroughly without getting annoyed.	Instructor
Stress in daily life	Stress
When i get overwhelmed with classwork and tests on the same days	Homework
Life outside of class (spending time with friends, family, work, TV)	Party, Work
Lack of instruction or practical experiences.	Instructor
That I want to work and have a social life as well.	Party
So far I am motivated about what I am doing and I hope stay in progress.	Nothing
Distractions	Busy

Distractions such as nice weather, and wanting to work and have a life outside of school. I spend so much time at school that its hard to be motivated enough to go home and do homework and study.	Work, Party
When the class is unorganized. Not knowing when things are due and open due dates. Also when I work really hArD to get my stuff turned in early or on time and late assignments are excused. I am one of 3 people that has kids, everybody has things that keep them busy but kids are a full time job, my stuff is turned in on time and others do not. Their excuses are always heard. Also how much class people miss for a petty cold is crazy. To each their own but I thought u could only miss so much class before u are kicked out. I had surgery and still showed up 2 days later.	Instructor, Family, Stress
Alcohol	Party
Lack of time.	Busy
All the hours of class we have.	Busy
When I do bad on a test even though I studied a lot.	Grades
The time it takes to complete busy work in excess in a couple classes. Doing Homework at home.	Homework
The stress of family and school at the same time. When it gets to this point I have reached my breaking point and I need to relax and get away for a little bit.	Stress
Video games, youtube, I am addicted to content from the internet. I sometimes have a negative attitude on the future of the country and the globe that makes me feel like all this is going to be for nothing. That my personal efforts in my life would somehow support things that I don't find ethically sound. I have to always be battling these perceptions in my mind to keep going.	Party, Stress
Un-prepared instructors	Instructors

Appendix E

“Student-Athlete Responses to:

"What keeps you motivated to succeed athletically in your sport?"

Open-ended Question – Raw Data

Code(s)

My love for baseball	Love of the game
I love the game and I want to be the best I can possibly be.	Love of the game, Being the best
I love to play.	Love of the game
To win.. and to know that everyone around me is fighting for the same thing, I dance for the SCSU Dance Team and knowing that we're all doing the same dance for the same amount of time makes me want to work hard for myself and for my team. I love to improve myself every chance I get.	Win, Teammates, Personal pride
My Family and Jesus Christ	Teammates
My determination to do my best at everything I do	Being the best
Winning	Win
Priorities and emotions toward the game	Love of the game
Always striving to be better than my competition	Win
My teammates and coach and our drive to win.	Win, Teammates
knowing that with hard work i will help the team win	Win
challenge myself to be a better player every practice. pushing myself to work to be the best	Being the best
It is my last time I will be able to do this and I want to end my career on a good note.	Teammates, Win
Wanting to get better everyday at the sport I love.	Love of the game, Personal pride
it motivates me that I want to be a good athlete	Being the best
Because I want to be the best i can be for myself and my team. I know i can make an impact if I do my best.	Teammates, Being the best
To play and move onto another college and get free food	Teammates, Playing at the next level
To BE The Best And Make Others Better.	Being the best, Teammates
To move on to the next level.	Playing at the next level
personal pride and enjoyment	Personal pride
Helping my team to be successful.	Teammates
I always strive to do my best, and reaching my full potential is something that motivates me.	Being the best
The girls I play with and the effort everyone gives and my coach driving me to be the best I can be	Teammates, Being the best

Winning	Win
I know how good I can be and it pushes me to practice.	Being the best
I love it and I want to be good at it	Love of the game, Being the best
To try and be the best at what I do.	Being the best
Winning and teammates	Win, Teammates
All the other players	Teammates
My drive to want to be the best I can be and going out there to show them what I can do.	Being the best
My whole family.	Teammates
I want to win, plain and simple.	Win
It's something I love to do and want to get better at	Love of the game, Personal pride
To be a known team, and be feared by everyone we play.	Win
I want to do good for me. My family pushes me to do good, the competition pushes me.	Personal pride, Win
Playing the sport I love with great teammates.	Love of the game, Teammates
going to practice	Personal pride
To be the best player/teammate I can be to help my team win.	Being the best, Teammates, Win
Desire to win	Win
first of all my passion for being a major league baseball or at least play at a good college with a scholarship I also like the competition and that is what I find here why I like this. other of my motivations is my family.	Playing at the next level
the passion for the game	Love of the game
You never know when you will play your last game.	Teammates
compeating	Win
I want to be the best I can be	Being the best
to be able to play D1 baseball in the future. and to help my team make it to the worldsries	Playing at the next level, Win
my sense of competition and how i want to be the best over everyone i my position	Being the best
Playing time	Teammates
name recognition, joy of the game i love	Love of the game
To move on to a four year university and to win.	Playing at the next level, Win
To know I am getting better each day Make sure all my weaknesses are strengths To be the best at what I do	Being the best
That I need to work hard everyday to play	Personal pride

