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Academic achievement in student athletes versus non-student athletes

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ACADEMIC ACHIEVEMENT IN STUDENT ATHLETES VERSUS NON-STUDENT ATHLTES

by
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Dedications

I would like to dedicate this manuscript to my loving, supportive family: Mom, Dad, Joey, Mamoo, Paw, Mom-mom, Pop-pop, and my love, Erron.

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Abstract

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The purpose of this study was to investigate academic achievement amongst student athletes and non-student athletes. Participants were undergraduates enrolled in a psychology course and were recruited via university subject pool. Students of both populations exhibited similar levels of academic achievement and academic motivation as well as study habits through online questionnaire. Grade point average (GPA) was used to assess academic achievement, while the Academic Motivation Scale-College Version (Vallerand et al., 1992) was utilized to assess academic motivation. Participants were also asked to report on how many hours they spend weekly on coursework. An independent samples t-test found significance in the difference between student-athletes and non student-athletes in the number of hours spent coursework. Student athletes as a group reported spending on average 8-11 hours per week on coursework, while non student-athletes reported spending on average 4-7 hours per week on coursework. Implications of the findings as well as further research are discussed.

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Chapter 1

Introduction

Purpose

The purpose of the current study was to examine the academic achievement of student athletes and non-student athletes. To measure academic achievement, participants filled out an anonymous questionnaire, which asked to report their grade point average (GPA) and whether or not they participated in a sport. In addition to academic achievement, academic motivation was measured in student athletes and non-student athletes. Time spent on coursework was also assessed. The current study also took into account study habits and other activities outside of school. This study was inclined to determine whether participating in sports during school enhances or inhibits academic achievement in students as well as desire to achieve academically.

In the first section, the hypotheses of this study are defined and the need for the study is established. Then, terminology is defined. Finally, limitations and assumptions of the study are discussed. The second section explores the existing literature regarding academic achievement and motivation in student athletes versus non-student athletes to establish background information. The methodology of the current study is explained and the results of the data are presented. Finally, the discussion regards the implications of the findings and suggestions for further research.

Hypotheses

The first hypothesis of the current study was that participating in sports has effects on academic achievement. Specifically, participating in athletics inhibits the academic achievement of the majority of student-athletes. The GPA of all student athletes combined would be less than the GPA of all non-student athletes combined. A second hypothesis was that sports participation has an effect on academic motivation. Specifically, student athletes would show greater signs of extrinsic motivation, while non-student athletes would show greater signs of intrinsic motivation in regards to academics. A third hypothesis was that sports participation has an effect on the amount of time spent on coursework. Non-student athletes would spend more time on coursework than student athletes.

Need for Study

As academics have been the primary focus of the school environment, extra curricular activities have played a role in molding a well-rounded individual. Many parents wonder if extra-curricular activities are worthwhile to enroll their child in. Some fear that sports may hinder academic achievement while others urge their children to participate in sports for social and cognitive benefits (Aries et al., 2004; Bradley, Keane & Crawford, 2013; Comeaux & Harrison, 2011). Some athletes feel pressure to obtain an athlete scholarship to college, and therefore, their focus shifts from academics to success in athletics. When they do finally reach college, their interest and motivation for academics could be diminished. Some youth athletes receive offers in 7th and 8th grade (Yen, 2011). At this age, it is unlikely that children are sure of what they want to go to college for and where, but they feel obligated to commit to a school for recognizing their

athletic gift at such a young age. In accordance with popular stereotypes, some believe that one can either be academically inclined or athletically inclined, but rarely both (Emerson et al., 2009). However, some studies show that increased oxygen to the brain promotes cognitive function and that student athletes are more inclined to keep their grades up (Aries et al., 2014; Bradley et al., 2013; Gill, 2014). Conflicting views on the matter of the effects of sports participation on academic achievement are apparent.

The importance for this study was to help determine whether or not placing a particular student in a sport would help the student's academic success. It was also designed to help determine whether or not removing a particular student from a sport would increase the student's academic achievement. Many existing studies on academic achievement and motivation in student athletes were done on athletes who participate in highly competitive division I programs. This study looked at academic achievement and motivation in a setting where athletes were not pressured by athletic scholarship. The current study provided insight as to which factors motivated student athletes to attend college and how they affected academic performance compared to non-student athletes.

Operational Definitions

Academic achievement: In this study, academic achievement was determined by the students' current cumulative grade point averages (GPA).

Academic motivation: Based on the Academic Motivation Scale-College Version (Vallerandet al., 1992), academic motivation referred to the reasons why students attended college.

Student athlete: A student at the university who was an active, eligible member on one of the school's sports teams.

Non-student athlete: A student at the university who was not an active, eligible member on one of the school's sports teams. This includes students who were part of a club team sport at or outside of the university.

Extrinsic motivation: The desire to succeed was due to external factors, such as reward or praise from others.

Intrinsic motivation: The desire to succeed was due to internal factors, such as a sense of accomplishment when surpassing personal goals.

A-motivation: The absence of motivation.

Division I athletics: A highly selective athletic program, in which student-athletes can be awarded athletic scholarships.

Division II athletics: A moderately selective athletic programs, in which student-athletes can be awarded small amount of athletic scholarship.

Division III athletics: Nonselective athletic programs, in which student-athletes cannot be awarded any amount of athletic scholarship.

Revenue generating program: Athletic programs, which provided the university with financial resources beyond what was necessary to operate the team.

Limitations and Assumptions

Limitations of this study involved the selection of participants. Subjects were psychology majors from a single university. Academic achievement amongst student athletes versus non-student athletes may have varied depending on the college. Academic achievement may also have varied in high school, middle school, or elementary school students participating in sports. Another limitation was that data were collected from student-athletes of a Division III school, where athletic scholarships were not available.

Results may have been different if the study was conducted at a Division I school, where athletic scholarships were allotted. The way in which data were collected could also have hindered the findings. Subjects may not have been completely truthful when completing the anonymous survey. Other things such as socioeconomic status, work, study habits, and home life may also have attributed to academic achievement. The current study took self-report data from a subject pool of students. It was assumed that the information reported by the students was completely accurate and truthful.

Chapter 2

Literature Review

Student Athletes in the Classroom

The argument concerning whether or not student athletes are as competent in the classroom as non-student athletes has been double sided, and existing research has supported both sides (Aries, McCarthy, Salovey & Banaji, 2004). Some research has shown that student athletes achieve less academically than non-student athletes (Comeaux & Harrison, 2011; Eitzen, 2009). Other research has claimed that student athletes are just as likely, if not more likely, to be academically successful as non-student athletes (Aries et al., 2004; Bradley, Keane & Crawford, 2013; Richards & Aries, 1999). Student athletes may come into college with lower SAT scores than non-student athletes, but end up with a GPA no different than non-student athletes (Richards & Aries, 1999). Carodine, Almond, and Grato (2001) conducted a content analysis on research already done about the divergent schedule of student athletes. The researchers found four areas that student athletes have to constantly focus on equally on a daily basis: academic commitment, athletic commitment, personal development commitment, and career development commitment (Carodine et al., 2001). Academic commitment refers to the obligation to coursework, and athletic commitment refers to the obligation to the sport (Carodine et al., 2001). Personal development refers to the obligation to building self-esteem, relationships, and financial responsibility (Carodine et al., 2001). Career development refers to the obligation to prepare for life after college (Carodine et al., 2001). Sedlacek & Adams-Gaston (1992) categorize student athletes as "nontraditional students" due to their many obligations and roles on campus and uncommon experiences.

Just like minority "nontraditional students," student athletes are a culture within themselves and are sometimes pre-judged by students and faculty (Aries et al., 2004; Comeaux, 2011; Sedlacek & Adams-Gatson, 1992). Many students and professors on campus believe that student athletes receive preferential treatment on campus academically, whether it is tutorial support or being given good grades without earning them (Bonura, 2010).

Comeaux (2011) conducted a study on the attitudes of faculty members about student athletes at a Division I school with an above-average graduation rate. Faculty members represented all departments and levels at the college (Comeaux, 2011). The researcher modified the Situational Attitude scale to measure the faculty members' attitudes regarding regular students, male student athletes from high-revenue sports, student athletes from low-revenue sports, and female student athletes (Comeaux, 2011). Each subject received a survey regarding only one of the groups to prevent the subject from determining the purpose of the study and adjusting answers (Comeaux, 2011). According to Comeaux (2011), attitudes towards high-revenue student athletes, low-revenue student athletes, and female student athletes were significantly more negative than attitudes towards regular students. Attitudes towards high-revenue male student athletes and low-revenue student athletes were more negative than attitudes towards female student athletes (Comeaux, 2011). When faculty members were asked to report feelings about receiving a full scholarship, being admitted into the school despite low-test scores, or appearing in the school newspaper, they reported feelings of anger and disapproval towards student athletes in any of the scenarios as opposed to regular students (Comeaux, 2011).

