

A COMPARATIVE STUDY OF STUDENT ENGAGEMENT BASED ON
INTERCOLLEGIATE ATHLETICS PARTICIPATION

by

David Michael Woolever

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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APPROVED BY:

Alan Wimberley, EdD, Committee Chair

L. Thomas Crites, EdD, Committee Member

Ralph Marino, EdD, Committee Member

ABSTRACT

The concept of retention in higher education institutions is certainly a hot topic. Institutions have explored first year seminars, engagement with faculty and creating a culture of connectivity and belongingness among the student population to include extra-curricular activities in creating an engaged student that will persist until graduation. Furthermore, academic engagement among student-athletes is one topic that has that has been somewhat neglected while institutions look at ways to increase retention via creating a culture of involvement. In addition, the Student Engagement Instrument (SEI), initially designed to measure engagement among secondary students has rarely been utilized to examine academic engagement among students at the collegiate level (Grier-Reed, Appleton, Rodriguez, Ganuza & Reschly, 2012). Therefore, the purpose of this study is to examine the effects that athletics participation has on the academic engagement of students as measured by the SEI. Drawing upon Albert Bandura's (1977, 2001) social learning theory, Astin's (1999) theory of involvement, the self-determination theory (SDT) and Tinto's (1975) student integration model, the study explored the relationship between participation in sports and academic engagement. This research is geared toward higher education exploring persistence and retention as well as exploring further use of the SEI on a college population. Conclusions can be drawn to address retention issues plaguing universities and colleges.

Keywords: academic engagement, academic engagement scores, persistence, retention, Student Engagement Instrument (SEI), varsity athletics

Dedication

First and foremost I would like to give thanks to my Lord & Savior Jesus Christ. Without Him, nothing is possible.

I would like to dedicate this endeavor to my parents, Ken and Mary Woolever. From my first class at Shepherd to my last hour at Liberty, and all the trials in between, you have been my source of strength. Mere words cannot express the enormity of my gratitude. Your prayers, words of wisdom, and encouragement have made this achievement possible. You are truly the best parents one could ever ask for.

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Lastly, they say that a dog is a man's best friend. Nothing could be truer of my little guy, Nestor. As a pet therapy dog in the Prescription Pet Program at Children's Hospital-Colorado, he has spent invaluable time with patients and their families bringing a smile upon every visit. Without question, Nestor served as my therapy dog while I dealt with the stress, pressure and anxiety of a doctorate program. He made it tolerable and fun! Thanks buddy.

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Table of Contents

ABSTRACT	3
Dedication	4
Acknowledgements	5
List of Tables	9
List of Figures	10
List of Abbreviations	11
CHAPTER ONE: INTRODUCTION	12
Overview	12
Background	12
Problem Statement	14
Purpose Statement	15
Significance of the Study	16
Research Questions	18
Null Hypothesis(es)	18
Definitions	19
Research Summary	20
CHAPTER TWO: LITERATURE REVIEW	21
Overview	21
Theoretical Framework	23
Social Learning Theory	23
Self Determination Theory	24
Theory of Involvement	24

Student Integration Model	27
Review of the Literature	28
University and College Closures	28
Student Engagement and Persistence.....	30
Participation in Athletics and Experience.....	34
Retention in Higher Education.....	38
Student Engagement Instrument.....	46
Summary	49
CHAPTER THREE: METHODS.....	52
Overview.....	52
Design	52
Research Questions.....	53
Null Hypothesis(es)	53
Participants and Setting.....	54
Instrumentation	57
Procedures.....	59
Data Analysis	60
CHAPTER FOUR: FINDINGS.....	62
Overview.....	62
Research Questions.....	62
Null Hypothesis(es)	63
Descriptive Statistics.....	63
Results.....	66

Data Screening	66
Null Hypothesis One.....	67
Null Hypothesis Two	71
Null Hypothesis Three.....	81
Overview.....	85
Discussion.....	85
Null Hypothesis One.....	87
Null Hypothesis Two	88
Null Hypothesis Three	89
Implications.....	90
Limitations	92
Recommendations for Future Research	93
REFERENCES	95
APPENDICES	106

List of Tables

Table 1. Descriptive Statistics for Hypothesis One	64
Table 2. Descriptive Statistics for Hypothesis Two.....	65
Table 3. Descriptive Statistics for Hypothesis Three.....	66
Table 4. SEI Tests of Normality	69
Table 5. Levene's Test and t-test for SEI by Athletic Participation.....	71
Table 6. GPA Tests of Normality	74
Table 7. Levene's Test and t-test for GPA by Athletic Participation.....	79
Table 8. Descriptive Statistics for Mann Whitney U Test for GPA Scores.....	81
Table 9. SEI Tests of Normality	83
Table 10. Levene's Test and t-test for SEI by Athletic Participation.....	84

List of Figures

Figure 2. Normal QQ plot for varsity student-athletes	69
Figure 3. Normal QQ plot for non-varsity student-athletes	70
Figure 4. Box plot for GPA by athletic participation.....	72
Figure 5. Normal Q-Q plot for varsity student-athletes.....	74
Figure 6. Normal Q-Q plot for non-varsity student-athletes.....	75
Figure 7. Histogram for varsity student-athletes.....	76
Figure 8. Histogram for non-varsity student-athletes	77
Figure 9. Box plot for SEI by varsity athletic participation (individual sports, team sports).....	82

List of Abbreviations

Student Engagement Instrument (SEI)

Grade Point Average (GPA)

NAIA (National Association of Intercollegiate Athletics)

NCAA (National Collegiate Athletic Association)

CHAPTER ONE: INTRODUCTION

Overview

Chapter One explores the overall need for this study, while explaining both the negative and positive perceptions of varsity intercollegiate athletics participation in higher education. Additionally, many private universities are struggling with both recruitment of students and retention issues forcing many universities to downsize or even close. Therefore, this study is recommended for those administrators looking to address these issues. The purpose statement addresses the goals of the study whereas the significance of the study explains the importance of utilizing the Student Engagement Instrument (SEI) to measure academic engagement based upon athletic participation. The developers of the SEI state that this instrument should be used on another college population, and this study fulfills that gap in the literature (Grier-Reed et al., 2012). Research questions and their corresponding hypothesis are clearly stated, and Chapter One concludes with key definitions.

Background

Much has been debated when discussing the impact that sports participation has on student achievement among college populations. Many have contended that sports and athletics at the collegiate levels have become distorted and corrupt. Others argue that students who participate in sports become obsessed with their respective sports to the detriment of their academic endeavors. Recent incidents of academic fraud and scandal involving student-athletes among some of the nation's most prestigious universities serve to reinforce the notion that athletics and education are incompatible. Although some may perceive that sports participation has a negative correlation on academic achievement, other studies have indicated the opposite. This is evident in one of Hu's (2011) articles in which he explores the relationship between

student engagement and persistence in college as it relates to graduation. As such, Hu (2011) contends that participation in sports results in social integration, academic involvement and ultimately graduation. Perhaps there is a correlation between academic success and social involvement. If one is socially integrated, then one may also be engaged academically. Those in higher education have witnessed the implementation of first year seminar programs at colleges and universities across the country in an attempt to integrate incoming first-year students into the social culture of the university (Henning, 2012). The theory being, if a first year student can “connect,” they will have a higher chance of succeeding in the classroom (Henning, 2012).

Higher education institutions can certainly strive to facilitate a student-centric learning environment. In creating a student-centric learning environment, the first step is getting to know and understand the student upon arrival as this helps teachers facilitate connections with the new student (Daniels, 2011). This is setting the stage to creating a facilitative and cooperative learning environment in which both the teacher and the student are engaged in the pursuit of learning. The thinking behind this is that when there is a positive relationship between the students and the teacher, academic success is likely to follow. Therefore, it is essential that institutions strive to create a positive atmosphere for all students through both social and academic endeavors.

Drawing on Astin’s theory of involvement as a reason why students who are engaged in student activities tend to graduate, Hu (2011) explores this topic in which he ultimately concludes that a “high level engagement in social activities is positively related to student persistence in college” (p. 104). Furthermore, research among adolescents demonstrates that “sports participation has a positive influence on a child’s physical and emotional development, because it is easier for a child to adapt to their physical environment and to communicate if they

take part in sports activities” (Dinc, 2011, p. 1417). This study is intended to ask a key question with research as it relates to academic engagement among intercollegiate athletes. Furthermore, inferences can be made in regard to overall student satisfaction with the university. As such, retention issues may be examined through the scores of academic engagement as measured by the student engagement instrument. Meaning, the more engaged a student is, the more satisfied one is with their university, and thus, the student is more likely to persist at the university through graduation. Therefore, if involvement in non-scholarship intercollegiate sports teams can be attributed to higher scores of academic engagement, perhaps there is cause for universities to invest in these types of activities.

Problem Statement

Throughout higher education, there is a problem with student retention (Borysenko, 2014). Such retention issues are correlated with students who are not socially and academically engaged with their institution. Many universities are addressing this issue through a variety of endeavors to include mandatory enrollment in first year seminars and expanding social integration opportunities through student clubs and intercollegiate athletic sports teams, especially at small universities that do not grant athletic scholarships (Henning, 2012). Therefore, the purpose of the study is to provide a context in which to better understand the effects that athletic-participation has on academic engagement scores as measured by the Student Engagement Instrument (SEI). The study contributes to the research knowledge base by drawing inferences about the relative impact the participation in sports has on academic engagement, and ultimately upon student retention through graduation.

In order to measure academic engagement, the SEI is the primary instrument that will be utilized in collecting the data pertinent to the study of engagement based upon participation in

varsity intercollegiate athletics. The researcher has chosen to examine a small, secular, private university as part of a convenience sample. Furthermore, the university system selected does not provide athletic scholarships at three of the four regional campuses, and those students that do receive athletic scholarships will be screened out of the data. Therefore, the student bias of one indicating they are more academically engaged, due in part to the fact they are receiving a scholarship, is eliminated.

The SEI has been developed and utilized to “measure cognitive and affective engagement in school for middle and high school students” (Grier-Reed et al., 2012, p. 85). Furthermore, Appleton, Christenson, Kim, and Reschly (2006) have indicated that further research needs to be conducted utilizing the SEI in a collegiate setting.

Lastly, if there is a positive correlation between participation in intercollegiate sports teams and high scores on the SEI, university leaders may look to improve overall student retention by adding varsity sports teams. Since this study is focused on the small, college setting without athletic scholarships, this may be an inexpensive option to improving overall student engagement, social interaction and increase retention among the student population.

Purpose Statement

The purpose of this study is to examine the level of academic engagement based upon participation in varsity athletics as measured by the Student Engagement Instrument (SEI). This study incorporates the concepts of student involvement, engagement, and retention. Furthermore, Astin (1985) and Tinto (1975, 2015) have developed theories or models that attest to the premise of this research study. This is a comparative study that will utilize an independent samples *t*-test, due to the fact that the researcher will have one dependent variable and two independent variables in this study. The researcher has proposed to collect data from a small

private secular university that does not grant athletic scholarships. Therefore, the purpose of this study is to examine the level of academic engagement as measured by the Student Engagement Instrument (SEI) based upon participation in varsity athletics. Furthermore, inferences from this study can be drawn as they relate to academic success, retention, and student graduation.

Significance of the Study

The significance of the study is two-fold. Presently, there is a partial void in the literature and current research in regard to institutions seeking answers for retention related questions and issues as they relate to athletics and extracurricular activities. There is also a void in the literature as it relates to examining student-athletes aside from their peers (Weiss & Robinson, 2013). Although many studies have been conducted that examine the correlation between athletics participation and academic achievement, especially at the high school level, there is limited research that explores the correlation between academic engagement as it pertains to four-year colleges and universities among non-scholarship athletes (Grier-Reed et al., 2012). In regard to academic engagement, there is also little research on whether student-athletes engage in academic practices in a similar manner as other students (Umbach, Palmer, Kuh, & Hannah, 2006). Due to scandals and corruption among athletics departments at all levels, some have questioned the effect that sports participation has on the academic achievement of student-athletes (Hill, Burch-Ragan & Yates, 2001). Furthermore, “employing a measure of student engagement to examine the educational experience of students provides information related to a variety of educationally sound practices associated with both learning and personal development” (Symonds, 2009, p. 162). Weiss and Robinson (2013) citing Tinto (1993) comment that there have been “few attempts at isolating the student-athlete to determine if there are specific issues related to intention of this particular type of student” (p. 84). While studies

like Routon and Walker (2015) and Umbrach et al. (2006) have examined the differences among student athletes and the non-athlete peers, the idea of exploring how student-athletes and academic engagement are correlated is relatively new.