Family, Pride	Personal pride
Personal satisfaction. The desire for my coach and teammates to be impressed by how I play.	Personal pride, Teammates
It is my last opportunity to play at the college level and I want to make the most of it.	Personal Pride
Myself	Personal pride
The thought of winning a national championship.	Win
Competition	Win
I want to get better and fin a scholarship in other university	Playing at the next level
Trying to be the best basketball player I can be and move on to play at a higher level.	Being the best, Playing at the next level
Getting better everyday and having the opportunity to move on to the next level	Playing at the next level, Personal pride
To be there for my team, and be the best I can be	Teammates, Being the best
I love sports and I want to play	Love of the game
Getting 1st / winning. Positive coaches and teammates. Also to improve with my team and be the best athletic that i can be.	Win, Teammates, Being the best
The fact that I am on a team and I love the sport I play and my teammates	Love of the game, Teammates
The fact that there are higher levels and to reach those levels, also to be the best player on the field.	Being the best, Playing at the next level
I enjoy competing and I enjoy winning. I want to do the best I can.	Win, Being the best

Appendix F

“Student-Athlete Responses to:

“What reduces your motivation to succeed in your college sport?”

Open-ended Question – Raw Data

Code(s)

Being tired, having homework	Tired
Muscle Soreness/ my Surgery	Negativity
Some team mates that I don't get along with	Teammates
people who don't work hard, or don't try. When there's no positivity in practice. and when there's no goals to achieve.	Teammates, Negativity
When I think about my problems more than solutions.	Negativity
Nothing	Nothing
Being tired	Tired
Injuries and time	Tired
Losing more than I win.	Losing
If we were really bad, which we aren't.	Losing
when i struggle	Negativity
stress, being tired, personal issues	Tired, Negativity
I don't really feel like there is anything that reduces my motivation.	Nothing
Nothing	Nothing
nothing	Nothing
Being tired and not playing my best in certain games. Sometimes if i do not have a good game that can sometimes get in my head and that can reduce my motivation to succeed	Tired, Negativity
Coaches always on your back, extra stuff that's unnecessary to what your sport involves	Coach
NOthing.	Nothing
Not enough time.	Tired
when i work hard, and i dont get any credit	Negativity
When not everyone is in it for the same common goal.	Teammates
The amount of time and energy spent.	Tired
If we were really bad. Bad attitudes, giving up during games	Losing, Negativity
Not much	Nothing
Not being paid to play when you have things to pay for.	Negativity
My coach doesn't know how to coach	Coach
Failing because I'm not focused.	Negativity
Losing and fatigue	Tired, Losing

time	Tired
Bad attitudes and poor sports	Negativity
The competetion	Negativity
Somehting that reduces my motivation in sports is having bad teammates that make the game about themselves.	Teammates
I want to keep up with my school work	Tired
Nothing our team and myself try hard everyday to exceed our potential.	Nothing
School work, or work interferes. Family and friend issues get in the way.	Negativity
Unfair coaching.	Coach
not being able to play	Negativity
None.	Nothing
nada	Nothing
actually what I like obstacle use it as something to make me stronger. I have several things like having my family away and not having enough money to pay for college. but the only thing I think about is moving forward.	Nothing
nothing	Nothing
Not getting playing time.	Negativity
being tired	Tired
If we were really bad	Losing
nothing reduces my motivation to succeed	Nothing
nothing.	Nothing
Nothing	Nothing
ammount of time for practice, time consumption in general	Tired
Nothing winning is everything	Nothing, Losing
The fear of failing	Negativity
nothing	Nothing
Struggles	Negativity
Unachievable goals. Playing for a coach who is never pleased.	Coach, Negativity
Na	Nothing
Nothing. Ball is life.	Nothing
N/A	Nothing
playing time	Negativity
Not being mentally strong and focus	Negativity
Running. I hate running.	Negativity
The little amount of time i have	Tired
Nothing	Nothing
Bad days so tension between coaches and athletes or just tension inbetween athletes. It makes it harder to work as a	Coach, Negativity, Teammates

team because when there is tension between teammates or teammates in coaches then its more making that sport an individual sport instead of a team sport.	
Nothing I love to play the game	Nothing
Nothing, I want to be the best player on the field.	Nothing
Nothing.	Nothing