Sedlacek and Adams-Gatson (1992) argue that the term "student athlete" indicates a student who just happens to participate in athletics, when there is much more to the role of a student athlete. The researchers claim that rather than trying to make student athletes and non-student athletes as similar as possible, it would be more beneficial to understand the different circumstances that student athletes are involved in (Sedlacek & Adams-Gatson, 1992). According to Aries et al. (2004), prejudices that student athletes face may cause them to fall into common stereotypes. Student athletes who are more committed to athletics than academics tend to believe they are not academically gifted (Aries et al., 2004). According to Robst and Keil (2000), student athletes take more courses and more difficult courses than non-student athletes. However, Schneider, Ross, and Fisher (2010) refute this idea in their study of student athletes during the 1996, 2001, and 2006 seasons. The researchers bring up the topic of academic clustering, which involves student athletes placing themselves or advisors placing student athletes in easier courses with professors who are known to be athlete friendly, to ensure eligibility (Schneider, Ross, & Fisher, 2010). The study found that all football teams in the Big 12 Conference did partake in academic clustering, but according to the researchers, it cannot be proven that academic clustering has any advantages or disadvantages (Schneider, Ross, & Fisher, 2010).

Yukhymenko-Lescroart (2014), created the Academic and Athletic Identity Scale (AAIS) to measure whether a student-athlete identifies more with his or her role in academics or athletics. When testing the scale on a large sample of student athletes, it was found that elite student athletes; specifically at the Division I level identified more with his or her role as an athlete than on academics (Yukhymenko-Lescroart, 2014). The scale utilizes a six-point Likert scale to address five questions pertaining to academic

identity and six questions pertaining to athletic identity (Yukhymenko-Lescroart, 2014). The scale asks participants to indicate how important each item is to them (Yukhymenko-Lescroart, 2014). The five items pertaining to academic identity are: "1. Being a capable student, 2. Being satisfied with my academic work, 3. Doing well in school, 4. Getting good grades, and 5. Having a high GPA" (Yukhymenko-Lescroart, 2014). The six items pertaining to athletic identity are: 1. Being a capable athlete, 2. Being a good athlete, 3. Being athletic, 4. Being proud to be an athlete, 5. Being satisfied with my athletic achievements, 6. Doing well during sport competitions" Yukhymenko-Lescroart, 2014).

Yopyk and Prentice (2005) studied the effects of academic and athletic identity on academic achievement in a sample of student athletes. Before completing an academic assessment, the researchers directed the participant to either write an open-ended response about either their most recent sports event or academic achievement (Yopyk & Prentice, 2005). The researchers also had a control group of student athletes take the academic assessment without any probe (Yopyk & Prentice, 2005). Student athletes who were exposed to their role as an athlete prior to the academic assessment attempted fewer problems than those who were exposed to their role as a student or no role (Yopyk & Prentice, 2005). When exposed to the athletic identity, subjects reported feeling a depleted sense of confidence in academics (Yopyk & Prentice, 2005). The researchers repeated the study with a sample of male student athletes but did not expose the student athletes to any identity prior to either an academic assessment of self-assessment (Yopyk & Prentice, 2005). After the student athletes completed the questionnaire, the researchers provided subjects with a list of words missing letters and directed the subjects to fill in the letters to make a complete word (Yopyk & Prentice, 2005). Yopyk and Prentice

(2005) designed each word to relate to academics (ST_ _ _ for "study"), athletics (TE_ _ for "team"), or both (A_ _ _ _ _ IC for "athletic" or "academic"). The way in which the student athletes decided filled in the words would determine which identity the student athlete felt closest to (Yopyk & Prentice, 2005). Subjects who completed the self-assessment filled in more words related to athletics, and subjects who completed the academic assessment filled in more words related to academics (Prentice, 2005). According to Prentice (2005) student athletes have the ability to witch between roles and take on the role that is most important at the time.

Petrie and Stoever (1997) explored both academic and non-academic aspects that may influence academic performance in student athletes. Petrie and Stoever (1997) studied a sample of 171 Division I female student athletes. In the form of survey, the researchers collected data on demographic information, socialization, and anxiety and stress (Petrie & Stoever, 1997). The student athletes' GPAs, credit hours, and SAT scores were also obtained (Petrie & Stoever, 1997). The student athletes' SAT scores were predictive of freshman year GPA, but were not predictive of GPA in upper-level courses (Petrie & Stoever, 1997). The researchers found that socialization was a significant indicator of academic performance, and student athletes, especially freshmen, who felt social acceptance and encouraged had higher GPAs (Petrie & Stoever, 1997).

Student Athlete Obligations/ NCAA Rules

Student athletes dedicate more than twice the amount of time to activities outside of the classroom than non-student athletes (Richards & Aries, 1999). Student athletes must abide to the same academic standards of all students, as well as any implicated by the National Collegiate Athletic Association or university (National Collegiate Athletic

Association [NCAA] 2012, p. 4). According to NCAA bylaw 14.01.1, if a student athlete does not meet all of the criteria set in place by the NCAA, the student athlete is ineligible to participate in athletics and any scholarship money can be taken away (NCAA, 2012, p. 145). NCAA bylaw 14.1.7.2 states that all student athletes must be enrolled at a full-time student, taking a total of 12 or more credits per semester (NCAA, 2012, p. 150; NCAA, 2012, p. 87). Consequently, student athletes must have completed 24 credits by the third semester (NCAA, 2012, p. 172). The NCAA requires student athletes to prove they are pursuing an academic degree; to do so, student athletes are required to declare a major by the end of their second year or fourth semester and submit documentation to the NCAA (NCAA, 2012, p. 174). Student athletes require approval from administration to switch majors, add, or drop classes (NCAA, 2012, p. 174). To remain eligible, student athletes must have at least 40 percent of the coursework for the intended major by the third year and 60 percent by the fourth year (NCAA, 2012, p. 175). Each university has a minimum grade-point-average (GPA) required at the time of graduation, and a student athlete must maintain 90 percent of that GPA at all times beginning the second year to remain eligible (NCAA, 2012, 175). The third year, student athletes must uphold a GPA that is 95 percent of the graduation requirement, and of course, 100 percent at the time of graduation (NCAA, 2012, p. 175).

By law 17.1.6 restricts the number of hours a student athlete commits to athletics (NCAA, 2012, p. 244). During the competition season, student athletes are allowed to practice no more than four hours per day and twenty hours per week (NCAA, 2012, p. 244). Outside of the competition season, student athletes are allowed to practice no more than eight hours per week (NCAA, 2012, p. 244). Outside of the competition season,

practice cannot be held one week prior to and during examination periods (NCAA, 2012, p, 244). Any team meetings or activities count towards practice hours (NCAA, 2012, p. 244). During competition seasons, student athletes must have one day off per week and two per week outside of competition season (NCAA, 2012, p. 247). Although the NCAA regulates time allotted for practice, many teams and universities do not follow this policy (Ayers, Pazmino-Cevallos & Dobose, 2012). In a study done by Ayers et al., (2012), student athletes from a Division I school reported to spend an average of 31.25 hours per week on athletic related activities. According to Aries et al. (2004), student athletes may lack academic success because they do not have sufficient time to spend on academics.

Motivation for Achievement

Gaston-Gayes (2004) defines academic motivation as, "a student's desire to excel in academic-related tasks," and athletic motivation as, "a student's desire to excel in athletic related tasks." Researchers claim that the same qualities needed to participate in athletics are consistent with those necessary for academic achievement (Simons, Van Rheenen & Covington, 1999). Simons et al. (1999) name four categories that explain student athletes' are motivation in athletic competition and in the classroom. The researchers say that student-athletes are success oriented, over strivers, failure avoiders, or failure acceptors (Gaston-Gayles, 2005; Simons et al., 1999). Athletes who participate in sports that bring in the most revenue to the school are recruited more aggressively, and therefore, feel more of a commitment to athletics than academics (Simons et al., 1999; Richards & Aries, 1999; Zuagg, 1998). High-revenue athletes who are considered failure avoiders or failure acceptors are more likely to lack academic success (Aries et al., 2004; Simons et al., 1999; Zuagg, 1998). According to Zuagg (1998), Student athletes

participating in high-revenue sports tend to achieve less academically, and student-athletes participating in low-revenue sports tend to achieve the same amount of success as non-student athletes. In a study done on college athletes, Gatson-Gayes (2004) used the amount of attention professional sports received from the media to gauge the rank of collegiate sports and commitment level of its' players. Football and men's basketball were recognized as "high profile" male sports, while women's basketball and softball were recognized as "high profile" female sports, receiving a large amount of media coverage (Gatson-Gayes, 2004). Sports such as lacrosse and field hockey were recognized as "low profile sports," receiving less media coverage (Gatson-Gayes, 2004).

Motivation to be academically successful is not just self-driven; Coaches must stress the importance of academic success to their athletes (Burnett & Peak, 2010; Carr & Weigand, 2001; Zuagg, 1998). The coaches must be active and involved in the student athletes' academic development and eligibility by setting high standards, complying with the academic staff, and recognizing and rewarding academic success (Burnett & Peak, 2010; Zuagg, 1998). According to Sedlacek and Adams-Gaston (1992), the most academically successful student athletes are both intrinsically motivated but also use their professors, coaches, and families are sources for support. Students who feel as though their professors and university are invested in their academic success are more committed to their own academic success (Horton, 2009). Student athletes tend to have balanced ideals regarding academic and sports when the university models an appropriate importance for both (Horton, 2009). Horton (2009) conducted a study on student athletes from community colleges and found that student athletes were highly committed to academics and that sports increased levels of discipline.