Secondly, the SEI was initially designed to measure academic engagement among secondary students. Few studies have utilized the SEI to measure academic engagement in a college population. Since its inception, the SEI has been used primarily as an instrument to measure academic engagement among secondary students (Grier-Reed, et al., 2012). Other researchers have piloted an elementary version as well as a collegiate version (Carter, Reschly, Lovelace, Appleton & Thompson, 2012). Various words and phrases are amended to relate to the population sampled. As such, the SEI utilized in this study compliments Symonds' (2009) study examining academic engagement among intercollegiate student-athletes. Furthermore, the SEI utilized further expands the initial design of the instrument as recommended by Grier-Reed et al. (2012). This study will therefore utilize the SEI to measure academic engagement among college students at a private university.

Lastly, engagement is important to examine as it relates to student retention in smaller, career-focused higher education institutions. In addition, the concept of social engagement and belongingness further explores the idea that institutions should not eliminate, but rather add athletics activities and other student engagement opportunities for students in order to promote academic success as well as combat student retention issues plaguing higher education. While this study is examining the SEI and academic engagement among student-athletes, the higher a student-athlete scores on an instrument measuring academic engagement, one could infer that the student is highly satisfied with their institution, and more likely to persist. Therefore, higher scores on academic engagement instruments could suggest a student is likely to persist until

graduation. As such, if such a correlation does exist, perhaps smaller universities could look to increase their athletic budget in the name of retention. If there are links between participation, academic engagement and academic success, then there is cause for administrators to add varsity sports, rather than eliminate them in order to address retention issues.

Research Questions

To address the objectives of this study, three research questions were posed by the researcher. The research questions for this study were:

RQ1: Is there a difference in engagement scores as measured by the SEI between students involved in varsity athletics and those not involved in varsity athletics?

RQ2: Is there a difference in overall GPA based upon participation in varsity athletics and those not involved in varsity athletics?

RQ3: Is there a difference in engagement scores as measured by the SEI among student-athletes participating in individual sports and student-athletes participating in team sports?

Null Hypothesis(es)

The null hypotheses of this study were:

H₀1: There is no significant difference between the mean engagement scores as measured by the SEI of students involved in varsity athletics and those not involved in varsity athletics.

H₀2: There is no significant difference in overall GPA of students involved in varsity athletics and those not involved in varsity athletics as measured on a 4.0 scale.

H₀3: There is no significant difference in engagement scores as measured by the SEI among student-athletes participating in individual sports and student-athletes participating in team sports.

Definitions

1. *Academic engagement*- Academic engagement is defined as the level of participation a student has in their academic pursuits and endeavors (Soria & Stebleton, 2012).
2. *Academic engagement scores*- Academic engagement will be measured by the Student Engagement Instrument (SEI) to determine levels of academic engagement among student athletes (Lovelace, Reschly, Appleton, & Lutz, 2014).
3. *Persistence*- Persistence is the ability to successfully matriculate to graduation in a college setting (Hu, 2011).
4. *Retention*- Retention is defined as persisting or to successfully persevere and continue the course, certification, or degree program to completion (Simonson, 2010).
5. *Student Engagement Instrument (SEI)*- The SEI is the instrument used to measure academic engagement and is “a self-report measure of cognitive and affective engagement with school” (Lovelace et al., 2014).
6. *Varsity athletics*- Varsity athletics are programs sponsored by an institution, which requires a high level of skill resulting in individuals being restricted from participation due to lack of skills (Lovell, 2013; Williams, 2008).
7. *Individual Varsity Sports*- Individual sports are defined as those where one individual from the team can advance to post-season play (NCAA, 2016). For this study, individual sports included: cross country, equestrian, golf, swimming & diving, track & field, and wrestling.
8. *Team Varsity Sports*- Team sports are defined as those sports where only the whole team can advance to post-season play (NCAA, 2016). For this study, team sports included: baseball, basketball, ice hockey, lacrosse, sailing, soccer, softball, and volleyball.

Research Summary

This study was a quantitative study that examined the differences between the variables. The research design was a comparative study that utilized an independent samples *t*-test due to the fact that the researcher will have one dependent variable and two independent variables in this study for each research question. The SEI was emailed to every undergraduate student at each of the four regional campuses of the university system. Students self-reported their approximate grade point average (GPA). The independent samples *t*-test was used to test the null hypotheses.

CHAPTER TWO: LITERATURE REVIEW

Overview

Researchers are continually exploring means to help college students achieve academic success in the United States and around the world. Furthermore, university administrators are striving to make ends meet in regard to recruitment and retention of students. Much has been written regarding student engagement with campus activities and the relationship with academic achievement. However, does that engagement translate to satisfaction with their university? It can be inferred that if a student is not satisfied, then one will not persist until graduation and either drop out or transfer to another university. In addition, the impact that sports participation has on student achievement has been debated for some time. While some studies show positive correlations between athletics participation and academic achievement, others show the something quite different such as low graduation rates among student-athletes (Gayles & Hu, 2009). Furthermore, recent charges of corruption include stories of academic fraud, non-existent classes and student-athletes given grades in order to maintain eligibility at some of the nation's most prestigious universities (Stripling, 2014).

Although some may perceive that sports participation has a negative correlation on academic achievement, other studies have indicated the opposite (Gayles & Hu, 2009; Hu, 2011). This is evident in Hu's (2011) articles where he explores the relationship between student engagement and persistence in college as it relates to graduation. Perceptions and personal feelings aside, this study is intended to ask a key question with research as it relates to academic success and engagement. Research should examine student-athlete participation at the small, collegiate setting where athletic scholarships are not provided. In addition, research needs to be conducted that explores various levels of engagement on a reliable instrument such as the SEI

The SEI is a relatively new instrument and has been utilized to measure “cognitive and affective engagement in school for middle and high school students” (Grier-Reed et al., 2012, p. 85). In the 2012 study, “Exploring the Student Engagement Instrument and Career Perceptions,” the researchers attempted to measure career engagement of college students as it related to career perceptions utilizing the SEI to determine levels of engagement (Grier-Reed et al., 2012). While the questions remained the same, words were changed from “teacher” to “professor” to provide a compatible instrument for college students (Grier-Reed et al., 2012). Furthermore, the researchers of the 2012 study state that, “future research exploring the SEI with college students is needed, and we recommend additional research in this vein [as] this research can improve continuity in how engagement is defined and measured across secondary and postsecondary settings” (Grier-Reed et al., 2012, p. 94).

This is an important topic to explore, as there is a void in the literature in utilizing the SEI to measure academic engagement among college students, especially intercollegiate athletes. As the researchers indicated, the SEI should be used in studies examining engagement among college students (Grier-Reed et al., 2012). In addition, with small, private colleges and universities seeking answers for retention related questions, this research utilizing the SEI “can advance understanding of the importance of engagement to different facets of the student experience like career development, which may contribute to innovations in career and education practices that better retain students in school” (Grier-Reed et al., 2012, p. 94).

Lastly, the concepts of academic and social engagement should further explore the idea that institutions should not eliminate, but rather add athletics activities for students in order to promote academic success as well as combat student retention issues plaguing higher education. This research is important in higher education as it seeks to understand the influence athletics

participation has on academic engagement as measured by the SEI. Conclusions can be drawn to address retention issues plaguing universities and colleges.

Theoretical Framework

Social Learning Theory

The theories examined in this research will draw primarily on Albert Bandura's social learning theory (SLT) also known as the social cognitive theory (SCT) (Bandura, 1977, 2001). The basic premise of Bandura's (1977, 2001) theory is that one is influenced by observation in order to learn new behaviors (Miller, 2011, p. 262). The self-efficacy component of Bandura's (1977, 2001) theory further accentuates the relationship of "...people's perception of their competence in dealing with their environment and exercising influence over events that affect their lives" (Miller, 2011, p. 243). The key element of this study focuses on the power of self-efficacy and confidence as it relates to academic engagement. The idea is that if a person experiences success in one facet of their life, they will develop the confidence to be successful in other facets of their life. In this case, the athlete learns to handle success or perseverance on the field of play that in turn, helps them identify how to attain success in the classroom through a desire to be engaged. The self-efficacy component of Bandura's (1977, 2001) theory further accentuates the relationship "...people's perception of their competence in dealing with their environment and exercising influence over events that affect their lives" (Miller, 2011, p. 243). In addition, a sense of self-efficacy helps to influence how one addresses challenges and obstacles (Tinto, 2015).

Edwin Locke (1997) argues that self-efficacy relates to most areas of basic psychology including leadership, performance evaluations, and teams (Locke, 1997). In demonstrating how self-efficacy is related to athletics, Devonport and Lane (2006) apply self-efficacy and Bandura's

(1977) work to the concept of retention. Qualitative methods were used to investigate this relationship and the results indicated that those students who possessed high levels of self-efficacy were more likely to not drop out of school during their first year at their undergraduate institution (Devonport & Lane, 2006). Therefore, students have to believe that they can be successful and therefore, self-efficacy is the foundation upon which student persistence is built (Tinto, 2015).

Self Determination Theory

In addition to Bandura (1977, 2001), the self-determination theory (SDT), as explained by Edward L. Deci and Richard M. Ryan (1985) is important to this study. The SDT is a general theory of motivation, but many studies have been conducted which give credit to this theory when examining the correlation between sports participation, motivation and achievement. The SDT is a “comprehensive model that has shown to be effective in explaining motivation and behavior” (Bell, Blom, Halbrook, Holden & Hurley, 2012, p.61). The SDT describes motivation on a continuum “anchoring intrinsic motivation on one end and extrinsic motivation in the middle and motivation on the other end” (Bell et al., 2012, p. 61). Therefore, the SDT may provide insight as to relationships between sports engagement and academic achievement.

Theory of Involvement

Astin’s (1999) theory of involvement explores how students who are engaged or involved in their surroundings tend to persist and succeed. According to Astin (1999), with this approach, student involvement becomes the primary focus of examination rather than the extrinsic motivators of the institution (Astin, 1999). Quite simply, “student involvement refers to the amount of physical and psychological energy that the student devotes to the academic experience” (Astin, 1999, p. 518). For example, a highly involved student is one who devotes

“considerable energy to studying, spends much time on campus, participates actively in student organizations, and interacts frequently with faculty members and other students” (Astin, 1999, p. 518).

Astin’s (1999) theory explores a student’s intrinsic motivation to want to be involved in campus activities as well as their academic learning. This theory is partially designed to explore retention issues and those students who leave the academic system, thus using this theory to examine engagement and retention is practical (Astin, 1999). The theory of student involvement has its roots in Astin’s early work where he examined various factors in a college environment that affected student’s retention in college (Astin, 1999). In one of his early longitudinal studies Astin showed that students who participate in extracurricular activities of almost any type including honors programs, research projects, Greek life and ROTC “are less likely to drop out” (Astin, 1999, p. 523). Furthermore, a key component that distinguishes Astin’s (1999) theory from other theories is that it focuses on the student’s time, arguably the most precious resource a student possesses. The theory of involvement has also identified those students who live on campus and hold part-time jobs with the university as key factors to persisting as student’s “feel” a greater connection and attachment to the university than those who hold part-time jobs off campus (Astin, 1999). In addition, it is wise to note that involvement takes many forms such as academics, work, extracurricular activities and interaction with faculty and staff (Astin, 1999). According to the theory, the more one is involved in their campus, the greater the amount of learning and personal development (Astin, 1999). A student can be involved in many facets of the institution to include, clubs, sports teams, student government as well as academic and peer involvement. Therefore, as educators look to address retention issues, they should look at ways to engage students and enhance student involvement in their campus.

According to Astin (1999), the principal advantage of the student involvement theory over traditional pedagogical approaches (including the subject-matter, the resource, and the individualized or eclectic theories) is that it directs attention away from subject matter and technique and toward the motivation and behavior of the student. (p. 528). Therefore, all members of the institution can begin to assess their own activities and programs in terms of their success “in encouraging students to become more involved in the college experience” (Astin, 1999, p. 528).

In exploring student athletes, Astin (1999) commented that “athletic involvement is also associated with satisfaction in four areas: the institution's academic reputation, the intellectual environment, student friendships, and institutional administration” (Astin, 1999). According to the longitudinal study, “participation in sports, particularly intercollegiate sports, has an especially pronounced, positive effect on persistence” (Astin, 1999). Therefore, when examining student-athletes, there is reason for colleges and universities to enhance their athletic department, even at the non-athletic scholarship level. This will help in creating a sense of “belongingness” as described by Tinto (2015) in exploring ways students persist until graduation.

Astin’s (1999) theory shares similarities to Bandura’s (1977, 2001) self-efficacy theory in regard to sports participation, in that Astin’s (1999) theory of involvement suggests that athletic involvement is also associated with not only achievement, but also with satisfaction in primarily four areas: academic reputation, intellectual environment, student and peer friendships and university administration. Astin’s (1999) theory has been examined by many researchers hoping to understand retention issues as well as overall academic success and social well-being. Therefore, Astin’s (1999) work is fundamental to the foundation of this study.