Personal Experiences

Open-Ended Questions

All participants:

- What motivates you to succeed in your college courses?
- What reduces your motivation to succeed in your college courses?

Student-athletes only:

- What keeps you motivated to succeed athletically in your college sport?
- What reduces your motivation to succeed in your college sport?

Basic Need Satisfaction:

The following questions concern your thoughts and feelings regarding your **OVERALL EXPERIENCE** in your college courses. Please indicate how true each of the following statement is for you:

1 = Strongly disagree, 2, 3, 4 = neutral, 5, 6, 7 = Strongly agree

Name	Item
	Autonomy Satisfaction
Auton15_1	1. In college, I feel a sense of choice and freedom in the things I undertake.
Auton15_2	7. I feel that my decisions in college reflect what I really want.
Auton15_3	13. My choices in college express who I really am.
Auton15_4	19. I feel I have been doing what really interests me in college.
	Autonomy Thwarting
Autontw15_1	5. Most of the things I do in college feel like “I have to.”
Autontw15_2	10. In college, I feel forced to do many things I wouldn’t choose to do.
Autontw15_3	15. I feel pressured to do too many things in college.
Autontw15_4	18. My daily activities in college feel like a chain of obligations.
	Competence Satisfaction
Compt15_1	3. I feel confident that I can do things well in college.
Compt15_2	9. When I am attending college classes, I feel capable at what I do.
Compt15_3	14. In college, I feel competent to achieve my goals.
Compt15_4	21. I feel I can successfully complete difficult tasks in college.
	Competence Thwarting
Compttw15_1	6. In college, I have serious doubts about whether I can do things well.
Compttw15_2	11. I feel disappointed with my performance in college.
Compttw15_3	17. When I am attending college classes, I feel insecure about my abilities.
Compttw15_4	23. In college I feel like a failure because of the mistakes I make.
	Relatedness Satisfaction
Relate15_1	4. I feel that the people I care about in college also care about me.
Relate15_2	12. In college, I feel connected with people who care for me, and for whom I care about.
Relate15_3	16. I feel close and connected with other people who are important to me in college.
Relate15_4	24. I experience a warm feeling with the people I spend time with in college.
	Relatedness Thwarting
Relatetw15_1	2. When I am attending classes in college, I feel excluded from the group I want to belong to.
Relatetw15_2	8. I feel that people who are important to me in college are cold and distant towards me.
Relatetw15_3	20. I have the impression that people I spend time with in college dislike me.
Relatetw15_4	22. I feel the relationships I have in college are just superficial.

Adapted from:

Van den Broeck, A., Vansteenkiste, M., De Witte, H., Soenens, B., & Lens, W. (2010). Capturing autonomy, competence, and relatedness at work: Construction and initial validation of the Work-related Basic Need Satisfaction scale. *Journal of Occupational & Organizational Psychology*, 83(4), 981-1002. doi: 10.1348/096317909X481382

Academic Motivation Scale:

Using the scale below, indicate to what extent the following items correspond to the reasons, thoughts, and feelings regarding why you are going to college.

1 = Does not correspond at all, 2, 3, 4 = Corresponds moderately, 5, 6, 7 = Corresponds exactly