Carr and Weigand (2001) determined whether students in a physical education class were "task motivated" or "ego motivated," using Duda's Task and Ego Orientation in Sport Questionnaire. If parents and physical education teachers created an environment enforcing effort and hard work no matter the outcome, students would be focused on working towards achieving a particular task (Carr & Weigand, 2001). If parents and physical education teachers created an environment focused on being the best in comparison to everyone else, students would only be motivated to complete a task or exercise to be above another student (Carr & Weigand, 2001). Male students were more likely to be motivated by ego when it comes to sporting activities than females (Carr & Weigand, 2001). According to Carr and Weigand (2001), ego-focused motivation can be short-lived, and athletes who are only motivated by being better than others are likely become unmotivated quickly. Athletes will continue to be motivated if they are genuinely interested in learning and working towards a goal (Carr & Weigand, 2001).

Bonura (2010) defines motivation for academics as the fundamental purpose of the student's actions and the intentions of the academic actions. Bonura (2010) utilizes the "self-determination theory" to describe academic motivation as self-motivated, externally motivated, or not motivated at all. Self-motivation, or intrinsic motivation, comes from within and is when a person engages in an activity for the pure fact that it brings them joy (Bonura, 2010; Vallerand, Pelletier, Blais, Briere, Senecal, & Vallieres, 1992). Out of the three types of motivation, intrinsic motivation tends to indicate that a certain behavior will be consistent (Bonura, 2010; Vallerand et al., 1992). Students who are self-motivated academically show up to class because they enjoy learning (Bonura, 2010). People who think of a situation in terms of reward verses punishment are

experiencing external motivation, or extrinsic motivation (Bonura, 2010; Vallerand et al., 1992). Student who are externally motivated academically show up to class because they fear punishment or ineligibility or want some type of reward (Bonura, 2010; Vallerand et al., 1992). Students who show up to class and are externally motivated and either do not want their grade to drop or think attending class will help their score in the class (Bonura, 2010; Vallerand et al., 1992). People who are not motivated academically at all do not have any prior experience to gauge any type of motivation off of (Bonura, 2010; Vallerand et al., 1992). Students who are not motivated are most likely discouraged from previous attempts at academic achievement but have not succeeded (Bonura, 2010; Vallerand et al., 1992).

Bonura (2010) used the Student Athletes' Motivation toward Sports and Academics Questionnaire (SAMSAQ) to measure motivation in student athletes and non-student athletes (Bonura, 2010). The Student Athletes' Motivation toward Sports and Academics Questionnaire was established to measure athletic motivation, academic motivation, and career motivation (Gaston-Gayles, 2005). Gaston-Gayles (2005) defines motivation as "an individual's choice of and effort applied toward a task." Gaston-Gayles (2005) used the four categories of motivation that Simons et al. (1999) established to create the scale: failure avoiders, failure acceptors, success oriented athletes, and over strivers. When Gaston-Gayles (2005) tested the scale on student athletes, it was determined that failure avoiders and failure acceptors associated themselves more with athletics than academics, and success oriented student-athletes and over strivers were more associated with their academic identity than their athletic identity.

According to Bonura (2010), a student's academic motivation may be related to how much of an attachment they have to their school. Student athletes feel an attachment to their school due to athletics, but may feel unattached to the academic aspect of their school if they are not invested in academics (Bonura, 2010). When comparing academic motivation between collegiate student athletes and non-student athletes, Bonura (2010), found no difference between the two groups. Interestingly, Vallerand & Bissonnette (1992) found that students who enter college motivated by an external factor, such as parents or sports, tend to lack motivation to achieve academically. Those who enter college intrinsically motivated tend to strive for academic success and achieve it (Fortier, Vallerand & Guay, 1995; Vallerand & Bissonnette, 1992).

For student athletes highly considering participating in sports as a career, focusing on academics as much as athletics can be difficult (Adler & Adler, 1991; Simons, Van Rheenen, & Covington, 1999). On the other hand, some studies show that student athletes who are motivated to make playing sports a career are also motivated to achieve in college (Center for the Study of Athletics, 1988). Most student athletes with a GPA lower than 2.0 reported that completing a degree program is imperative (Center for the study of Athletics, 1988). When measuring both academic motivation and athletic motivation in college athletes, Gatson-Gayes (2004) found that ACT scores, ethnicity, and academic motivation were significant in anticipating academic performance. The study concluded that minority students had a lower GPA than non-minority students because lesser resources were available to ready them for higher education (Gatson-Gayes, 2004). Despite findings of other research, Gatson-Gays (2004) found that athletic motivation

was not related to academic motivation or academic achievement, but academic motivation is directly related to academic success.

Curry, Snyder, Cook, Ruby, and Rehm (1997) used the concept of "hope" to measure "goal-directed thinking," or motivation, in student athletes and non-student athletes. The researchers claim that hope is the first of two steps in "goal-directed thinking," with planning, execution, and sustained effort as the second part (Curry, Snyder, Cook, Ruby & Rehm, 1997). The researchers hypothesized that student athletes are goal directed and would have higher levels of hope than non-student athletes, and consequently, higher levels of hope would result in academic success (Curry et al., 1997). The researchers pulled a sample of student athletes and non-student athletes from the University of Montana and utilized the Dispositional Hope Scale (Snyder, Harris, Anderson, Holleran, Irving, Sigmon, Yoshinobu, Gibb, Langelle & Harney, 1991) and Self-Perception Profile for College Students (Neeman & Harter, 1986) to measure levels of hope and self-worth (Curry et al., 1997). Overall, student athletes had higher levels of hope than non-student athletes, and hope did not seem to affect perceptions of self-worth (Curry et al., 1997). For both samples, levels of hope and self-worth dropped during the sophomore year of college (Curry et al., 1997). High levels of hope also correlated to higher grade-point averages (Curry et al., 1997).

Currey et al. (1997) furthered the study to measure how levels of hope affect athletic performance. In the second longitudinal study, the researchers used a sample of nine members of the women's cross-country team and added the State Sport Confidence Scale (Vealey, 1986) and a report of weekly training (Currey et al., 1997). Levels of hope had a significant affect on the athletes' performance at competitions (Currey et al., 1997).

Currey et al., (1997) created a third study to measure levels of hope, natural athletic ability, and positive or negative affect. In this study, a larger sample of female track and field athletes from the Big Eight Conference during the 1993 outdoor season (Currey et al., 1997). The researchers a self-report survey to measure affectivity and physical ability and asked coaches to also report on the athletes' physical abilities (Currey et al., 1997). The researchers also took into consideration the athletes' performance over the course of the season based on rankings and times (Currey et al., 1997). Overall, negative or positive affectivity had no affect on athletic performance, but levels of hope and worry had a significant impact on athletic performance (Currey et al., 1997). However, the researchers associate hope with positive affectivity and worry with negative affectivity (Currey et al., 1997). Higher levels of hope meant better athletic performance, and high levels of worry meant poor athletic performance (Currey et al., 1997).

Medic, Mack, Wilsom, and Starkes (2007) explored the effects of athletic scholarship on motivation using The Sport Motivation Scale (Pelletier, Fortier, Vallerand, Tusson, Briere & Blais, 1995). The Sport Motivation Scale (Pelletier et al., 1995) is similar to the Academic Motivation Scale (Vallerand et al., 1992), utilizing similar subtests to assess types of intrinsic motivation, extrinsic motivation, and a-motivation. Male athletes on scholarship reported high levels of internal pressure due to extrinsic factors (Medic et al., 2007). Athletes not receiving scholarship reported that if they were offered a scholarship, levels of intrinsic motivation would decrease. Student athletes receiving athletic scholarship reported high levels of pressure to perform well rather than performing for enjoyment. If their scholarship was taken away, athletes reported that they would feel financially constrained (Medic et al., 2007).

Pros and Cons of Sports Participation

Research shows that participation in sports has great cognitive and physical benefits (Aries et al., 2004; Gill, 2014). Physically, exercise promotes heart health, weight management, and healthy blood pressure and sugar levels (Gill, 2014; McKee, Daneshvar, Alvarez & Stein, 2014). Cognitively, exercise helps to depress the deterioration of brain matter due to aging, increase mental sharpness, and lower the possibility of developing dementia (Gill, 2014). Physical activity promotes high-density lipoprotein-cholesterol levels, which is beneficial to glucose and weight management as well as blood pressure (McKee et al., 2014). Exercise is also known to create antioxidants and increase blood flow and oxygen delivery (McKee et al., 2014).

Studies have shown that sports participation can be used to help adolescents with social adjustment disorders (Moreau, Chanteau, Benoit, Dumas, Laurin-lamothe, Parlavecchio & Lester, 2014; Zuagg, 1998). Adolescents with social adjustment issues and have participated in sports programs reported a feeling of "belonging and empowerment," (Moreau et al., 2014). The positive encouragement from the coaches motivated the adolescents to challenge themselves, and the structure of having a schedule for training provided stability (Moreau et al., 2014). Sports programs for adolescents with social adjustment issues challenge the adolescents' limitations physically, mentally, and socially while encouraging adolescents to put forth more effort because they are having fun and being challenged at the same time (Moreau et al., 2014). Sports participation promotes coping skills, teamwork, self-worth, social skills, and a good work ethic (Aries et al., 2004; Richards & Aries, 1999; Zuagg, 1998). According to Zuagg (1998), sports participation aids in developing socialization, leadership, and coping skills as well as

boosting self-esteem. Research done on Division III student athletes show that student athletes are also just as involved in extra-curricular activities outside of athletics on the college campus as non-student athletes because people tend to make time for activities that they enjoy doing (Richards & Aries, 1999). According to Zuagg (1998), students participating in athletics have less disciplinary issues than students not participating in sports. Student athletes are also offered academic support such as tutoring and are required to attend mandatory study hall (Comeaux & Harrison, 2011). According to Bowen and Levin (2005), student-athletes are more likely to be admitted schools than non-student athletes. Once they get to college, student athletes also receive other perks such as additional academic supports such as tutoring and early registration for classes (Bowen & Levin, 2005).