Student Integration Model

Lastly, the work of Vincent Tinto (1975, 1993, 2015) should not be overlooked in regard to retention and dropout issues. Tinto (1975) argued that it is the individual's "integration in the academic and social systems of the college that most directly relates to his continuance in that college (p. 96). This model of retention and persistence mostly closely parallels Astin's (1999) theory of involvement. Tinto (1975) also examines the levels of individual goal commitment the student has toward completion of a college degree as well as his or her "institutional commitment" toward their given institution. Therefore, it is fair to say that there are several factors at work here in Tinto's (1975) model. First, the student must actively seek to be involved in the academic and social spheres of the university. Second, the institution must recognize students persist through this involvement and therefore should offer and encourage students to immerse themselves in activities that allow them to connect to the institution where they feel involved and develop a sense of belonging. This is where it is incumbent on the institution to develop an array of activities and programs designed to excite and entice the student, be athletic involvement, student led activities, student government, first year seminars, and other programs meant to help the student connect to the institution. Tinto (1975) argues in the final analysis that it is the "interplay between the individual's goal of college completion and his commitment to the institution that determines whether or not the individual decides to drop out from college" (p. 96).

The most fascinating aspect of Tinto's (1975) model that relates to this study is the social interaction component. As defined by Tinto (1975), social integration as it pertains to persistence encompasses the "development of friendship associations with some part of the social system of the college" (p. 107). These varied and diverse subcultures can include

fraternities, peer group associations, semi-formal extracurricular activities and “interaction with faculty and administrative personnel within the college” (Tinto, 1975, p. 107). This is the component of Tinto’s (1975) model that most closely align with both Bandura (1977, 2001) and Astin (1999). Therefore, it is important to study Tinto’s (1975) model and part of the framework of this particular study exploring student-athletes and how they score on the SEI.

Review of the Literature

University and College Closures

Small, private universities are facing pressure to remain financially solvent despite the fact that the recession ended some five years ago. According to an article in *Bloomberg Business*, many small, private universities that depend on tuition for revenue are facing severe competition from online programs, student debt and poor job prospects (McDonald, 2014). Furthermore, “Harvard business school professor Clayton Christensen has predicted that as many as half of the more than 4,000 universities and colleges in the U.S. may fail in the next 15 years” (McDonald, 2014, para. 7). Susan Fitzgerald, an analyst at Moody’s Investors Service, believes there will be more closures over the coming years (McDonald, 2014).

In examining the risks of private universities, Lyken-Segosebe and Shepherd (2013) reported that private colleges and universities that closed nearly doubled in four years from 2008-2011 (Lyken-Segosebe & Shepherd, 2013). Recent closures among small, private universities have caused administrators to examine how to not only recruit new students, but to look at ways to retain their current student population. This serious issue has added to the problem of excessive turnover among college presidents. Tekniepe (2014) found that the various job responsibilities and pressures that cause tremendous turnover among community college presidents. Pressures on college presidents to balance a wide array of demands, including fiscal

concerns as well as academic engagement and retention among the student population, have proven to be a tremendous task (Tekniepe, 2014).

According to a survey of higher education leaders, retaining current students is the top priority facing colleges and universities today, outdistancing other revenue producing initiatives such as increasing the endowment, developing and expanding online programming and investing more in fundraising (Borysenko, 2014). Furthermore, Borysenko (2014) states that many institutions focus more on academic factors than social and financial factors, which could be a problem in addressing the true nature of the retention issue. As discussed by Turner and Thompson (2014), many universities focus on freshmen retention as critical to the financial success of an institution and “address this area of concern by creating some form of freshman support systems to engage the new learners” (p. 94).

As such, perhaps one way to look at the retention issue is to examine student engagement, especially as it relates to social integration in the form of clubs, specifically intercollegiate varsity athletics. This is a common practice among non-selective NCAA Division III institutions, as these colleges and universities often face challenges in meeting their enrollment goals as well as facing retention issues, especially among the private institutions. According to Beaver (2014), in order to “ensure their continued viability, [NCAA Division III schools] recruit large numbers of student athletes” (p. 35). As a result, these schools “have a much higher percentage of student athletes on campus and a slightly higher number of varsity teams despite having much smaller enrollments” (Beaver, 2014, p. 35).

This new model of recruiting students to stabilize enrollment while also enticing students to stay at the institution can work for non-selective private universities. Beaver (2014) cites statistics from Westfall (2011) that showed that only two percent of high school athletes received

athletic scholarships at Division I or II institutions. Therefore, “a large number of high school athletes might continue their athletic careers at the college level” (Beaver, 2014, p. 37). If private universities that are searching for ways to increase enrollment and retain students “offer the opportunity to play at the next level, a college might enroll any number of students who otherwise would not have considered it [and] even if a student did not perform well athletically, they might continue to attend, not wanting to transfer to another school” (Beaver, 2014, p. 37).

Drawing upon the theories of Bandura (1977) and Astin (1999), universities have been examining how to provide athletic and social engagement opportunities to students in order to meet enrollment goals and retain students through graduation. The following sections of this review relate to articles exploring student engagement, athletics participation, and student retention.

Student Engagement and Persistence

At all levels of education, the institution and the faculty within are ultimately responsible for the curriculum, teaching methodologies, and the well being of the student. Educational institutions are often viewed to be *in loco parentis*, as they serve as the authority figure for the student while they are in school (Walker, 2014). If society views educators in that fashion, then it is far more important for institutions to not only look for ways to provide levels of academic and social engagement for the students, but also look to enhance the overall experience of the student.

In reviewing the 2014 article “Faculty Advising to Support Student Learning,” found in the *Journal of Developmental Education*, the authors explore how to enhance student learning through academic advising and faculty engagement (Williamson, Goosen, & Gonzalez, 2014). In doing so, this endeavor not only assists with academic engagement, but also aids academic

achievement that can help with student retention (Williamson, et al., 2014). Studies have demonstrated that there is a correlation between establishing a strong institutional connection with students and academic achievement (Williamson, et al., 2014). A case is made that a partnership between student services and faculty should take place to enhance student advising (Williamson, et al., 2014). In doing so, the student is exposed to multiple voices all of who are concerned with the student's well-being. Furthermore, the student has a chance to connect with more than one member of the university and this can enhance their overall academic and social experience (Williamson, et al., 2014).

As the authors noted in their conclusion, student success is tied to the university taking an active role in the student's life, particularly those who may be identified as "at-risk" (Williamson, et al, 2014). With many colleges and universities looking at ways to enhance student retention, this article helps to provide another possible way administrators can initiate a program that would assist students in persisting to graduation. Recent initiatives at Johnson & Wales University in Denver, Colorado involve similar programs or "endeavors" where faculty are encouraged to interact with students outside of the classroom (R. Wiscott, personal communication, September 3, 2014). While not as specific as the program detailed in this study, it has the same end goal: to reach out to students through various means to engage them in the academic process (R. Wiscott, personal communication, September 3, 2014).

Hu (2011) examined the question between student engagement and persistence in college. Hu (2011) makes reference to Astin's (1999) theory of involvement as a possible explanation as to why students who are engaged tend to persist (p. 98). The article also makes reference to other researchers who have conducted similar studies on this topic examining the relationship between student engagement and persistence (Hu, 2011, p. 98). Similarly, Henning (2012)

explored student engagement as a macro topic. Henning (2012) comments that institutions are increasingly using engagement as a conceptual framework for structuring the student experience. In this respect, student engagement is defined as activities such as first year seminars, learning communities, intellectual experiences, service learning, writing intensives and other educational forms of engagement (Henning, 2012). Similar to the articles authored by Gayles and Hu (2009), in which student athletes' educational activities are explored, Henning (2012) also argues a varied use of the concept of student engagement. What is interesting about this article is that Henning (2012), while working in student affairs at Dartmouth College, observes "after a quick analysis" (p. 17) that alumni who were involved in Greek organization tend to donate to the college as opposed to those who were not members of these organizations. Henning (2012) anticipates studying alumni who were actively participating in other student activities, such as the outing club, to determine if they were also engaged alumni. Furthermore, Henning (2012) summarized the article "Piecing together the student success puzzle: Research, propositions, and recommendations," which states that "while students have a responsibility to create their own opportunities for engagement, institutions should be intentional about how they allocate and employ resources to foster engagement and develop a process that results in improved student outcomes" (p. 17).

Astin and Oseguera (2005) found that students who live in residence halls, especially during their freshman year, were more likely to persist to graduation than those who lived off campus. These improved student outcomes are the responsibility of the educational institution due to the fact that there is an inherent trust placed in the school to provide a quality education for the student paying for this service (Astin & Oseguera, 2005). The purpose of residential living is to enhance the student's experience through social integration, friendships and activities

(Astin & Oseguera, 2005). This would further corroborate Astin's (1999) involvement theory as to why students retain, or persist until graduation.

A sense of belonging is also tied to engagement (Tinto, 2015). It is important that students see themselves as a member of a community of faculty, staff, and other students who value their participation (Tinto, 2015). The concept of persisting until graduation or until goal attainment is reached, can be cemented if the student is connected or develops a "belongingness" to a smaller group within the institution (Tinto, 2015). Engagement is an important step to cementing the sense of belongingness needed for a student to persist (Tinto, 2015). While many universities understand the importance of academic engagement, social engagement is equally as important. Studies have demonstrated that this is especially true for many first-generation students (Tinto, 2015).

Comeaux, Snyder, Speer and Taustine (2014) examine the role of engagement activities among student-athletes. Specifically, the authors examined how purposeful engagement activities influences academic success" (Comeaux et al., 2014, p. 206). Comeaux et al. (2014) expanded the literature on the effects of academic engagement on student success, and explored how purposeful engagement activities affected student athletes. Comeaux et al. (2014) explained that engagement activities paralleled Astin's (1999) theory of involvement, in that students became involved in the university and therefore were more likely to attain success. However, where Astin (1999) argues general involvement, the authors explored educationally purposeful activities (Comeaux et al., 2014). Such activities included "student-faculty interaction, task orientation, cooperation among students, opportunities for communication, active learning, respect for diverse talent and ways of learning and prompt feedback" (Comeaux et al., 2014, p. 207). This research is important to the field because "few studies have examined student-

athletes' engagement in educationally purposeful activities and its influence on college outcomes" (Comeaux et al., 2014, p. 208). While the study compared male to female student-athletes, interesting results did emerge that reinforced other literature examining types of engagement that lead to one's academic success (Comeaux et al., 2014). Cross-racial interaction served as a significant factor in both genders on improving one's leadership skills (Comeaux et al., 2014). While other educational activities such as faculty interaction did not reveal any significant difference, this study showed that engagement in educational activities have had an effect on student-athletes' educational outcomes (Comeaux et al., 2014).

Symonds (2009) examines academic engagement among student-athletes as measured by the *National Survey of Student Engagement*. The unique aspect of the Symonds (2009) study is that it correlates to this research by exploring academic engagement among student athletes as measured by the SEI. Symonds (2009) uncovered "significant differences between both categories of independent variable- athletes/non-athletes and revenue/non-revenue sport participation" (p. 161). The overall results of the study indicated that athletes were as engaged as their non-athlete peers; however, there were significant differences in the athletes themselves (Symonds, 2009). Ultimately, non-revenue sport participants were more engaged than the revenue sport athletes (Symonds, 2009).

Participation in Athletics and Experience

Dinc (2011) examined the positive effects of sport with academic achievement, where the author argued that students engaged in sports participation would have a positive influence on a child's physical and emotional development, because it is easier for children to adapt to their physical environment and to communicate if they take part in sporting activities. Furthermore, research among adolescents demonstrates that "sports participation has a positive influence on a

child's physical and emotional development, because it is easier for a child to adapt to their physical environment and to communicate if they take part in sports activities" (Dinc, 2011, p. 1417). Similarly, Fredricks (2012) inferred that negative media reports were overblown in regard to participation in athletics and extra curricular activities, as students who engaged in extracurricular activities tended to do better than those who did not. This finding is similar to a theme that emerged in Navarro's (2014) study, in which all participants agreed that being a student-athlete prepared them for success in their jobs and in life due to various skills they learned in their respective sports

Echoing this theme, Horton (2009) discovered through his study that many of the athletes commented that their collegiate experience and subsequent success as a student and athlete were enhanced through the support and encouragement due to their participation in athletics. Horton (2009) concludes that although community colleges may be losing money, the athletic programs offer a valuable experience for student participants and facilitate the continued desire to pursue academics beyond sports.

Dilley-Knoles, Burnett and Peak (2010) examined the relationship between academic support systems and academic success in terms of eligibility as it relates to the student-athlete. The purpose was to explore the differences among gender as well as particular sport and to examine if the various means of academic support are adequate to meet their requirement to achieve academic success. As Dilley-Knowles et al. (2010) noted, previous studies indicated that athletic participation has had a positive impact on academic achievement, despite the additional responsibility athletic participation requires. Also of interest, is the fact that student-athletes performed at a higher levels in-season than out-of-season (Dilley-Knowles et al., 2010). This supports the study conducted by Pfiefer and Cornebelin (2010), in which given additional

responsibility, athletes in Germany responded by performing better than their peers that did not participate in sports. In addition, Pfeifer and Corneliben (2010) contended that sport participation teaches soft skills such as “taking orders, leadership, teamwork, performing in a regulated system, and socialization” (p. 95). Furthermore, sport activities may enhance competitiveness and self-esteem of female athletes, which can be essential to assert themselves in the classroom (Pfeifer & Corneliben, 2010). These assertions relate to Bandura’s (1977, 2001) social learning theory and in particular his emphasis on self-efficacy.