Name	Scale/Item
	Intrinsic motivation - to know
intrin15_1	2. Because I experience pleasure and satisfaction while learning new things.
intrin15_2	7. For the pleasure I experience when I discover new things never seen before.
intrin15_3	11. For the pleasure of broadening my knowledge about subjects that appeal to me.
intrin15_4	16. Because my studies allow me to continue to learn about many things that interest me.
	Extrinsic motivation – identified
ident15_1	3. Because I think that a college education will help me better prepare for the career I have chosen.
ident15_2	8. Because eventually it will enable me to enter the job market in a field that I like.
ident15_3	12. Because this will help me make a better choice regarding my career orientation.
ident15_4	17. Because I believe that a few additional years of education will improve my competence as a worker.
	Extrinsic motivation – introjected
introj15_1	5. To prove to myself that I am capable of completing my college degree.
introj15_2	10. Because of the fact that when I succeed in college I feel important.
introj15_3	15. To show myself that I am an intelligent person.
introj15_4	20. Because I want to show myself that I can succeed in my studies.
	Extrinsic motivation - external regulation
extrin15_1	1. Because with only an undergraduate degree I would not find a high-paying job later on.
extrin15_2	6. In order to obtain a more prestigious job later on.
extrin15_3	13. Because I want to have "the good life" later on.
extrin15_4	18. In order to have a better salary later on.
	Amotivation
amot15_1	4. Honestly, I don't know; I really feel that I am wasting my time in school.
amot15_2	9. I once had good reasons for going to college; however, now I wonder whether I should continue.
amot15_3	14. I can't see why I go to college and frankly, I couldn't care less.
amot15_4	19. I don't know; I can't understand what I am doing in school.

Adapted from:

Vallerand, R. J., Pelletier, L. G., Blais, M. R., Brière, N. M., Senécal, C. B., & Vallières, E. F. (1992). The academic motivation scale: A measure of intrinsic, extrinsic, and amotivation in education. *Educational and Psychological Measurement*, 52, 1003-1017. doi:10.1177/0013164492052004025

Perceived Success in College

This academic year, how successful do you feel...

1 = Very unsuccessful, 2, 3, 4 = Somewhat successful, 5, 6, 7 = Very successful

Name	Items
psucccolcl15_1	...you are in college courses overall?
psucccolcl15_2	...about the grades you got on tests and assignments in your college courses?
psucccolcl15_3	...in achieving the learning goals you set for yourself?
psucccolcl15_4	...when it comes to knowing that you made an honest effort to make progress during the year?
psucccolcl15_5	...in doing all the work, meeting deadlines, keeping up with the reading, studying, etc.?
psucccolcl15_6	...in gaining new knowledge and understanding from your courses?

Adapted from:

Hall, N. C., Hladkyj, S., Perry, R. P., & Ruthig, J. C. (2004). The role of attributional retraining and elaborative learning in college students' academic development. *The Journal of Social Psychology, 144*(6), 591-612. doi: 10.3200/SOCP.144.6.591-612

GPA in your college courses:

Name	Item
gpa13	Please estimate/indicate your current or GPA (e.g., 4.0): [Enter number in textbox; range 0.0 to 4.0]

Sports Motivation Scale:

Why do you participate in college athletics?

Using the scale below, please indicate to what extent each of the following items corresponds to one of the reasons for which you are presently participating in college athletics.

1 = Does not correspond at all, 2, 3, 4 = Corresponds moderately, 5, 6, 7 = Corresponds exactly

Name	Scale/Item
	Intrinsic
Spmotintr15_1	2. Because it gives me pleasure to learn more about my sport.
Spmotintr15_2	7. Because I find it enjoyable to discover new performance strategies.
Spmotintr15_3	14. Because it is very interesting to learn how I can improve my skills.
	Integrated
Spmotinte15_1	11. Because practicing sports reflects the essence of whom I am.
Spmotinte15_2	18. Because participating in sport is an integral part of my life.
Spmotinte15_3	13. Because through sport, I am living in line with my deepest principles.
	Identified
Spmotid15_1	3. Because I have chosen this sport as a way to develop myself.
Spmotid15_2	8. Because I found it is a good way to develop aspects of myself that I value.
Spmotid15_3	17. Because it is one of the best ways I have chosen to develop other aspects of myself.
	Introjected
Spmotinj15_1	5. Because I would feel bad about myself if I did not take the time to do it.
Spmotinj15_2	10. Because I feel better about myself when I do.
Spmotinj15_3	16. Because I would not feel worthwhile if I did not play.
	External
Spmotex15_1	1. Because people I care about would be upset with me if I didn't.
Spmotex15_2	6. Because I think others would disapprove of me if I did not play.
Spmotex15_3	12. Because people around me reward me when I play.
	Amotivation
Spmotamot15_1	4. I used to have good reasons for doing sports, but now I am asking myself if I should continue.
Spmotamot15_2	9. So that others will praise me for what I do.
Spmotamot15_3	15. It is not clear to me anymore; I don't really think my place is in playing sports.