Zuagg (1998) completed a study comparing the mid-term and final grades of 52 student athletes and 82 non-student athletes between the ages of 15-19 in a Canadian high school. The study concluded that the both the mid-term and final grades of student athletes were significantly higher in each subject than non-student athletes (Zuagg, 1998). Student athletes in the study missed class less often than non-student athletes, perhaps because student athletes are required to attend class unless they are excused for athletic participation (Zuagg, 1998).

Comeaux, Snyder, Speer, and Taustine (2014) studied the effects, during college and after college, of participating in activities such as athletics in college. The researchers collected data from a sample of former Division I student athletes across the United States who have been out of college for 6-20 years (Comeaux, Snyder, Speer & Taustine, 2014). A survey on academic success and leadership competence was distributed, which

also asked participants to report on quality of relationships with faculty members, multicultural experiences, and relationships with teammates and peers (Comeaux et al, 2014). The study found that female student athletes who felt as though faculty members provided them with truthful, realistic feedback had high academic success (Comeaux et al., 2014). For male and female student athletes, multicultural experiences during college had a positive influence on leadership skills after college (Comeaux et al., 2014). Ensign & Woods (2014) claim that the ability to work in a diversified environment is an essential attribute in today's workforce and being part of certain activities such as athletics in college prepare students to work in multicultural settings.

Jonker, Elferink-Gemser, and Visscher (2009) found that the qualities necessary to be successful in athletics are comparable to the qualities necessary to be successful in academics. A great deal of self-motivation and self-discipline is needed to excel athletically, which are traits that the student athlete can transfer to be achieve academically (Jonker, Elferink-Gemser & Visscher, 2009). A large sample of elite athletes ages 14-16 from the Netherlands participated in this study representing different team-oriented and individualized sports (Jonker et al., 2009). Participants were asked to complete a survey, and one sample was taken during the 1992/1993 year and the second was taken during the 2006/2007 year (Jonker et al., 2009). From the survey, which collected data on the level of courses the athlete was currently taking, researchers were able to place the athletes into one of two categories: likely to go on to a university or likely to attend some type of "middle" education such as a vocational school (Jonker et al., 2009). The study found that the amount of hours athletes spend practicing increased from the 1992/1993 to 2006/2007 year (Jonker et al., 2009). Data collected from the

athletes were compared the national average of students going on to attend a university (Jonker et al., 2009). In the 1992/1993 year, the amount of athletes from the sample likely to go on to a university was consistent with the national average (Jonker et al., 2009). Although the national average of students likely to go on to attend a university remained stable from the 1992/1993 to 2006/2007 year, the amount of elite athletes from the samples likely to attend a university increased from the 1992/1993 to 2006/2007 year (Jonker et al., 2009).

Research also indicates some negative effects associated with playing sports such as physical injuries including brain injuries, which can inhibit cognitive function (Gill, 2014; McKee et al., 2014). Specific sports, such as football and soccer, run a high risk of blunt forces to the head causing rapid acceleration, deceleration, and rotation. Long-term damage to neurons, cells and blood vessels may cause cognitive impairments or disabilities (McKee et al., 2014).

Lindo, Swensen, and Waddell (2012) compared academic success of student athletes to non-student athletes from cohorts of students from 1999-2007. The researchers looked at transcripts of student athletes and non-student athletes at the University of Oregon as well as the football team's win-loss record for data (Lindo et al., 2012). Data were also obtained from a questionnaire about student activities, interest in the football team and football games, classes, and alcohol consumption, which was distributed to a random sample of students in 2011 (Lindo et al., 2012). The study showed that the in male sports, the more successful the team in athletic competition, the more academics suffered (Lindo, Swensen & Waddell, 2012). Lindo et al. (2012) suggest that male athletes are inclined to celebrate victories and athletic success at the expense of

academics. Male students in general, including non-athletes, were likely to increase engagement in activities such as alcohol consumption and going to parties as athletic success increased, while decrease time dedicated to academics (Lindo et al., 2012). The grades of female students were likely to increase when the football team was winning, and the retention of female students increased with a successful football season (Lindo et al., 2012). The grades of football players dropped significantly during the football season (Lindo et al., 2012).

Students sometimes have to quit playing a sport in order to focus on academics, but studies show that students who quit playing a sport spent less time on their studies after quitting (Bradley et al., 2013). Adolescents participating in a sport are less likely to use cannabis and tobacco than those not participating in a sport (Wichstrom & Wichstrom, 2009). Adolescents who participate in team sports are at a high risk for alcohol use, but adolescents who participate in endurance sports such as running are at a low risk for alcohol use (Wichstrom & Wichstrom, 2009). According to Storch, Storch, Killiany, and Roberti (2005), student athletes are more subjective to alcohol-related issues as well as eating disorders than non student-athletes. Some research done on Division I student athletes revealed that student athletes did not branch out on campus outside of their team and were not involved in other campus activities (Aries et al., 2004; Parham, 1993). According to Aries et al. (2004), the lack of socialization in student athletes may contribute to a lack of academic success. The ability to make time for things outside of sports is a concern, especially for Division I student athletes who are on athletic scholarship (Richards & Aries, 1999). Although academic support is available to

ensure eligibility, many schools do not offer ways to help student athletes manage stress or personal and social issues (Comeaux & Harrison, 2011).

Some research proves that physical activity reduces depression and anxiety (McKee et al., 2014). A study done by Storch et al. (2005) questioned the emotional benefits of athletic participation and indicated that student athletes may be more prone to psychological disorders than non-student athletes. Although physical exercise may be linked to improving mood and reducing stress, the demands associated with sports participation at the collegiate level introduces the possibility of creating stress (Storch et al., 2005). According to the researchers, stress is related to personal feelings of being inadequate which may result from negative comments and actions of coaches, teammates, parents, and fans about performance (Storch et al., 2005). Over time, a student athlete can become chronically stressed from a series of negative experience in practice or competition (Storch et al., 2005). In the study of both male and female student athletes and non-student athletes, female student athletes showed the highest rates of depression (Storch et al., 2005). The researchers mentioned that female student athletes struggle to prove they are dedicated to academics and become part of groups outside of athletics on campus (Storch et al., 2005; Richards & Aries, 1999).

According to Ensign and Woods (2014), being involved with extracurricular activities and engaged with the campus community promotes academic motivation. Students who have obligations outside of the campus community such as full-time work or a family seem to be less focused on academic achievement (Ensign & Woods, 2013). Broh (2002) compared sports participation to other extra curricular activities in a longitudinal study following close to 25,000 eighth-graders until twelfth grade. Sports

were the most popular activity, then music, followed by career-related activities, acting, intramurals, cheer, student council, and finally journalism (Broh, 2002). Broh (2002) found that tenth and twelfth graders who continued to participate in sports had higher math grades, but lower reading grades. School-sponsored sports participation posed the most overall benefits than any other extracurricular activity (Broh, 2002). The research did indicate that involvement in sports increases self-esteem and forces students to set aside time for schoolwork (Broh, 2002). Broh (2002) also found that sports participation benefits relationships with parents in terms of student-parent, student-school, parent-school, and parent-parent. The only two activities that came close to providing similar benefits as school-sponsored sports were intramural sports and music, which both came up short on social benefits (Broh, 2002). According to the National Survey of Student Engagement (NSSE), there are five essential factors that indicate a successful learning environment: first, the "level of academic challenge," secondly, "active and collaborative learning," thirdly, "student-faculty interaction," fourth," enriching educational experiences," and finally, a "supportive campus environment" (NSSE, 2012).

Emerson, Brooks, and McKenzie (2009) conducted a study on academic achievement in student athletes at a small Division III college. The researchers make important distinctions between Division I and Division III colleges, with one of the most prevalent differences being that student athletes at Division I schools are eligible to receive athletic scholarships while student athletes at Division III schools are not (Bowen & Levin, 2003; Emerson, Brooks & McKenzie, 2009). Division III schools are more focused on offering academic and merit-based scholarships (Bowen & Levin, 2003). The researchers also note that the student athlete population at Division I schools is much

smaller than at Division III schools (Emerson et al., 2009). Athletics are highly popularized and are an important source of revenue for Division I schools, while followers of Division III athletics are limited to the campus community (Emerson et al., 2009). Bowen & Levin (2003) point out that Division III schools aim to level the playing field for student athletes and non-student athletes and focus on offering student athletes the same accommodations as non-student athletes. According to Emerson et al. (2009), there are significantly more minority student athletes than minority students at Division I schools, while minorities in the student athlete population generally reflect the same amount of minorities in the regular student population.

According to Emerson et al. (2009), The College Sports Project (CSP) is a group of eighty Division III schools, which collects data on the treatment, admissions, and academic performance of student athletes and non-student athletes and reports results. The program follows cohorts of students during college from start to finish, with more than 40,000 students in each cohort (Emerson et al., 2009). According to data from the 2005-2006 academic year, overall, female students had higher grade-point averages (GPAs) than male students, non-student athletes had higher GPAs than student athletes, non-recruited student athletes had higher GPAs than recruited student athletes, and the more selective the college, terms of admission, the higher the GPA of all groups (Emerson et al., 2009). Another concern regarding the participation in athletic programs are graduation rates. Student athletes have lower graduation rates than the non-student athlete population (Matheson, 2007). More specifically, male sports teams at division I universities that are high-revenue generating sports, such as football and basketball, tend to have below average graduation rates (Matheson, 2007).