Similarly, Blumenthal (2009) confirmed what Pfeifer and Corneliben (2010) concluded. Although lacking in his own study, Blumenthal (2009) explored the long history of recreation and intramural sports on collegiate campuses and their correlation to student recruitment and retention. The article synthesized research conducted by a Lindsey and Sessoms (2006) study of a small southeastern university that found that 31 percent of student respondents reported that the availability of recreational sports was important/very important in deciding to attend the college (Blumenthal, 2009). Furthermore, 37.3 respondents indicated that having such recreational sports available was important/very important in deciding to continue at the college (Blumenthal, 2009). These findings are significant when looking for evidence as to recruitment and retention of students and the effect sports programs have on this issue. Blumenthal’s (2009) study could be tied to Astin’s (1999) theory of involvement as well as Bandura’s (1977) work. Both theories suggest that the college institution can help students acclimate to the rigors of university life by providing opportunities for engagement (Astin, 1999; Bandura, 1977). Blumenthal’s (2009) article advanced the notion that extracurricular activities may not only attract students, but help to retain them as well, thus indicating that sports participation, to include clubs, intramurals and other athletic forms of engagement, may in fact lead to academic success and graduation.

According to Horton (2009), the students state that their collegiate experience and subsequent success as a student and athlete were enhanced through the support and encouragement of both participation in athletics and attending a community college. Horton (2009) concludes that although community colleges may be losing money, the athletic programs offer a valuable experience for student participants and facilitate the continued desire to pursue academics beyond sports.

Miller and Kerr (2002) focus on the academic and social experiences of student-athletes. While the article is dated, the implications of the study are relevant to any study examining social and academic implication of being a student-athlete. One of the key findings of the study was that the athletes commented on their involvement with their respective teams allowed them to fit in, and thus the transition to university social life was easier (Miller & Kerr, 2002). Athletes commented that they received immediate support among other athletes (Miller & Kerr, 2002). In addition, the senior athletes ensured that new incoming students “received the same social support” (Miller & Kerr, 2002, p. 360). These findings spoke to the sense of belongingness and social engagement that is necessary for any student to achieve academic success and persist in the academic endeavors. While this support is vital to success, the study also found that these athletes segregated themselves to their teammates and thus had less involvement with non-athletes (Miller & Kerr, 2002).

Paule and Gilson (2011) examined athletic participation regarding athletic performance. Citing previous studies that indicated that athletes, especially NCAA DI athletes, tend to struggle academically, the authors looked to examine if non-revenue sports participation hinders academic performance (Paule & Gilson, 2011). Non-revenue sports included any sport that is not basketball, football or hockey (Paule & Gilson, 2011). The authors discussed how previous

literature argued that participation in sports was detrimental to one's academic performance (Paule & Gilson, 2011). While this has been the case in some instances, especially in the revenue sports at large NCAA DI institutions, Paule and Gilson (2011) found that athletes in the non-revenue sports tended to agree that teammate cohesion helped them with their academic progress. This corroborates that Miller and Kerr (2002) essentially found similar results where athletes felt teammates assisted with social support and integration into the college community. Paule and Gilson (2011) demonstrated that athletes found teammates as a great source of support in asking about professors, courses and finding individuals to study with all of which "were a great asset to academic success" (p. 208). The athletes also cited that the academic support they received in the form of advisors, scheduling and tutors was essential to their academic success (Paule & Gilson, 2011). The athletes in the study "believed that participating in their chosen sport while in college has taught them goal setting, hard work, and other skills they will be able to use in their future careers" (Paule & Gilson, 2011, p. 211). These positive findings underscore Astin's (1999) theory of involvement as perhaps a reason why these athletes felt they were successful due to their sport participation.

With many colleges and universities searching for answers to retention issues, this study will shed some light on the importance of participation in student-athletics as it relates to academic engagement. If true, conclusions can be drawn that relate to retention issues among small, private universities. Perhaps then, the code to student retention issues can begin to be unlocked.

Retention in Higher Education

Various studies have examined retention in higher education for the last few years to discover a remedy for transfers and drop-outs. Dowd (2014) comments in her review of the book

Rethinking College Student Retention by Braxton, Doyle, Hartley, Hirschy, Jones and McLendon (2014) that educational leaders are examining student retention that correlates to other literature involving persistence, self-efficacy, and involvement. Dowd (2014) comments in the review that it is wise to reconsider Tinto's (1975) "residential model of student persistence and focus on identifying factors that "function as antecedents of social integration" (p. 84). Dowd (2014) comments that student departure is multi-faceted, and the causes are often neglected by key administrators. Dowd (2014) further comments that Braxton's et al. (2014) recommendations are wide ranging and are summarized as imperatives where practitioners should embrace students as clients, customers and stakeholders.

Building on the previous article and aforementioned literature, Thomas and Hanson (2014) co-authored a study that examined student retention initiatives that focused on social integration. This is similar to Astin's (1999) theory of involvement, and while the study centered on higher education in England, there is some value that can be extrapolated to American universities combating retention issues. Thomas and Hanson (2014) discuss how retention initiatives have changed from focusing on supporting students to engaging students. Furthermore, the authors comment "by supporting students' growth of identity and social belonging, it aims to increase engagement with their academic work" (Thomas & Hanson, 2014). Examples of this type of social integration take the form of learning communities to emphasize social interaction including faculty and staff as approachable and friendly staff can have a positive impact on the students' experiences (Thomas & Hanson, 2014). Developing positive peer relationships and friendships is also cited as an important component of social integration. Levels of engagement could take the form of social events such as movie nights, bowling events, a quiz night and visits to local attractions all of which help to garner a feeling of belongingness

that can alter the doubter into the persister (Thomas & Hanson, 2014). Wilcox, Winn and Fyvie-Gauld (2005) emphasize that students who feel more socially integrated are less likely to think about leaving university since friends provide direct emotional support, equivalent to that provided by family relationships, as well as acting as a buffer in stressful situations.

Additionally, the added nature of friendships and faculty-staff connections speak to the sense of belongingness that has been found as the primary factor in persistence among successful students (Wilcox et al., 2005). These factors can certainly be found in sports teams and athletics departments where athletes connect to coaches, academic advisors and of course teammates and other athletes. This is one reason some studies have found that involvement in sports has correlated to academic success in higher education institutions (Hu, 2011).

Stuart (2013) identified issues in retention that speak to Astin's (1995) theory of involvement specifically in regard to academic success. Students who needed remedial courses in English at the community college of Baltimore County often would become discouraged and dropout as they would be required to take the no-credit remedial course (Stuart, 2013).

However, if they were placed in the credit 101 class simultaneously with the remedial class, then they would feel involved and engaged and continue to remain enrolled (Stuart, 2013). As such, perhaps students would not feel stigmatized and feel as though they were making progress. This is one concrete solution to mainstream students in the academic community so that they do not feel ostracized or feel they are simply treading water. Rather this innovative strategy of involving students in academic absorption further confirms the validity of Astin's (1999) theory when considering retention.

As such, educational leaders need to examine the impact of retention issues especially when examining the bottom line. Higher education dropout rates continue to be on the rise even

in countries other than the United States (Parkinson, 2013). For many universities, “poor student retention can equate to cash flow issues” (Parkinson, 2013, p. 75). While primarily examining students and institutions in Great Britain, Parkinson (2013) offers a unique approach to addressing student attrition issues to include smart phone technology, going into detail to explain how harnessing this technology can “improve the student experience” (p. 76). Such advancements in technology make it possible for students to personalize timetables and being instantly informed of changes to lectures and course information via their smartphone can “dramatically impact the student’s experience and their overall impressions of the course and the institution” (Parkinson, 2013, p. 76). In addition, Parkinson (2013) suggests that other advancements in technology have allowed faculty to utilize university platforms to message their students directly to circulate slides and lecture notes and this form of technology could appeal to student identified as at-risk of dropping out to “feel engaged with their course and institution” (p. 76). While many other studies focused on creating a sense of belongingness, engagement, and an overall feeling of connectivity with the university in order to address student attrition, it is important to note that something as small as smart phone technology can have an impact in student retention. Therefore, it is vital that the “quick wins” espoused in this article are implanted immediately as a means to improve the overall student experience (Parkinson, 2013). Therefore, when students leave, universities lose money. It is imperative the universities examine the total college experience in order to improve retention so that the university can remain solvent.

Kerby (2015) states that “research involving predictive models of persistence in higher education, however, has failed to examine the experiences that take place within the institutional context and climate from a classical theoretical lens; organizational structure and individual

function” (p. 140). Kerby (2015), citing Tinto (1993), explains that it is vitally important to examine the relationship between the student and the institution. Therefore, Kerby (2015) has developed a model that examined external and pre-college factors to include the national and educational climate, institutional culture and climate, and adaptive factors that “effect the voluntary dropout decisions in higher education” (p.139). One of the interesting aspects of this model is that the external factors such as “encouragement from family and friends, financial support, commitment, and expectations of the college experience were crucial factors in student retention” (Kerby, 2015, p. 155). Students who are not engaged with their college experience often have “negative encounters both socially and academically, which affects their decisions of persistence in higher education” (Kerby, 2015, p. 155). Therefore, if there is a means for the institution to reach these students and get them involved in the college life, perhaps a sense of involvement, connection, and belongingness will assist the students’ desire to remain in school. Kerby (2015) clearly addresses that retention issues vary among institutions and the individual school must look at ways to reach students. Kerby (2015) states “while universities have no control over external and precollege factors, they do have control over internal factors (institutional culture and climate) that lead to student adaption” (p. 157). Therefore, this “predictive model” puts the focus on what university leadership can do to address retention issues at their respective universities by “molding internal factors on a continuum appropriate for the changing needs of the institution and its student” (Kerby, 2015, p. 157).

Much has been discussed regarding retention through the lens of the institution; however, it is best to explore retention from the student’s perspective. Students do not look at retention as an issue, rather they look at the concept of “persisting” until graduation (Tinto, 2015). This is the same persistence as previously discussed by Hu (2011). Students want to graduate, therefore

persistence, or retention must be examined through their eyes. As Tinto (2015) argues, most students enroll with the intent to graduate regardless of what school they attend. Tinto (2015) goes on to explore this perspective through students' perceptions of self-efficacy and a sense of belonging as it relates to their personal motivation to persist. Accordingly, Tinto (2015) addresses that students differ in their motivation to attend college and that many factors can affect a student's desire to persist. The new conceptual model presented by Tinto (2015) adopts the students' view of their experience and explores the various ways colleges and universities can help influence students to stay in school and ultimately graduate.

Building on how an institution can address student retention, an article authored by O'Keefe (2013) examines various key factors that explore the causes of retention and provide potential "solutions to student attrition" (p. 605). The primary purpose is to explore the concept of "belongingness" as a central piece to improving student retention. The study itself focuses on higher education in the United States and Australia and has several key implications when discussing retention issues facing institutions (O'Keefe, 2013). The attrition rate among first year students has been reported to be as high as 50% in some cases and this phenomenon costs universities lost revenue and reputation as "high attrition rates and misappropriated resources do not reflect well upon the institution" (O'Keefe, 2013, p. 606). Perhaps one of the central reasons that students leave their university is the feeling that they do not belong or not feel a sense of belongingness. This disconnect between students and the university must be addressed (O'Keefe, 2013). In order to create an environment to support student retention, staff and faculty are encouraged to create professional relationships with students. According to O'Keefe (2013), the motivation arising from a "positive relationship that a student has with their faculty has been widely documented" (p. 608). Furthermore, students' overall experience has been documented

to be beneficial when such relationships take place (O’Keefe, 2013). The theory is that the student feels the faculty or staff member is empathetic toward their plight as a student and as such, a connection is established. While these relationships are important, when it comes to dealing with personal matters, the student is best served to have access to professionals better suited to handle these matters (O’Keefe, 2013). Student support services function in this matter so that the student can receive the counseling and professional care a faculty member may not be able and should not be able to provide.

These are all steps for universities to create a caring environment and help each student develop a sense of belongingness. O’Keefe (2013) has sought to provide concrete solutions in helping universities cultivate a sense of belonging for each student and as such, this should help increase retention rates among institutions in higher education.