Adapted from:

Pelletier, L. G., Rocchi, M. A., Vallerand, R. J., Deci, E. L., & Ryan, R. M. (2013). Validation of the Revised sports motivation scale. *Journal of Sport & Exercise Psychology, 14*(3), 329-341.

Basic Need Satisfaction:

The following questions concern your thoughts and feelings regarding your **OVERALL EXPERIENCE** on your athletic team. Please indicate how true each of the following statement is for you:

1 = Strongly disagree, 4 = neutral, 7 = Strongly agree

Name	Item
	Autonomy Satisfaction
AthAuton15_1	1. On my team, I feel a sense of choice and freedom in the things I undertake.
AthAuton15_2	7. I feel that my decisions on my team reflect what I really want.
AthAuton15_3	13. The choices I make on my team express who I really am.
AthAuton15_4	19. I feel I have been doing what really interests me on my team.
	Autonomy Thwarting
AthAutontw15_1	5. Most of the things I do on my team feel like "I have to."
AthAutontw15_2	10. On my team, I feel forced to do many things I wouldn't choose to do.
AthAutontw15_3	15. I feel pressured to do too many things on my team.
AthAutontw15_4	18. My daily activities in athletics feel like a chain of obligations.
	Competence Satisfaction
AthCompt15_1	3. I feel confident that I can do things well during practices and games.
AthCompt15_2	9. When I am competing, I feel capable of what I can do.
AthCompt15_3	14. On my team, I feel competent to achieve my goals.
AthCompt15_4	21. I feel I can successfully complete difficult tasks on my team.
	Competence Thwarting
AthCompttw15_1	6. On my team, I have serious doubts about whether I can do things well.
AthCompttw15_2	11. I feel disappointed with my performance on my team.
AthCompttw15_3	17. When I am competing on my team, I feel insecure about my abilities.
AthCompttw15_4	23. On my team I feel like a failure because of the mistakes I make.
	Relatedness Satisfaction
AthRelate15_1	4. I feel that the people I care about on my team also care about me.
AthRelate15_2	12. On my team, I feel connected with people who care for me, and for whom I care.
AthRelate15_3	16. I feel close and connected with other people who are important to me on my team.
AthRelate15_4	24. I experience a warm feeling with the people I spend time with on my team.
	Relatedness Thwarting
AthRelatetw15_1	2. When I am with my team, I feel excluded from the group I want to belong to.
AthRelatetw15_2	8. I feel that people who are important to me on my team are cold and distant towards me.
AthRelatetw15_3	20. I have the impression that people I spend time with on my team dislike me.
AthRelatetw15_4	22. I feel the relationships I have on my team are just superficial.

Adapted from:

Van den Broeck, A., Vansteenkiste, M., De Witte, H., Soenens, B., & Lens, W. (2010). Capturing autonomy, competence, and relatedness at work: Construction and initial validation of the Work-related Basic Need Satisfaction scale. *Journal of Occupational & Organizational Psychology*, 83(4), 981-1002. doi: 10.1348/096317909X481382

Perceived Success in Athletics

This season, how successful do you feel you will be in...

1 = Very unsuccessful, 2, 3, 4 = Somewhat successful, 5, 6, 7 = Very successful

Name	Items
psucath15_1	...winning games this season?
psucath15_2	...achieving the athletic goals you set for yourself?
psucath15_3	...implementing the game plans created by the coaching staff?
psucath15_4	...putting forth your best effort in nearly every practice and competition?
Psucath15_5	...arriving on time and prepared for all athletic events and activities?
psucath15_6	...developing new skills?
psucath15_7	...understanding the game plans created by the coaching staff?

Adapted from:

Hall, N. C., Hladkyj, S., Perry, R. P., & Ruthig, J. C. (2004). The role of attributional retraining and elaborative learning in college students' academic development. *The Journal of Social Psychology, 144*(6), 591-612. doi: 10.3200/SOCP.144.6.591-612

Athletic role:

Name	Item
athrole15	<p>Please indicate your expected or current role on the team during most games or competitions”</p> <p>1 = rarely see game-time action 2 = non-starter and play limited minutes 3 = non-starter, but play major minutes 4 = starter</p>

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