Stereotypes of Athletes

Emerson et al. (2009) recognize that a phenomenon called "stereotype threat" may be the cause for academic underperformance in student athletes. Harrison (2000) finds that the way in which the media portrays athletes can be problematic and focuses on Black male athletes. According to Harrison (2000), the common stereotype of Black males is that their only talent is in sports. Many Black males feel as though sports participation is the only way they can be successful in today's society and put forth all of their effort in athletics, ignoring other parts of development such as academics and relationships (Harrison, 2000). The media often only recognizes Black male athletes in terms of their efforts in sports, but when media attention focuses on Black male athletes outside of sports, it is often in a negative way, highlighting criminal or irresponsible acts (Harrison, 2000).

Athletes are subject to the common stereotype that they are not intellectual (Dee, 2014; Harrison, Stone, Shapiro, Yee, Boyd & Rullan, 2009). Some student athletes are more likely to be negatively affected by this stereotype than others. According to Yeager and Walton (2011), students who are not academically successful and feel that others are judging their personality by his or her academic performance are likely to associate themselves with groups who do not place significance academics. Despite findings of other research indicating that female athletes are more academically inclined than male athletes, it is female athletes who may be most negatively affected by the stereotype (Harrison et al., 2009; Simons et al., 1999). According to Dee (2014), when a person is presented with the possibility of being attached with a negative stereotype, it poses a threat or anxiety to the individual. Harrison, Stone, Shapiro, Yee, Boyd & Rullan (2009)

conducted at study at which they had some student athletes indicate their participation in athletics then complete an academic test while others were not probed to identify with athletics and simply took the academic test. Female athletes scored significantly worse on the academic test when asked to identify with athletics prior to completing the test, but male athletes seemed to score better when probed to identify with athletics (Harrison et al., 2009). The researchers indicate that male athletes get a confidence boost when they identify with sports, while female athletes tend to lack confidence in their academic abilities (Harrison et al., 2009). When student athletes are presented with the two different identities at once, they want to defend themselves against the common stereotype, but females are likely to become overwhelmed and their academic performance suffers (Harrison et al., 2009).

Dee (2014) conducted data on the implications of stereotypes on academic performance. A random, subsequent sample of the participants (student athletes and non-student athletes) were prompted to identify if they are or have been a part of a NCAA sports team, and if so, were then asked a serious of questions regarding the student's experience as a student-athlete (Dee, 2014). The rest of the sample was prompted on overall campus experience, which all students could relate to (Dee, 2014). After the initial questionnaire, the entire sample of student athletes and non-student athletes were given a separate, 30-minute timed test consisting of 39 moderate and difficult Graduate Record Examination (GRE) questions to test academic achievement (Dee, 2014). To ensure the efficiency of the test in measuring academic achievement, not a single participant was able to answer all 39 questions correctly, and only one-third of the same completed the entire questionnaire (Dee, 2014). After the questionnaire was completed,

participants underwent a word-completion task to indicate whether or not the athletic stereotype had been implemented (Dee, 2014). Participants were given the first few letters of a word pertaining to either sports or self-doubt and asked to fill in the blank spaces to make a word, such as "TE _ _" to spell out "team" or " DU _ _" to spell out "dumb" (Dee, 2014). If the participant spelled out a phase pertaining to sports or self-doubt, it had meant that the negative athletic stereotype had been implemented (Dee, 2014). Dee (2014) found that the student athletes' overall scores dropped by 12% when associated with the negative stereotype. Male athletes had a tendency to attempt to answer more questions when presented with the stereotype, but their scores also seemed to worsen with this tactic (Dee, 2014). Female student-athletes who place a high value on academics seemed to be negatively affected by the stereotype.

Simons, Bosworth, Fujita, and Jensen (2007) conducted an analysis on student-athletes at a Division I school, where student-athletes were asked to report on ways they think the campus community views student-athletes. Overall, student athletes reported that academic achievement was something that was important to them (Simons et al., 2007). Simons et al. (2007) found that most student athletes reported that non-student athletes had unfavorable views of student athletes. Student athletes who were part of a high revenue generating team reported more negative feedback from fellow students and professors (Simons, Bosworth, Fujita & Jensen, 2007). Student athletes reported that they have heard teachers in class make comments that student athletes feel entitled to preferential treatment, are only focused on athletics, and are not academically adequate (Simons et al., 2007). Student athletes also reported that they have been discriminated against in the academic setting (Simons et al., 2007).

Parsons (2013) replicated the study done by Simons et al. (2007) on a sample of Division II student athletes including 178 male and 74 females. The study found that the negative stereotype of student athletes was not as prevalent at the Division II level as it was at the Division I level (Parsons, 2013). The GPAs of the student athletes was reflective of the study body, and according to the survey, student athletes reported to class routinely and kept up with due dates (Parsons, 2013). Student athletes reported positive feedback from professors and were recognized in favorable ways in the academic setting (Parsons, 2013).

The attitudes of coaches towards their athletes greatly influence performance athletically and academically (Burnett & Peak, 2010; Feltz, Hwang, Schneider & Skogsberg, 2013; Zuagg, 1998). Feltz, Hwang, Schneider, and Skogsberg (2013) studied the affect of stereotypes of student athletes from the athletes' coach. The researchers distributed a questionnaire to a large sample of male and female student athletes from eleven schools including Division I, Division II, and Division III teams (Feltz et al., 2013). The Athlete Identity Measurement Scale (AIMS) created was used to measure the importance a student athlete places on athletics (Feltz et al., 2013). The College Academic Beliefs scale (CAB) was used to measure the level of stereotype threat and involved questions pertaining to the student athlete's perception of his or her academic ability as well as how the student athlete believes others perceive his or her academic ability (Feltz et al., 2013). The Michigan State Self-Concept of Ability Scale-General (MSSCA-G) was used to determine the student athlete's level of interest and commitment to academics (Feltz et al., 2013). Student athletes who felt a stronger connection to their role as an athlete than to their role as a student felt more subject to the dumb-jock

stereotype (Feltz et al., 2013). Student athletes with a stronger connection to their role as an athlete than role as a student did not feel as though their coach placed a high value on academics and felt a high level of threat by the stereotype against student athletes (Feltz et al., 2013). The researchers also concluded that when a coach placed a high value on academics, athletes were less likely to feel threatened by the stereotype, and therefore perform well academically (Feltz et al., 2013).

Jamieson and Harkins (2007) sought an explanation as to why stereotype threat might inhibit performance athletically and academically. According to Schmader and Johns (2003), stereotype threat occupies our working memory without leaving room for the cognitive ability to focus on other tasks. Efficient cognitive focus requires the use of working memory to block out any unwanted stimulus (Schmader & Johns, 2003). Jamieson and Hawkins (2007) implemented a gender stereotype threat to an experimental group before having male and female subjects complete a task requiring focus on the computer. The control group did not receive the gender stereotype threat (Jamieson & Hawkins, 2007). After a series of studies, Jamieson and Harkins (2007) found that the experimental group exposed to the stereotype threat actually performed better than the control group on the tasks, supporting what the researchers refer to as the "mere effort account." Jamieson and Harkins (2007) explain the "mere effort account" as an increase in motivation when exposed to a negative stereotype threat in order to prove the opposite.

Differentiation Amongst Sports

Burnett and Peak (2010) conducted a study on student athletes from 14 different male and female sports teams. The researchers determined whether or not each student athlete was eligible or ineligible to participate in athletics according to his or her GPA

and retrieved each student athlete's GPA from the registrar (Burnett & Peak, 2010). Gender and sport had a significant impact on the GPA of student athletes (Burnett & Peak, 2010). Female student athletes had a higher GPA than male athletes, and volleyball (3.56), women's cross-country (3.44), and women's basketball (3.28) were the sports teams with the overall highest cumulative GPAs (Burnett & Peak, 2010). Men's baseball (2.92), men's golf (2.90), and men's track and field (2.83) were the male sports teams with the highest GPAs (Burnett & Peak, 2010).

Student athletes who participate in sports who bring a large amount of revenue to the school and are on athletic scholarship, such as football and basketball are more likely to struggle academically and socially than student athletes not on scholarship or participate in a sport that does not bring a large amount of revenue to the school (Richards & Aries, 1999; Robst & Keil, 2000). According to Robst and Keil (2000), participation in sports that generate a large amount of revenue could be detrimental to academics, but participation in sports that do not generate revenue have no effect on academic success. Simons et al. (1999) found that the type of sport may indicate a student athlete's motivation to achieve in the classroom as well as gender. Women who play sports in college have more academic success than men who play sports in college because female sports bring in less revenue than male sports (Simons et al., 1999). Consequently, women are less likely to choose a school based on athletics and are more likely to choose a school based on academics than men (Simons et al., 1999). Student-athletes who participate in individualized sports, such as track and field, tennis, and rowing, are more likely to be academically successful than student athletes who participate in team-oriented sports, such as football and basketball (Bradley et al., 2013).

Student athletes who participate in individualized sports are highly careful, diligent, and independent, while those who participate in team sports are more cooperative (Bradley et al., 2013).