Kalsbeek (2013) discusses retention in higher education and specifically how to set up a framework for student retention strategies. According to the author, there is perhaps no greater topic examined at the institutional level as committees, taskforces, and strategic plans have all sought various ways to address student attrition (Kalsbeek, 2013). Furthermore, President Obama’s calls for an increase in degree completion at the baccalaureate levels have increased the national dialogue about retention and student success (Kalsbeek, 2013). The article examines “4 Ps” as the framework to include profile, progress, process and promise. Kalsbeek (2013) gives a comprehensive explanation of each aspect of this framework in order to link retention to the overall profile of the institution. One key aspect of the 4 Ps is “progress” which is defined as successfully meeting the academic requirements of a curriculum where academic progress is at the core of the retention strategy” (Kalsbeek, 2013, p. 9). Persistence is therefore examined here, but not in a vacuum as persistence or staying in school without progress is ultimately

meaningless to institutional effectiveness (Kalsbeek, 2013). Kalsbeek (2013) cites Adelman's (2006) study that called exclusive attention to persistence without regard to progress. If a student is not progressing in their academic achievement, they will certainly not persist, and this while on the surface may appear to be semantics, it is a paradigm shift in how university leaders should view student retention. Kalsbeek (2013) offers that while student outcomes that include social and academic integration and engagement are important, they can become an end unto themselves, and retention strategies can lose focus with "retention and completion rates being indirect correlates" (p. 10). Overall, Kalsbeek (2013) does not discount the theories that advocate social and academic engagement to address retention; he is merely suggesting that institutions look to remove the obstacles that have impeded academic progress of all students.

Weiss and Robinson (2013) examined the retention of student-athletes. This is a unique study in that most research focusing on retention has explored the entire student population rather than specifically focusing on student-athletes (Weiss & Robinson, 2013). As such, there have been very few attempts in isolating the student-athlete to determine if there are specific issues related to the retention of this particular type of student" (Weiss & Robinson, 2013, p. 84).

In the study, eight areas related to retention were examined with findings that indicated that "relationships with the head coach, satisfaction with the athletic department, team success, personal reasons, academic concerns, and player development were factors leading to retention or withdrawal from athletic participation" (Weiss & Robinson, 2013, p. 83). The authors cite Tinto (1993) as a theory where students who become integrated into the social and academic systems in the institution tend to persist and attain academic success (Weiss & Robinson, 2013). Furthermore, the Weiss and Robinson (2103) imply that social integration and belongingness are contributing factors to the overall success of students. This affirms Astin's (1999) theory of

involvement and O’Keefe’s (2013) concept of “belongingness” as factors that lead to retention. Weiss & Robinson (2013) found that factors that led to persistence and retention included faculty interaction and positive relationships with team members. This affirms other researchers examining retention that also found that relationships with faculty, staff and peers are factors that led to overall academic success and a sense of belongingness and social integration, which are attributed as leading a student to persist through graduation (Tinto, 1975, 2015). The study is unique in that it explored NCAA DII student-athletes’ reasons of why they stayed in school and were retained (Weiss & Robinson, 2013).

Student Engagement Instrument

One of the essential purposes of this study is to utilize the SEI on a college population. The SEI is the primary instrument that will be utilized in collecting the data pertinent to the study of engagement based upon participation in varsity athletics. The researcher has chosen to examine a private university system as part of a convenience sample. Furthermore, the university selected does not provide athletic scholarships, thus the student bias toward being “more academically engaged” with the university due in part to the fact they are receiving a scholarship is eliminated. As discussed, the SEI has been developed and utilized to measure engagement in school among middle and high school students (Grier-Reed et al., 2012). As such, engagement has become a new way to address persistence and retention issues in education (Appleton et al., 2006).

The SEI was originally constructed to measure engagement in middle and high school and has also been piloted for use at the elementary level (Carter et al., 2012). The SEI was redesigned to include only 4 factors of assessment instead of the usually 6 factors. (Carter et al., 2012). The SEI attempts to identify and target aspects of engagement that are “responsive to

changes in school and teacher practices” (Carter et al., 2012, p. 62). According to Carter et al, (2012), student engagement is frequently described as consisting of four subtypes: academic, behavioral, cognitive, and affective (Reschly, Appleton, & Christenson, 2007). The SEI was designed to “assess the cognitive and affective engagement of middle and high school students” (Carter et al., 2012, p. 63). However, having differing versions of the instrument to measure elementary students and collegiate students allows researchers additional benefits in the field of educational research and practice (Carter et al., 2012). As such, having an elementary version and using the SEI on a collegiate population allows a more extensive data base for researching student engagement across multiple ages which can assist school administrators at all levels to identify best practices to promote academic engagement and facilitate persistence and academic achievement (Carter et al., 2012)

This is why it is imperative to use this particular instrument in this study as it addresses a gap in the literature by utilizing the SEI among a population outside the original intended audience. Furthermore, while the SEI has rarely been used on a collegiate population, it has never been utilized specifically on a sub component of the collegiate population: intercollegiate athletes. According to Lovelace et al. (2014), indicators of behavioral and academic engagement are usually available via student records, especially in secondary schools, but the data on cognitive and affective engagement are not. According to Appleton et al (2006) the SEI’s “taxonomy, engagement is viewed as a multi-dimensional construct comprised of four subtypes: academic, behavioral, cognitive, and psychological” (p. 428). Accordingly, “academic engagement consists of variables such as time on task, credits earned toward graduation, and homework completion, while attendance, suspensions, voluntary classroom participation, and extra-curricular participation are indicators of behavioral engagement” (Appleton et al, 2006, p.

428). Cognitive and psychological engagement includes internal indicators or factors such as “self-regulation, relevance of schoolwork to future endeavors, value of learning, and personal goals and autonomy (for cognitive engagement), and feelings of identification or belonging, and relationships with teachers and peers (for psychological) engagement” (Appleton et al., 2006, p. 428). It is important to measure cognitive and psychological engagement “because there is an overemphasis in school practice on indicators of academic and behavioral engagement” (Appleton et al., 2006, p. 431).

As such, the SEI consists of 35 total questions addressing five factors/ sub scales. The five factors/sub scales used in the cited study include Teacher-Student Relationships (TSR); Control and Relevance of School Work (CRSW); Peer Support at School (PSS); Future Aspirations and Goals (FG); and Family Support for Learning (FSL). The SEI may also be used to generate an overall score. Scores are measured on a 1-4 Likert scale with 1 indicating Strongly Disagree while a 4 indicating Strongly Agree. Average ratings of 3.0 or higher show engagement in school while average ratings below 3.0 so some degree of disengagement (SEI). Since there are 35 questions, the lowest score one could achieve is a 35 while the highest score would be 140; therefore the higher the score, the higher the level of engagement.

According to Lovelace et al. (2014), the SEI is a “self-report measure of cognitive and affective engagement with school. Prior SEI validation studies have focused primarily on construct validity through analyses of internal consistency, factor analysis, and measurement invariance” (Lovelace, 2014, p. 509). The SEI in an ordinal level of measurement that utilized a 4 point Likert scale that ranged from strongly agree to strongly disagree. The SEI’s framework seeks to place emphasis on the dynamic relationships between context, engagement, and outcomes (Appleton et al., 2006, 2008; Lovelace et al., 2014). Therefore, some studies have

concluded that confidence can be placed in the “interpretation of SEI scores for students in the process of disengaging from school” (Lovelace et al., 2014, p. 518). This is an important finding as the SEI can be used to identify potential dropouts or transfers in a collegiate setting. The SEI is integral to the purpose of this study as one examines the relationship between academic engagement among student athletes and non-athletes. If a relationship exists that shows those not involved in a school sponsored sport are less engaged, then emphasis can be placed on striving to integrate students into the social and academic environment of the institution thus fulfilling the social integration and belongingness advocated by Tinto (1975) and O’Keefe (2013).

Summary

A review of the literature on academic engagement and retention reveals an absence of research on non-scholarship student-athletes at the small university levels. In addition, research examining the SEI at the collegiate level is also missing. As such, no study has been conducted where the SEI was used to measure academic engagement of non-scholarship student athletes. Therefore, the SEI was examined as a reliable and valid instrument to measure academic engagement.

Throughout this review of literature, various theories were examined including Bandura’s (1977) social learning theory, the self-determination theory and Astin’s (1999) theory of involvement. Tinto’s (1975) model of persistence was also examined. Between the four, a framework has been established that demonstrates the need for students to feel connected to the university in order to achieve academic success and therefore stay enrolled at their respective institutions. This connection can be observed in how students score on the SEI. If students are not “connected” they will most likely not score well on the SEI. Various researchers have

concluded that academic engagement is the true model that exposes persistence (Appelton et al., 2006; Finn, 1989).

Literature exploring retention and engagement among students was also examined. Specifically, the effects of participation in intercollegiate athletics was examined in detail and found to have a variety of conclusions. However, as the literature suggests, if a student is connected to the university via a sports team, they most likely feel a sense of belongingness with coaches, team mates, faculty members and peers (Tinto, 2015; Comeaux et al., 2014). As such, the student-athlete is more likely to develop a strong connection with the university in spite of the many obstacles intercollegiate athletes face during their time on campus (Fredricks, 2012; Seymonds, 2009). This connection often causes a student to persist until graduation.

Upon reviewing the current literature, one may conclude that there is a relationship between participation in intercollegiate athletics and academic engagement, academic achievement and satisfaction with the students' university to include persistence to graduation. Much of the literature examined retention in higher education and its causes as well as remedies and recommendations for educational leaders. The more students are connected to their respective university, the more likely they feel a sense of belongingness and as such develop a strong commitment to that institution (Tinto, 1975). Therefore, it is wise for educational leaders to value the various levels of student engagement and participation opportunities their university provides to the general student population. If they can be socially integrated into the university, they hopefully will be academically engaged. Academic engagement is the key to persistence. There is a strong correlation between a student who is satisfied and academic success because satisfied students are more likely to succeed (Purdue, 2014). Whether it be varying forms of educational engagement, or social engagement, the more a student feels connected to his or her

university, the better acclimated and adjusted that student will become which could help address issues related to the overall student experience. Therefore, it is prudent to now examine varsity student-athletes who are not receiving athletic aid as their participative experiences may shed light into how to address factors involving retention at small, private universities. While the importance of this study is relevant to higher education, the SEI needs to be examined closely and ultimately be used in another collegiate setting in order to ensure the instrument's internal consistency and reliability (Grier-Reed et al., 2012). This study accomplishes that need.

CHAPTER THREE: METHODS

Overview

The purpose of this quantitative study was to examine the level of academic engagement based upon participation in varsity athletics as measured by the SEI. This comparative study utilized an independent samples *t*-test to analyze each research question due to the fact that the researcher will have one dependent variable and two independent variables in this study. Therefore, the purpose of this study is to examine the level of academic engagement as measured by the SEI based upon participation in varsity athletics.

Chapter Three focused on the methodology utilized to include information pertaining to the sample participants and setting where the survey was administered. In addition, the instrument used to measure the dependent variables as well as the procedures for conducting the recommended statistical analysis are presented.

Design

An ex post facto causal-comparative design will be used to examine the effects of participation in varsity intercollegiate athletics in regard to academic engagement as measured by the SEI. This research design was selected because it compares two or more groups on a dependent variable (Gall, Gall & Borg, 2007).

The SEI is the instrument that will be utilized in collecting the data pertinent to the study of engagement based upon participation in varsity athletics. The researcher has chosen to examine a small, secular, private university as part of a convenience sample. Furthermore, the university selected does not provide athletic scholarships, thus the student bias toward being “more engaged” due in part to the fact they are receiving a scholarship is eliminated. The SEI has been developed and utilized to “measure cognitive and affective engagement in school for

middle and high school students” (Grier-Reed et al., 2012, p. 85). Furthermore, the authors state that “future research exploring the SEI with college students is needed, and we recommend additional research in this vein” (Grier-Reed et al., 2012, p. 85).

In this study, participation in varsity intercollegiate athletics was treated as an independent variable. Non-participation in varsity intercollegiate athletics was also treated as an independent variable. In addition, participation in varsity intercollegiate by sport was treated as an independent variable. The dependent variable included scores of academic engagement on the SEI as well as grade point average (GPA).

Research Questions

The research was guided by the following questions and hypotheses:

RQ1: Is there a difference in engagement scores as measured by the SEI between students involved in varsity athletics and those not involved in varsity athletics?

RQ2: Is there a difference in overall GPA based upon participation in varsity athletics and those not involved in varsity athletics?

RQ3: Is there a difference in engagement scores as measured by the SEI among student-athletes participating in varsity individual sports and student-athletes participating in varsity team sports?

Null Hypothesis(es)

The null hypotheses of this study are as follows:

H₀1: There is no significant difference between the mean engagement scores as measured by the SEI of students involved in varsity athletics and those not involved in varsity athletics.

H₀2: There is no significant difference in overall GPA of students involved in varsity athletics and those not involved in varsity athletics as measured on a 4.0 scale.

H₀₃: There is no significant difference in engagement scores as measured by the SEI among student-athletes participating in varsity individual sports and student-athletes participating in varsity team sports.

Participants and Setting

The university system enrolls approximately 15, 063 undergraduate and graduate students (Johnson & Wales University, 2017). Currently, data is collected internally on academic success and achievement, but data has not been collected on the SEI. Permission was obtained from the University Research Review Committee. The SEI was administered via email to all 15,063 students by the Director of Institutional Research as the director provided the student email addresses to the University Student Communications Office. The Student Communications Office was responsible for sending all communications to the university students in coordination with the researcher.

Sensitivity and privacy was taken into account and the researcher took all precautions necessary to protect any possibility of identifiers in the data. Since the survey was anonymous, no identifiers could possibly be made. As such, data was compiled in a password- protected spreadsheet.

The total sample initially included 1,105 students. After the first two questions screened out respondents in regard to receiving scholarships and being a graduate level student, 914 students completed the remaining 38 questions, including 80 varsity student-athletes and 835 non-varsity student-athletes. Upon further examination of the data and corresponding answers to questions, 11 students were removed from the data set for indicating they had a 4.1 or higher GPA. This is not possible according to standards set by the university system. According to the Assistant Director of Student Academic Services, at one of the regional campuses of the

university system, a 4.0 GPA is the highest any one student can achieve at the university (Bartell, personal communication, March 21, 2017). Furthermore, seven student-athletes were removed from the data set for stating that they were not a varsity student-athlete in response to Question 2, even though they indicated that they played a varsity sport in Question 3. This inconsistency resulted in their removal from the data set. These 18 surveys were not entered into the data.

A total of 825 students identified themselves as having not participated in varsity intercollegiate athletics. Seventy-one students identified themselves as having participated in varsity intercollegiate athletics. Of those 71 student-athletes, 24 varsity intercollegiate student-athletes participated in individual sports while 47 varsity intercollegiate student-athletes indicated they participated in team sports. According to the NCAA DIII manual and verified by one of the regional university athletic directors, individual sports are defined as those where one individual from the team can advance to post-season play (NCAA, 2016). Team sports are defined as those sports where only the whole team can advance to post-season play (NCAA, 2016). For this study, individual sports included cross-country, equestrian, golf, tennis, track and wrestling. Team sports included basketball, baseball, ice hockey, lacrosse, sailing, soccer, softball and volleyball.

The university system includes four private, secular, regional campuses in four different states in the United States. Based upon fall 2016 data, the total enrollment for the university system includes approximately 15,063 students. Approximately 8% of the student population participated in varsity intercollegiate athletics (Johnson and Wales University, 2017).

The first regional campus of the university system is an urban university in the Rocky Mountain region of the United States. Enrollment includes 1,258 students at the undergraduate level and 20 students at the graduate level. Approximately 61% of the students are female, and

39% are male. Approximately 689 students identified as White, 15 non-resident alien, 264 identified as Hispanic, 120 identified as Black/African American, 95 identified as two or more races; 27 identified as Asian, 11 identified as Native American, 56 identified as unknown and 1 student identified as Pacific Islander (JWU, 2017)

The second campus is a coastal, urban campus located in the New England region of the United States. Enrollment includes 8,459 students at the undergraduate level and 865 students at the graduate level. Approximately 60% of the students are female, and 40% are male.

Approximately 4,888 students identified as White, 1,164 nonresident alien, 1034 Hispanic or Latino, 1,108 Black or African American, 389 unknown, 604 two or more races, 104 Asian, 30 American Indian, Alaska Native, and 3 Native Hawaiian or Pacific Islander (JWU, 2017).

The third campus is an urban campus located in the Southeast region of the United States. Enrollment includes 2,101 students with approximately 67% female and 33% male.

Approximately 798 students identified as White, 21 nonresident alien, 127 Hispanic or Latino, 906 Black or African American, 100 unknown, 121 two or more races, 19 Asian, 8 American Indian/Alaska Native and 1 student identified as Native Hawaiian or Pacific Islander (JWU, 2017).

The fourth campus is located in a coastal, urban campus located in the southern United States. Enrollment includes 1,561 students with approximately 61% female and 39% male.

Approximately 340 students are identified as White, 177 nonresident alien, 357 Hispanic or Latino, 527 Black or African American, 71 unknown, 107 two or more races, 11 Asian, and 4 students identified as American Indian or Alaska Native (JWU, 2017).

Instrumentation

The SEI is the instrument that was utilized in collecting the data pertinent to the study of academic engagement based upon participation in varsity intercollegiate athletics. The SEI has been utilized in various studies to measure student engagement (Carter et al., 2012). In addition, the SEI was used to measure student engagement by Grier-Reed et al. (2012). The purpose of this study was to test the validity and reliability of the SEI in a study exploring college students and levels of engagement. The SEI was originally constructed to measure engagement in middle and high school. Thus, this study was another opportunity to further validate the SEI among a college population.

The construct validity of the SEI is similar to other instruments measuring student engagement. Self-report survey measures are a common method in assessing student engagement because students are able to select the responses that best describe their behaviors and attitudes (Fredricks & McColskey, 2012). One of the arguments for using self-report methods is that it is critical to collect data on students' views and perceptions of themselves and their institution (Fredricks & McColskey, 2012). Another advantage to using self-report surveys is that data can be collected easily and in large and diverse samples (Fredricks & McColskey, 2012). While the self-report survey has been used to explore student engagement as it does limit researcher bias, one criticism is that since students are self-reporting, they may not always provide honest answers or accurate in reporting their overall grade point average, as an example.

The SEI is an ordinal level of measurement that utilized a four-point Likert scale that ranged from strongly agree to strongly disagree. Using the SEI, responses are as follows: Strongly Agree=4, Agree=3, Disagree=2, and Strongly Disagree=1. As such, high scores

indicate a high level of student engagement. While the researcher acknowledged the lack of a neutral choice, this is based solely on the validity of the SEI as it only utilizes a 4-point scale.

The scoring procedure for the SEI includes a combined possible score range from 35-140 for questions answered relating to engagement. The SEI consists of 35 total questions addressing five factors/sub scales. Average ratings of 3.0 or higher show engagement in school while average ratings below 3.0 show some degree of disengagement (Appleton et al., 2006). In this study, the researcher is only interested in the total score. Since there are 35 questions, the lowest score one could achieve is a 35 while the highest score would be 140, therefore the higher the score, the higher the level of engagement.

The SEI was normed on a diverse sample of 1,931 9th graders (Grier-Reed, et al., 2012). According to Grier-Reed, et al. (2012), the SEI contains five subscales or factors to include: “Teacher-Student Relationships (TSR – 9 items), Control and Relevance of School Work (CRSW – 9 items), Peer Support at School (PSS – 6 items), Future Aspirations and Goals (FG – 5 items), and Family Support for Learning (FSL – 4 items)” (p 88).

The SEI subscales have correlated as expected with measures of academic performance, such as GPA, reading and math achievement, and behavior with internal consistency reliability estimates across the five factors in the normative high school sample ranged from .76 to .88 (Appleton et al., 2006). According to Grier-Reed et al (2012), in order “to adapt the SEI for college students, some wording on the instrument was adjusted as words or phrases indicating high school or teacher were replaced by university and faculty/professor where appropriate (Grier-Reed et al., 2012). The researcher will utilize the survey used for college students in the 2012 study. In doing so, the researcher will maintained consistency of the 2012 study examining total SEI scores, while following through on the recommendation of the study to use the SEI on a

different college population (Grier-Reed et al., 2012).

Procedures

An application was submitted to the Director of Institutional Research that included copies of the dissertation proposal, survey, instructions and procedures. Upon gaining Institutional Review Board (IRB) approval from both Liberty IRB and the University Research Review Committee, it was decided by the director of Institutional Research that the survey containing the SEI would be sent to only undergraduate students of the university system since the study focused only on undergraduate students. This was the first screening of participants. Furthermore, the director of Institutional Research also decided to only send the survey to students not receiving any kind of athletic scholarship since the study is focused on non-scholarship student-athletes. Only one campus of the university system grants athletic scholarships. The director of Institutional Research provided the email addresses of the students enrolled at the university for the purpose of distributing the link for the anonymous administration of the SEI to the University Student Communications Office. The link contained both the informed consent as well as the SEI. The Student Communications Office was responsible for sending all communications to the students in coordination with the researcher. Email access applied only to those students who have not placed a confidential block on their records.

The researcher downloaded the survey results from Survey Monkey into a Microsoft Excel spreadsheet. The spreadsheet used a formula that changed the respondent's answer into a numerical value for each response, as is directed by the scoring procedures of the SEI for an overall score for each respondent. Additionally, GPA was calculated by the mean of each

possible category of what each respondent reported by the researcher. The total SEI score and mean GPA data were entered into SPSS software along with the athletic participation data.

Participant responses were divided into two groups for comparison: those who are participants in intercollegiate varsity athletics and those students who are not participants in intercollegiate varsity athletics (Woods-Warrior, 2014). For the third research question, participants were divided into two groups: those athletes who indicated that they participated in individual sports and those who indicated that they participated in team sports. The groups were compared quantitatively in terms of mean academic engagement scores as measured by the SEI and mean self-reported GPA scores. The SEI survey will be retained for five years after which all data connected to this study will be destroyed.

Data Analysis

This is a causal-comparative study that utilized an independent samples *t*-test due to the fact that the researcher will have one dependent variable and two independent variables in this study for each research question. The dependent variable was varsity athletic participation. The independent variables were academic engagement scores as measured by the SEI and self-reported GPA scores on a 4.0 scale.

For this study, there were 896 total participants (N=896). There were 825 students that did not participate in varsity athletics (N=825). There were 71 varsity student-athletes that did participate in varsity athletics (N=71). Therefore, normality was explored using the Kolmogorov-Smirnov test since the sample size was greater than 50 (Gall et al., 2007).

Data screening was conducted on the dependent variable in regard to outliers. The researcher tested for assumptions for the dependent variables looking for outliers utilizing the

box and whisker plot. In order to determine assumption of linearity and homoscedasticity a scatterplot was created using SPSS.

Lavene's Test was used to determine homogeneity of variance. If this assumption was violated and since the sample sizes for each group differ, the researcher would use an alternative statistic, the Welch t Test if equal variances could not be assumed (Yeager, 2017).

An independent samples t -test was used to test the three null hypotheses. The independent samples t -test requires that the assumptions of normality and homogeneity of variance are met. For the results to be significant, .05 or less would have to be achieved. If one or more of these assumptions were not met, the researcher would utilize the Mann-Whitney U test (Yeager, 2017).

Cohen's d was used to determine effect size. Sawilowsky (2009) defined d as “ (.01) = very small, d (.2) = small, d (.5) = medium, d (.8) = large, d (1.2) = very large, and d (2.0) = huge” (p. 599).

The primary focus of this quantitative study was to examine the level of academic engagement based upon participation in varsity athletics as measured by the SEI. The students for the experiment were students enrolled in a private, university system consisting of four geographically different regional campuses.

CHAPTER FOUR: FINDINGS

Overview

The purpose of this study was to examine the level of academic engagement based upon participation in varsity athletics as measured by the SEI. This study incorporates the concepts of student involvement, engagement, and retention. Along with adding to the current body of literature on academic engagement and the SEI, this study also examines non-scholarship student-athletes in regard to academic engagement and overall grade point average when compared with non student-athletes. The study also examines academic engagement among varsity student-athletes based upon participation in individual or team sports. The study was conducted using 71 varsity student-athletes and 824 students not participating in a varsity sport enrolled at a private university system comprised of four geographically regional campuses. This chapter presents the analysis of data collected during the research study as it relates to the research questions and hypotheses discussed in chapters one and three, and concludes with a summary of the results.

Research Questions

The research questions were as follows:

RQ1: Is there a difference in engagement scores as measured by the SEI between students involved in varsity athletics and those not involved in varsity athletics?

RQ2: Is there a difference in overall GPA based upon participation in varsity athletics and those not involved in varsity athletics?

RQ3: Is there a difference in engagement scores as measured by the SEI among student-athletes participating in varsity individual sports and student-athletes participating in varsity team sports?

Null Hypothesis(es)

The null hypotheses of this study are as follows:

H₀1: There is no significant difference between the mean engagement scores as measured by the SEI of students involved in varsity athletics and those not involved in varsity athletics.

H₀2: There is no significant difference in overall GPA of students involved in varsity athletics and those not involved in varsity athletics as measured on a 4.0 scale.

H₀3: There is no significant difference in engagement scores as measured by the SEI among student-athletes participating in varsity individual sports and student-athletes participating in varsity team sports.