Broh (2002) explains that team-oriented sports facilitate socialization with other and individualized sports facilitate self-sufficiency. Team-oriented sports not only facilitate socialization with teammates but other peers and community members as well (Broh, 2002). Students who participate in team-oriented sports seem to be more popular in the school community than individualized sports, and therefore, may a larger network of connections (Broh, 2002). Students who participate in individualized sports tend to be introverted and socialize with a core group of teammates (Broh, 2002). According to McKee et al. (2014), athletes who participate in team-oriented sports experience greater mental and physical health benefits than athletes of individualized sports.

Only Division I and II student athletes can be awarded athletic scholarships (Beaver, 2014). About 1 to 2 percent of high school athletes go on to be awarded athletic scholarships at the Division I or II level (Beaver, 2014). Universities with Division III athletics as well as Ivy League universities do not award athletic scholarships. Universities with Division III athletic programs tend to have more student athletes than universities with Division I or II programs because they are not limited to the number of athletes on a team. According to Beaver (2014), a university's division is based on the "institutional mission and size." With athletic scholarships on the line, recruiting for Division I or II athletics is much more competitive than Division III; however, Division III universities have less restrictions on recruitment. Student athletes at Division III institutions are considered more alike than student athletes at the division I level to non-

student athletes (Beaver, 2014). They must obtain scholarship utilizing the same resources as non-student athletes. They are not considered any different from other students on campus. However, Emerson et al., (2009) discovered that Division III athletes still tend to form their own subgroups on campus and are not likely to be involved in other campus activities, and their grades suffer as a result of being emerged in athletics. Some Division III schools find ways to award grants to student athletes in violation of NCAA regulations. Programs will offer "leadership" grants to captains of athletic teams, which is in violation NCAA policy that Division III student athletes may not be awarded any type of scholarship or grant for anything that has to do with athletics (Beaver, 2014).

Chapter 3

Methodology

Participants

The participants in the current study were undergraduate students enrolled in introductory psychology courses. The sample consisted of male and female students over the age of 18. The participants from this study attended a Division III university in southern New Jersey. The data were collected online, through the university's student subject pool. Undergraduate students enrolled in introductory psychology courses received credits by participating in studies posted on the subject pool website. Students who participated in this survey were awarded 1 credit towards their course. All subjects completed the same survey.

A total of 51 students took the survey, of which were 9 (17%) student athletes and 42 (83%) non-student athletes. The sample consisted of 30 (59%) male students and 21 (41%) female students. Out of the 9 student athlete participants, 5 (55%) were male and 4 (45%) were female. Out of the 42 non-student athletes, 25 (59%) were male and 17 (41%) were female. All of the participants were considered full-time students, meaning they were enrolled in 12 or more credits.

Materials

The data were collected during the Spring 2015 semester. A 41-question survey was uploaded on the university's student subject pool. The survey consisted of 35 multiple-choice questions and 6 short response questions. Participants were asked to self-report on their gender, status as a student athlete or non-student athlete, the number of hours spent on coursework each week, the importance their university places on

academics, and the personal importance they place on academics. Additionally, open-ended questions asked participants to self-report on their GPA, number of credits being taken, study habits and environment, adequacy of time spent on coursework, and plans for after graduation.

The final 28 questions of the survey were the questions from the Academic Motivation Scale-College Version (Vallerand et al., 1992). The Academic Motivation Scale-College Version (Vallerand et al., 1992) was designed to measure motivation for academic achievement in college students. Participants were asked to what extent each statement corresponds to why they attend college. The participants' responses correlated with the following numbers: *Does not correspond at all* (1), *Corresponds a little* (2 or 3), *Corresponds moderately* (4), *Corresponds a lot* (5 or 6), *Corresponds exactly* (7). A higher numerical value represented a higher level of agreement corresponding to the individual's motivation to be in college. Each of the 28 statements referred to intrinsic (internal) motivation, extrinsic (external) motivation, or a-motivation (no motivation). Statements reflecting intrinsic motivation were further broken down to the following categories: Intrinsic motivation to know, intrinsic motivation toward accomplishment, or intrinsic motivation to experience stimulation. Statements reflecting extrinsic motivation were further broken down into the following categories: Extrinsic motivation identified (the importance of the behavior is identified), extrinsic motivation introjected (feeling of obligation), or extrinsic motivation external regulation (reward-driven). A-motivation was a category of its own because indicates the absence of motivation (Vallerand et al., 1992).

Each of the 7 categories corresponded with a total of 4 questions on the Academic Motivation Scale-College Version (Vallerand et al., 1992). A statement pertaining to intrinsic motivation to know was, "Because I experience pleasure and satisfaction while learning new things" (Vallerand et al., 1992). A statement pertaining to intrinsic motivation toward accomplishment was, "For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments" (Vallerand et al., 1992). A statement regarding intrinsic motivation to experience stimulation was, "For the pleasure that I experience when I feel completely absorbed by what certain authors have written" "Vallerand et al., 1992). A statement regarding extrinsic motivation identified was, "Because I think that a college education will help me better prepare for the career I have chosen" (Vallerand et al., 1992). A statement pertaining to extrinsic motivation introjected was, "Because of the fact that when I succeed in college I feel important" (Vallerand et al., 1992). A statement regarding extrinsic motivation external regulation was, "Because with only a high-school degree I would not find a high-paying job later on" (Vallerand et al., 1992). Lastly, a statement pertaining to a-motivation was, "I once had good reasons for going to college; however, now I wonder whether I should continue" (Vallerand et al., 1992).

Design

This study compared and contrasted academic achievement and academic motivation between student athletes and non-student athletes. The dependent variables that were measured were academic achievement and academic motivation. The independent variables in the study were participation in one or more of the university's NCAA collegiate sports teams or non-participation in one of the university's NCAA

collegiate sports teams. All data collected through the anonymous survey were self-reported by the participant. To determine academic achievement, participants were asked to self-report grade-point average. The Academic Motivation Scale-College Version (Vallerand et al., 1992) was used to measure academic motivation.

Questions 1 through 13 consisted of multiple choice and short-response questions to assess academic achievement, gender, academic status and habits, and future plans. Question 14 through 41 consisted of the Academic Motivation Scale-College Version (Vallerand et al., 1992). For each question, participants selected a number 1 through 7 to represent the extent each statement corresponded with why they attend college: (1) *Does not correspond at all*, (2 or 3) *Corresponds a little,* (4) *Corresponds moderately*, (5 or 6) *Corresponds a lot*, (7) *Corresponds exactly* (Vallerand et al., 1991). Questions 15, 22, 29, and 36 of the survey measured the subject's intrinsic motivation to know. Questions 19, 26, 33, and 40 assessed intrinsic motivation toward accomplishment. Questions 17, 24, 31, and 38 measured intrinsic motivation to experience stimulation. Extrinsic motivation identified was assessed by questions 16, 23, 30, and 37. Questions 20, 27, 34, and 41 of the survey measured extrinsic motivation introjected. Questions 14, 21, 28, and 35 assessed the subject's extrinsic motivation external regulation. Finally, a-motivation was measured by questions 15, 25, 32, and 39 of the survey.

Procedure

First, it was determined that to generate a large sample size, a survey would be distributed. Research was done on existing academic achievement and academic motivation scales. It was found that past studies asked students to self- report GPA to determine academic achievement. Universities would not release the GPA of students.

No existing scales to determine academic achievement at the collegiate level were found. On the other hand, a variety of scales measuring academic motivation were found. Scales regarding athletic versus academic identity and motivation were discovered; however, in order to simplify the data into one general survey, it was determined that the Academic Motivation Scale-College Version (Vallerand et al., 1992) would be utilized.

Second, various multiple choice and short-response questions were generated to address the independent variables of the study as well as academic achievement. Once IRB approval was obtained, the survey was uploaded on to the university's subject pool website. The participants in the university's student subject pool completed the survey in order to receive credit towards an undergraduate introductory psychology course. All participants who read and agreed to the consent form were asked to answer the questions on the survey as accurate as possible to their best of their knowledge. Participants could retract their participation at any time; however, participants were not permitted to skip questions without a response. The desire to skip a question resulted in the forfeit of the participant's data. Participants completed the survey voluntarily, and all data obtained were kept completely anonymous and confidential. The survey took approximately 15-20 minutes to complete. The data from the survey were transferred to an Excel spreadsheet to be further analyzed. Required permission from the university's program director was obtained for the purpose of this study.

Chapter 4

Results

In order to analyze academic achievement in student athletes and non-student athletes, an independent samples t-test was run utilizing self-reported GPA. The discrepancy in academic achievement between student athletes and non-student athletes was non significant. Student athletes reported an average GPA of 3.18 and non student-athlete reported an average GPA of 3.01 (MD = 0.17). Student athletes reported taking an average of 14.67 credits, while non-student athletes reported taking an average of 14.39 credits; however, this data was found non significant as a result of an independent samples t-test. Descriptive statistics were run on academic achievement and academic motivation (see Table 1). These results indicate the representation of the population of student athletes and non-student athletes as well as specific survey responses pertaining to GPA and each motivation type regarding academics. Abbreviations were used to represent each academic motivation type: intrinsic motivation to know (*IMTK*), intrinsic motivation toward accomplishment (*IMTA*), intrinsic motivation to experience stimulation (*IMTS*), extrinsic motivation identified (*EMID*), extrinsic motivation introjected (*EMIN*), extrinsic motivation external regulation (*EMER*), and a-motivation (*AM*). The overall mean GPA reported was 3.04. The motivation type with the largest range of scores was intrinsic motivation to experience stimulation (4.00—28.00).