Descriptive Statistics

The independent variables of this study were athletic participation and non-athletic participation as well as participation in team sports and participation in individual sports. The dependent variables of this study were academic engagement as measured by the SEI and GPA. The descriptive statistics of the independent variables are presented in Table 1, Table 2, and Table 3

Table 1

Descriptive Statistics for Hypothesis One

Athletic Participation	M	SD	N
Varsity	110.92	10.45	71
Non Varsity	109.45	11.11	825
Total	109.57	11.06	896

Table 2

Descriptive Statistics for Hypothesis Two

Athletic Participation	M	SD	N
Varsity	3.55	0.34	71
Non Varsity	3.37	0.52	825
Total	3.38	0.50	896

Table 3

Descriptive Statistics for Hypothesis Three

Athletic Participation	M	SD	N
Individual Sports	113.00	12.01	24
Team Sports	109.8511	9.52	47
Total	110.92	10.36	71

Results

Data Screening

The data were collected and screened for errors and inconsistencies. At the beginning of the study, 1105 students attempted to complete the study. After the first two questions screened out respondents, 914 students completed the remaining 38 questions, including 80 varsity student-athletes and 834 students (non-varsity student-athletes). Upon further examination of the data and corresponding answers to questions, 11 students were removed from the data set for indicating they had a 4.1 or higher GPA, (nine students not participating in varsity athletics and two varsity student-athlete). This is not possible according to standards set by the university system. A 4.0 GPA is the highest any one student can achieve. Furthermore, seven student-athletes were removed for stating that they were not a varsity student-athlete in response to question 2, even though they had indicated they played a varsity sport in question 3. This inconsistency resulted in their removal from the data set. These 18 surveys were not entered into the data analysis.

After screening for inconsistencies in the data, the total participants for this study were 896 total participants ($N=896$). There were 825 students that did not participate in varsity athletics ($N=825$). There were 71 varsity student-athletes ($N=71$). Demographics were collected to include gender and year in school, however, that information was not pertinent to this study,

thus it was not examined. Respondents were asked to indicate what sport they participated in, as that information was pertinent to the study, specifically research question 3.

Null Hypothesis One

Null Hypothesis One stated that there is no statistically significant difference between the mean engagement scores as measured by the SEI of students involved in varsity athletics and those not involved in varsity athletics. An independent samples *t*-test was used to analyze the first null hypothesis.

Data Screening. Data screening was conducted on the dependent variable in regard to outliers, normality and data inconsistencies. Using a box and whiskers plot, several outliers were detected. The outliers were examined and there were no inconsistencies in the respondent's answers, nor were there any irregularities with their answers to the SEI. The researcher proceeded with the data analysis. Figure 1 shows a box plot with outliers for SEI scores and athletic participation. See Figure 1 for box and whisker plot.

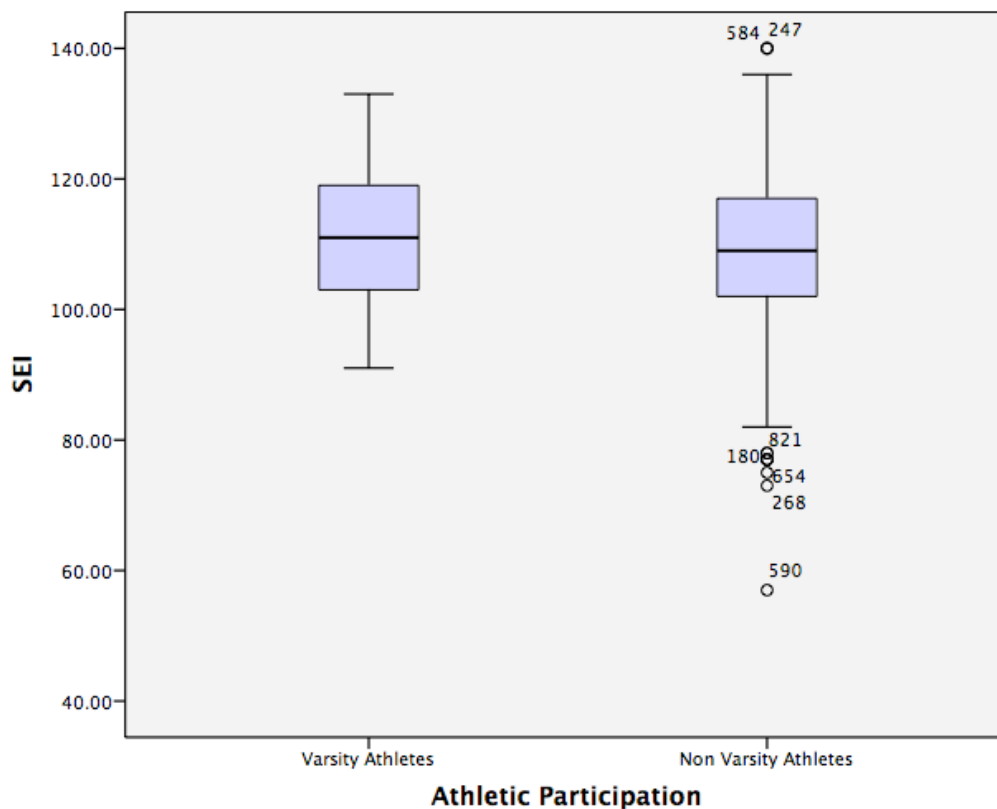


Figure 1. Box plot for SEI by athletic participation.

Assumption Testing. The independent samples t test required that the assumptions of normality and homogeneity of variance were met. Normality was tested using the QQ Plots and the Kolmogorov-Smirnov test, $p < .05$ and Levene's Test for Equality of Variance was used to determine equality of variance, $p < 0.5$.

Normality. Since the sample size was greater than 50, normality was explored using the Kolmogorov-Smirnov test. The evidence demonstrated that normality for non-varsity student-athletes could not be assumed, $p < .05$. However, among moderate or large samples, a violation of normality may still yield accurate p values (Yeager, 2017). See Table 4 for Kolmogorov-Smirnov test of normality.

Table 4

SEI Test of Normality

Variable	Kolmogorov-Smirnov Significance
Varsity Athletics	0.20
Non-Varsity	0.005

Furthermore, an examination of normal probability plot (Q-Q Plot) was completed to further determine normality. The normal Q-Q plot indicated normality. See Figure 2 and Figure 3.

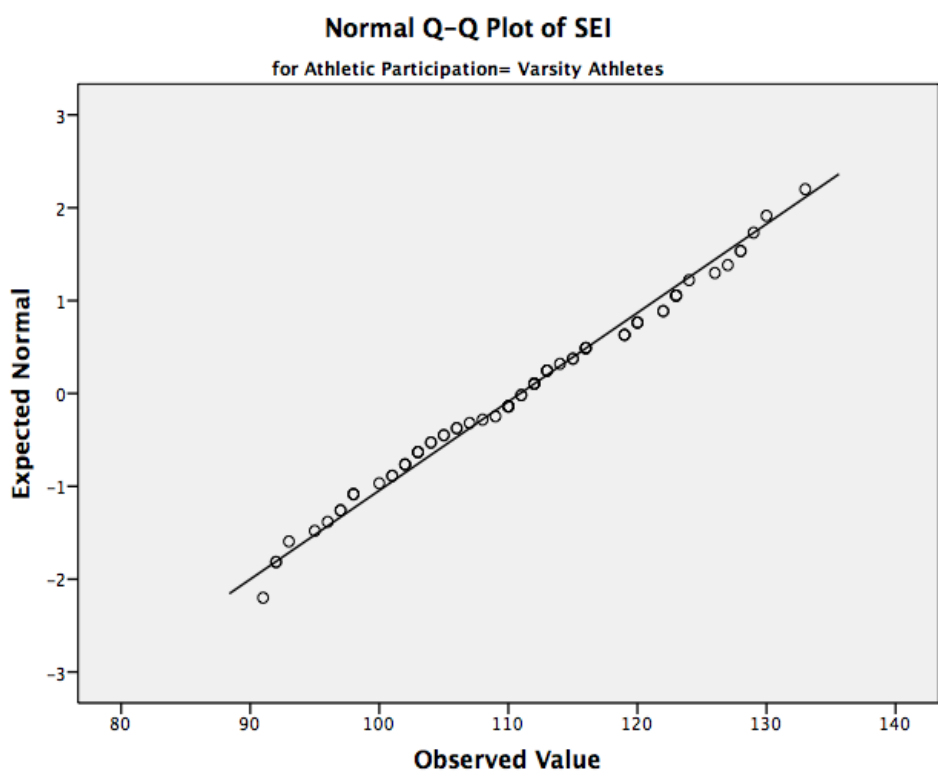


Figure 2. Normal QQ plot for varsity student-athletes

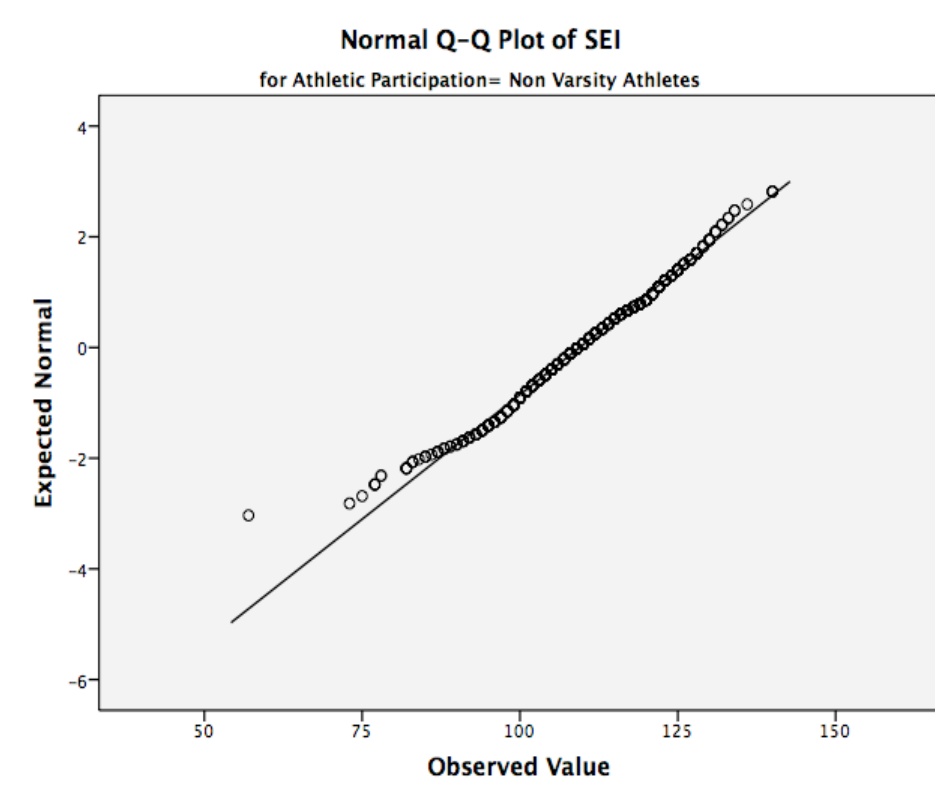


Figure 3. Normal QQ plot for non-varsity student-athletes

Variance. Levene's Test for Equality of Variance was also used to determine if the data satisfied the assumption of equality of variance. As referenced in Table 5, the variances were equal for varsity and non varsity athletes, $F(1, 894) = .072, p = .788$.

Table 5

Levene's Test and T-test for SEI by Athletic Participation

	Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig.
Equal Variances Assumed	0.072	.788	1.071	894	.285
Equal Variances Not Assumed			1.127	84.212	.263

Results. An independent samples *t*-test was conducted to evaluate the hypothesis that there is a difference in *academic engagement* as measured by the Student Engagement Instrument (SEI) between students involved in athletics and those not involved in athletics. There was no significant difference between varsity student-athletes ($M= 110.92$, $SD= 10.45$) and non-varsity student-athletes ($M=109.45$, $SD=11.11$), $t(894)= 1.071$, $p= .285$. Therefore, the null cannot be rejected.

Results indicated there is no statistical difference in *academic engagement* as measured by the SEI between varsity student-athletes and non-varsity student-athletes. Cohen's d 0.136 was calculated and it is rather small as .2 or less is a small effect (Sawilowsky, 2009). Therefore, the effect size is small.

Null Hypothesis Two

Null Hypothesis Two stated that there is no significant difference in overall GPA of students involved in varsity athletics and those not involved in varsity athletics as measured on a 4.0 scale. An independent *t*-test was used to analyze the second null hypothesis.

Data Screening. Data screening was conducted on the dependent variable in regard to outliers, normality and data inconsistencies. Using a box and whiskers plot, several outliers were detected. Outliers were kept in the analysis as they represented reported GPA scores. Figure 1

shows a box plot with outliers for GPA scores and athletic participation. See Figure 4 for box and whisker plot.