Table 1

Descriptive Statistics: Academic Achievement and Motivation

Survey Item/Measure	N	Mean	SD	Min	Max
GPA	51	3.04	.46	2.00	3.88
IMTK	51	23.04	4.28	7.00	28.00
IMTA	51	20.59	4.69	6.00	28.00
IMTS	51	16.41	5.67	4.00	28.00
EMID	51	22.57	3.75	16.00	28.00
EMIN	51	23.12	3.86	12.00	28.00
EMER	51	24.59	4.12	7.00	28.00
AM	51	7.67	5.44	4.00	26.00

Note. Scores for academic motivation measures range from 4.00 to 28.00; higher scores represent the statement corresponding with the participants' motivation for going to college.

Academic motivation was analyzed utilizing the results of the Academic Motivation Scale-College Version (Vallerand et al., 1992). Participants were scored based on the total number scored in each of the seven questions types (intrinsic motivation to know, intrinsic motivation toward accomplishment, intrinsic motivation to experience stimulation, extrinsic motivation identified, extrinsic motivation introjected, extrinsic motivation external regulation, and a-motivation). The survey consisted of 4 questions of each type. Each question had a minimum of 1 point and maximum of 7 points possible; therefore, a minimum score of 4 and a maximum score of 28 were possible for each type of question. A total score in each of the seven question types was determined for each

participant. A higher score total score for the question type indicated a high identification with that type of motivation for academics. For example, if a participant selected (7) *Corresponds exactly* for each of the four intrinsic motivation to know questions, the participant received a total score of 28 in the intrinsic motivation to know category. It would be interpreted that the participant was intrinsically motivated to learn and that is what motivates them academically (see Figure 1).

A Pearson Correlation was run to analyze the association between academic achievement and academic motivation. Specifically, the correlation compared GPA to each category of academic motivation (intrinsic motivation to know, intrinsic motivation to accomplish, intrinsic motivation to experience stimulation, extrinsic motivation identified, extrinsic motivation introjected, extrinsic motivation external regulation, and a-motivation). The results of the test were non significant across all measures.

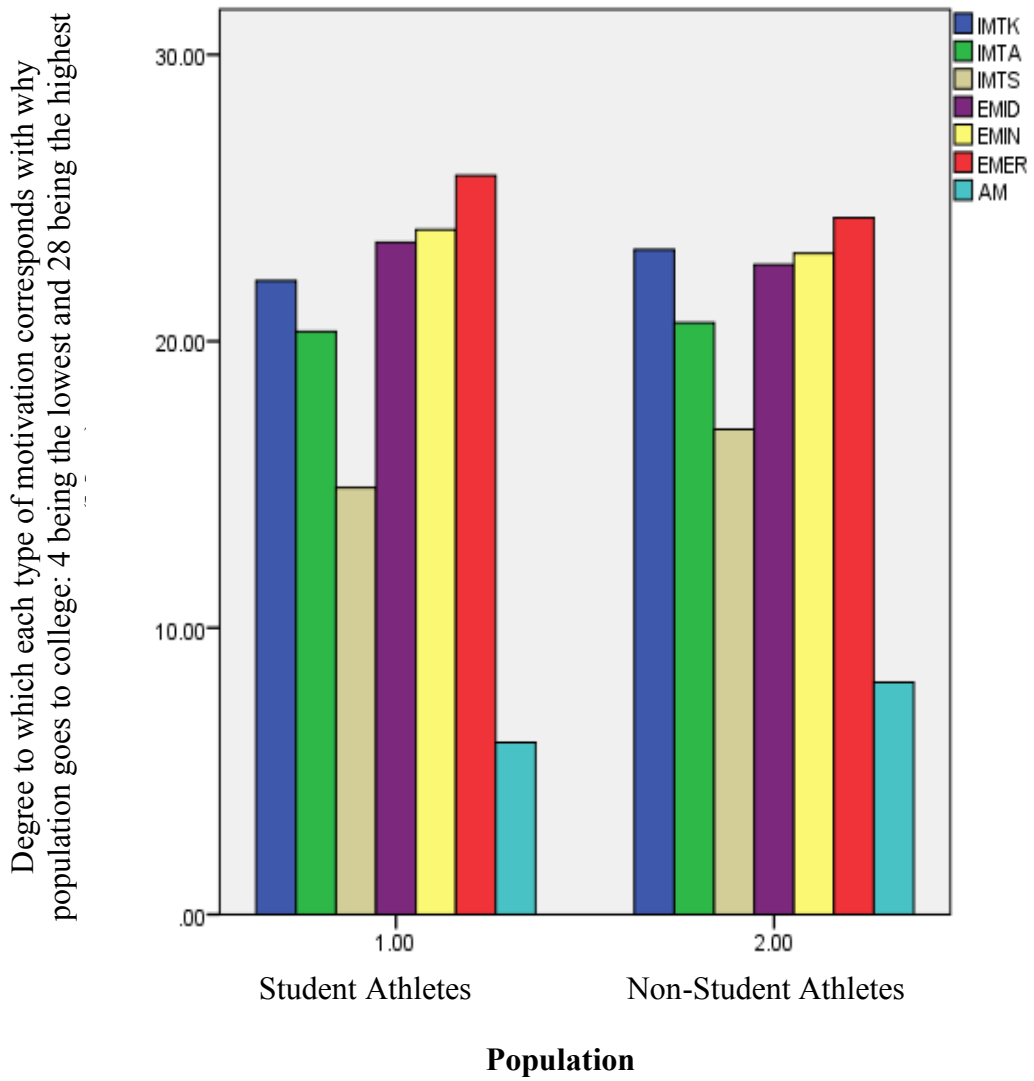

Figure 1. Comparing Types of Academic Motivation in Student Athletes and Non-Student Athletes.

Each bar was color coded to represent each of the 7 types of motivation addressed by the statements in the Academic Motivation Scale-College Version (Vallerand et al., 1992). The left cluster represents the responses by student athletes, and the right cluster

represents the responses by non-student athletes. The numbers along the vertical axis represent the mean score of each population in that specific category of motivation. The lowest possible mean score was 4 and the highest possible mean score was 28.

An independent samples t-test was run to compare academic motivation in student athletes and non-student athletes. Results of the analysis were non significant for each of the 7 types of academic motivation. Student athletes (M = 25.78, SD = 2.22) and non-student athletes (M = 24.31, SD = 4.50) alike scored highest in external motivation external regulation (MD = 1.47). Both student athletes (M = 6.00, SD = 4.18) and non-student athletes (M = 8.10, SD = 5.81) scored lowest in a-motivation (MD = -2.10).

Significant results of an independent samples t-test were found on the amount of time spent on coursework between student athletes and non-student athletes ($p = .013$, $df = 49$). Participants were asked to report the number of hours spent on coursework each week on average. Participants chose from a Likert scale: (1) *0-3 hours per week*, (2) *4-7 hours per week*, (3) *8-11 hours per week*, (4) *12 or more hours per week*. Student athletes (M = 2.778, SD = 0.441) reported spending more hours on coursework per week than non-student athletes (M = 2.095, SD = 0.759). Most student athletes (55%) reported spending 8-11 hours per week on coursework, while most non-student athletes (61%) reported spending 4-7 hours per week on coursework. Figure 2 represents the number of student athletes and the number of non-student athletes that reported spending the given range of hours on coursework each week. Frequency statistics were run to determine how often each range of hours was reported from the entire sample (See Table 2).

Table 2

Frequency Statistics: Hours Spent on Coursework Per Week

Hours Spent	Frequency	Percent
0-3	7	13.5
4-7	29	55.8
8-11	12	23.1
12 or more	3	5.8

Note. Frequency refers to the number of participants that reported spending the given range of hours on coursework per week. Percent refers to the mean of the sample that reported spending the given range of hours on coursework per week.

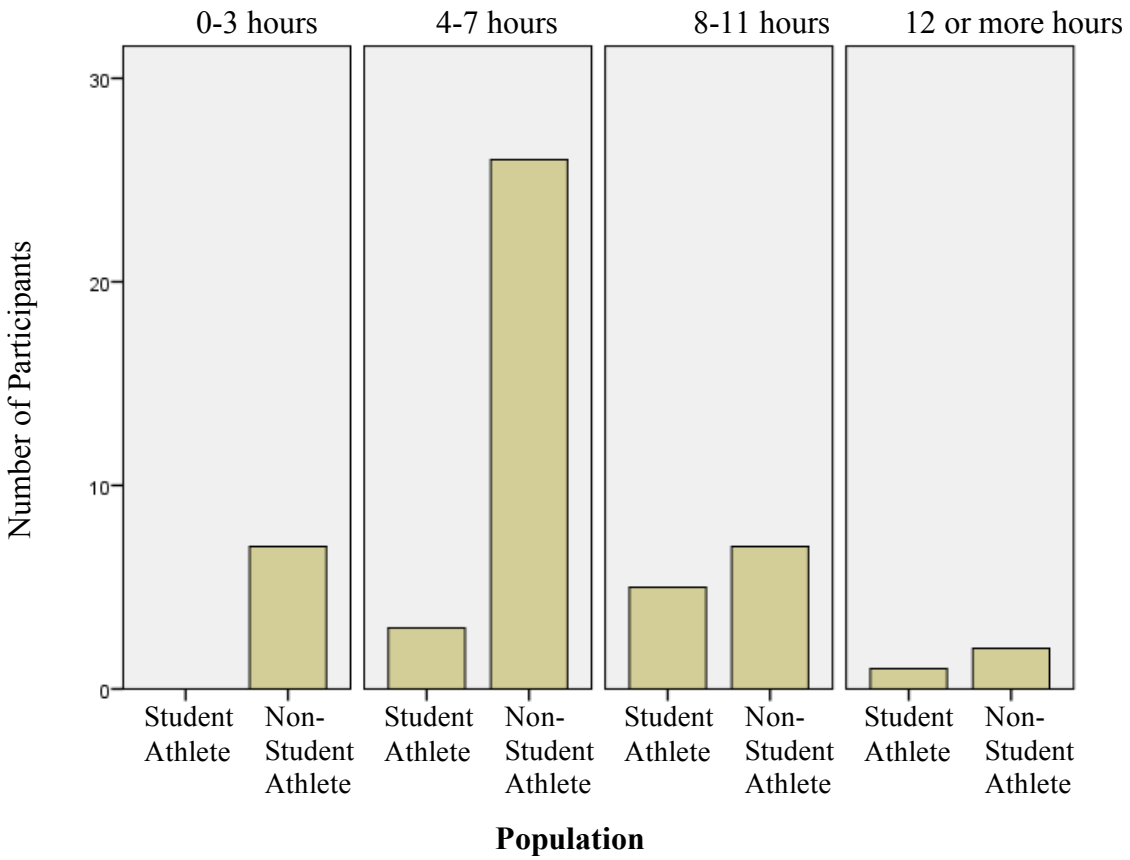

Figure 2. Comparing Hours Spent on Coursework Per Week in Student Athletes and Non-Student Athletes.

In each block, the bar on the left represents responses from the student athlete population, while the bar on the right represents responses from the non-student athlete population. The bars represent the self-report data from the 9 student athletes and the 42 non-student athletes on hours spent on coursework per week. The bars represent the number of participants from the indicated population that reported to spend the given range of hours on coursework per week.

Chapter 5

Discussion

Summary of Findings

The findings presented from this research indicate that there was not a significant difference in academic achievement or academic motivation between student athletes and non-student athletes at this particular Division III University. It is important to note that the use of self-report data runs a high risk of participant bias. Participant bias occurs as a result of demand characteristics (McGinley, Kaplan & Kinsey, 1975). Participants will provide false information in order to fit or go against what they think is the hypothesis of the study (McGinley et al., 1975). In the current study, student athletes may have felt the need to either conform or prove wrong the common stereotype of athletes being low-achieving in academics. Likewise, non-student athletes may have tried to conform to an assumed hypothesis. Previous research suggests that discrepancies in academic achievement and motivation between student-athletes and non student-athletes are more apparent at colleges and universities with highly competitive athletic programs.

The first and second hypotheses were also not supported. There were no correlations between GPA and any of the types of motivation from the Academic Motivation Scale-College Version (Vallerand et al., 1992). In this particular sample, the nature of motivation did not seem to have an effect on the participants' academic achievement. Likewise, academic achievement did not seem to influence the participants' motivation to achieve academically. Most participants felt that the university viewed academics as highly important, whereas participants at universities that rely on athletics for revenue may report differently. More student athletes (67%) and non-student athletes

(77%) viewed academics as very important. The other 33% of student athletes viewed academics as somewhat important as well as 17% of non-student athletes. The results indicate that student athletes and non-student athletes had similar values regarding academics.

Contrary to the third hypothesis, student athletes reported spending more hours on coursework per week than non-student athletes. Although it is possible that participants made false reports as a result of demand characteristics, the results are contrary to common stereotypes. Some research has indicated that student athletes do not have adequate time to complete coursework due to the amount of time dedicated to athletics. However, many Division I universities mandate weekly study hall hours for student athletes. Division III universities are not permitted to provide athletic scholarships to student athletes; therefore, student athletes at Division III universities may have similar goals and values in regards to academics as non-student athletes. Most student athletes at Division I universities receive athletic scholarships and may feel more obligated to athletics than to academics. In the open-ended responses to the question, "do you feel as though you have adequate time to complete coursework? Why or why not?" all student athletes answered yes. The non-student athletes who did not feel as though they had adequate time to complete coursework explained that it was due to obligations of work.

From the open-ended responses regarding future plans, it is apparent that student athletes and non-student athletes from the sample have similar goals. Overall, most participants reported that they had plans to pursue higher education in some type of graduate program. Other responses included finding a stable, high-paid career or owning a business. These open-ended responses were consistent with the findings about the

importance the participants placed on academics. The results of the current study indicated that student athletes were more similar than different academically to non-student athletes.

Implications

The current study found no distinct differences between student athletes and non-student athletes in regard to academic achievement and academic motivation. The results supported existing research that student athletes are capable of doing just as well academically as non-student athletes (Aries et al., 2004; Bradley, Keane & Crawford, 2013; Bonura, 2010; Richards & Aries, 1999). Student athletes exhibited similar patterns of academic motivation as non-student athletes (Bonura, 2010). The present research supported conclusions that student athletes are on a similar playing field as non-student athletes at Division III universities (Bowen & Levin, 2003).

Since student athletes at Division III are not required to complete study hall hours, the results of this study indicated the student athletes were intrinsically motivated to dedicate their time to academics. This finding negated existing research on academic clustering, which refer to the practice of groups of student athletes enrolling in classes that require the least amount of work (Schneider, Ross & Fisher, 2010). Less work means less time is consumed by coursework, and the current study found that student athletes spent more time on coursework than non-student athletes.

Although there were no significant difference between student athletes and non-student athletes in terms of academic achievement or academic motivation, the present study did indicate that student- athletes exhibited a commitment to academic success. Based on their time dedicated to coursework, GPA, and plans to continue their academic

career past collegiate sports, it can be inferred that student athletes at this institution were not just athletically inclined and had other motivators to attend college outside of athletics. The results of this study can be used against stereotype threat, and hopefully reduce demeaning attitudes that some have towards student athletes (Emerson et al., 2009).

Limitations

Limitations of this study included the sample size and the manner of which data were obtained. The limited sample size was not representative of the larger population. The populations within the sample were also skewed. There were far more non-student athletes represented in the sample than non-student athletes. The underrepresentation of the student athlete population may have reflected the ratio of student athletes to non-student athletes on campus. However, the number of student athletes in the sample was not enough to conclude a significant representation of all student athletes. The sample was also limited because it only included students enrolled in introductory psychology courses. Participants were not asked to report their class status (freshman, sophomore, junior, or senior), but it could be inferred that since the students were enrolled in an introductory course, that most participants were underclassmen.

The nature of the survey allowed participants to self-report the data being interpreted. It was unknown whether or not the responses reported were completely accurate or true. The only measure of academic achievement was GPA, and official records could not have been obtained from the university. Therefore, the only measure of academic achievement was one item of self-report data. It was possible that demand characteristics caused participants to report data to reinforce or reject certain stereotypes.

Recommendations for Further Research

Suggested further research would include utilizing the survey from this study on populations of student athletes and non-student athletes at Division I, II, and III universities across the nation. Data could be obtained from each university regarding the amount of revenue athletics generate, and more specifically, which specific sports teams generate the most revenue. Future study could include expanding the current survey to include student athletes to report which sports team they belong to. Comparing athletic motivation to academic motivation in student athletes could determine whether athletics, academics or both are the motivating factors for student athletes to attend college. In order to measure athletic motivation, The Student Athletes' Motivation toward Sports and Academics Questionnaire as well as the Athletic Identity Scale could be used in addition to the Academic Motivation Scale.

Research in the future may also require participants to report their year in order to include students from all class levels (freshmen, sophomores, juniors, and seniors). Motivation may vary depending on year. Plans for the future become more stable as students approach graduation. What was once important to a student during the freshman year of college may not be as important when the student is in his or her senior year. Another addition to the survey could include asking the participant to report his or her major. Sanders and Hildenbrand (2010) found that academic clustering is prominent in the student athlete population. Clustering refers when student athletes choose similar majors or courses. The research found that the most popular majors of student athletes were in the social sciences and that student athletes tended to choose less challenging majors (Sanders & Hildenbrand, 2010).

There is also a lack of research on the stereotype threat in Division III student athletes. Existing research indicates that student athletes from revenue-generating Division I athletic programs feel high levels of stereotype threat. These student athletes either become unmotivated to achieve academically or externally motivated to prove others wrong as a result of stereotype threat. It has been assumed that student athletes from Division III athletic programs do not experience stereotype threat because such athletes prioritize athletics and academics equally. The current study did not ask student athletes to report levels of stereotype threat within the campus community. A better understanding of the prominence of stereotype threat within Division III programs would aid in the research of motivation in student athletes across the board.

Additional research regarding the implications of NCAA academic standards and academic supports offered to student athletes would create a better understanding for academic motivation as well. The current study did not ask whether or not academic supports offered by the university were being utilized. Universities that have Division III athletic programs are not required by the NCAA to offer the same supports as Division I athletic programs, rather it is left to the discretion of the athletic department and coaches to implement supports. Universities offer sorts of academic supports that all students may take advantage of. Research regarding the utilization of academic support programs could be used in the research of academic motivation. Further research could look at the types of support offered to student athletes and non-student athletes as well as the utilization of such supports by student athletes and non-student athletes, taking into consideration what is mandated by the NCAA and university policy.

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