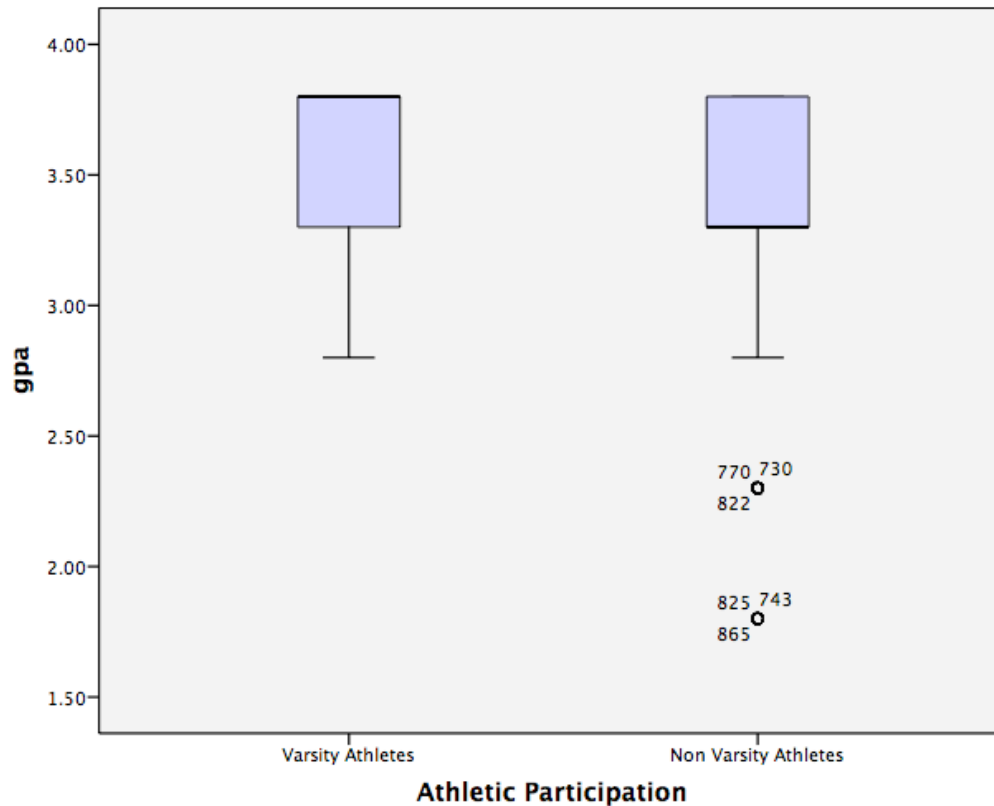


Figure 4. Box plot for GPA by athletic participation.

Assumption Testing. The independent samples t test required that the assumptions of normality and homogeneity of variance were met. Normality was tested using the QQ Plots, Histograms, and the Kolmogorov-Smirnov test, $p < .05$. Levene's Test for Equality of Variance was used to determine equality of variance, $p < 0.5$.

Normality. Since the sample size was greater than 50, normality was explored using the Kolmogorov-Smirnov test. The evidence demonstrated that normality was violated for both types of athletic participation, $p < .05$. However, among moderate or large samples, a violation

of normality may still yield accurate p values (Yeager, 2017). Furthermore, when testing for normality, significance can occur when sample sizes are large (Field, 2009).

However, the data was skewed heavily to the right as both the Q-Q plots and histogram reveal. See Figures 5 -8. The independent samples t -test is not a robust enough test and is not accurate when assumptions are violated. Understanding that normality was not met, the researcher was concerned that the independent samples t -test is not robust enough to yield reliable results. Accordingly, when one or more of the assumptions for the independent samples t test are not met, the Mann-Whitney U Test is recommended (Yeager, 2017). With this concern, both the Mann-Whitney U Test and the independent samples t -test was utilized to analyze results. See Table 6 for Kolmogorov-Smirnov test.

Table 6

GPA Test of Normality

Variable	Kolmogorov-Smirnov Significance
Varsity Athletics	0.000
Non Varsity	0.000

An examination of normal probability plot (Q-Q Plot) was completed to further determine normality. The normal Q-Q plot indicated non-normality. See Figure 5 and 6.

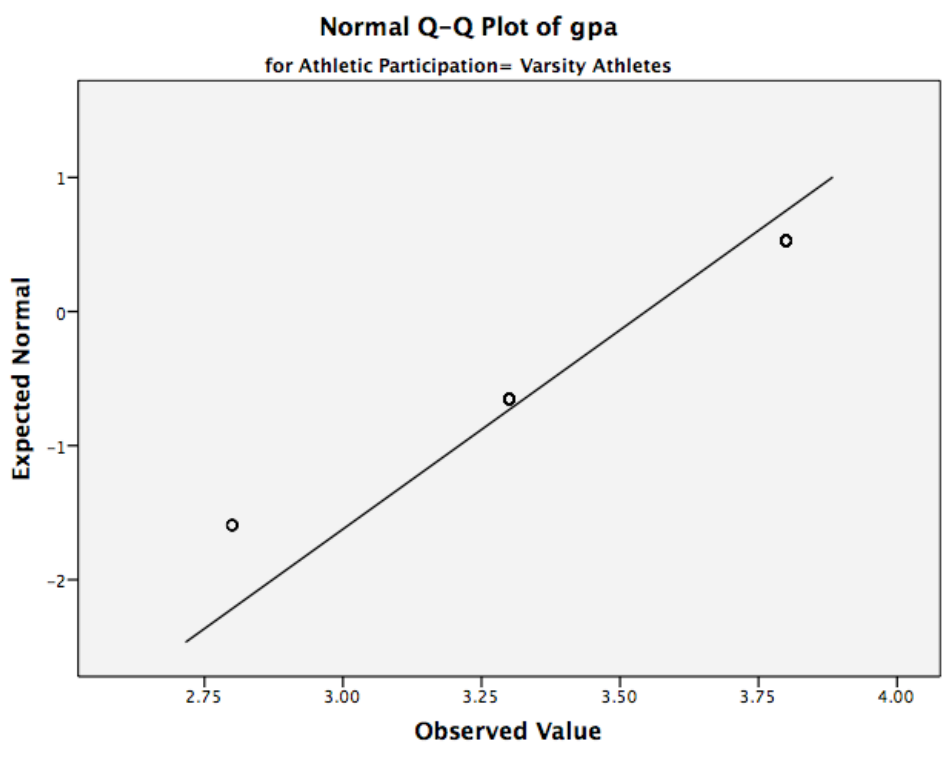


Figure 5. Normal Q-Q plot for varsity student-athletes

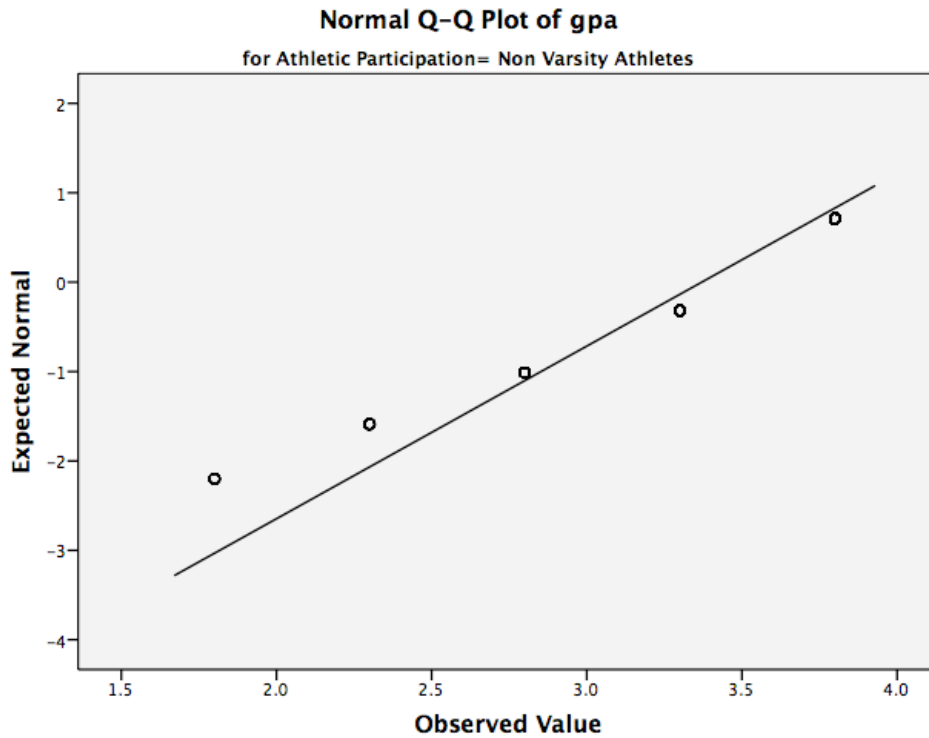


Figure 6. Normal Q-Q plot for non-varsity student-athletes

An examination of histograms was completed to further determine normality.

Histograms displayed non-normality with data heavily skewed to the right. See Figure 7 and 8.

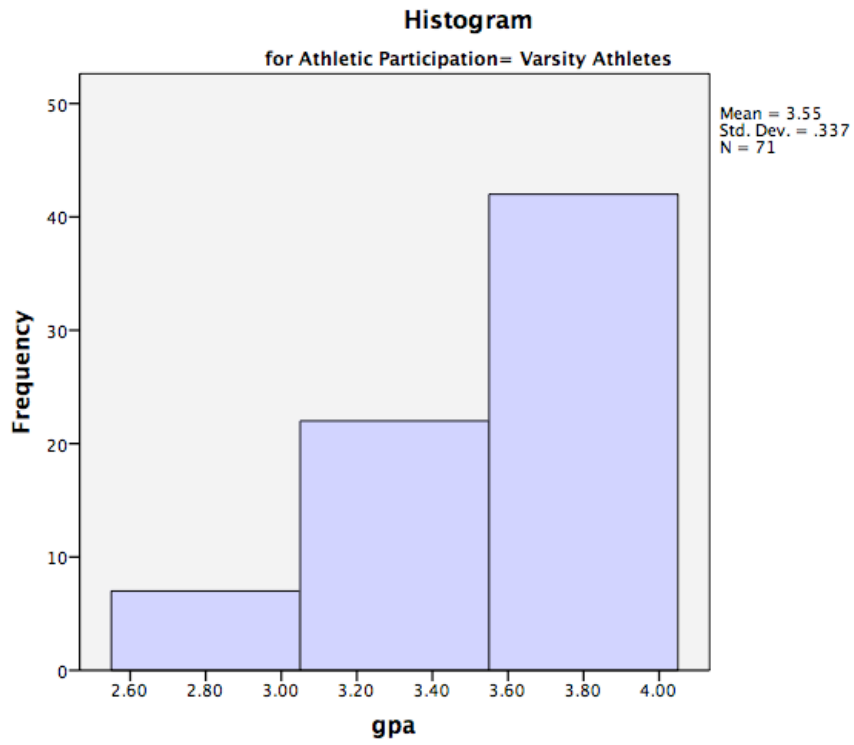


Figure 7. Histogram for varsity student-athletes

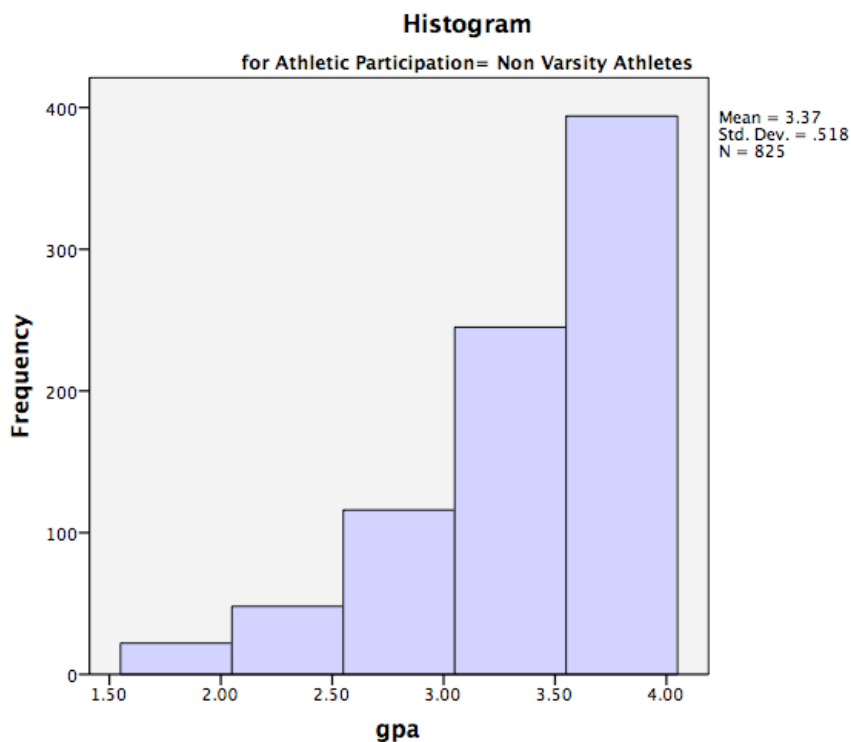


Figure 8. Histogram for non-varsity student-athletes

Variance. Levene's Test for Equality of Variance was also used to determine if the data satisfied the assumption of equality of variance. As referenced in Table 7, the variances were not equal for varsity and non varsity athletes, $F(1, 894) = 8.54, p = .004$. Levene's Test for Equality of Variances showed a significance level of .004 ($p = .004$) so the variances of the two populations can not be assumed to be approximately equal, so equal variances are not assumed. According to Field, "as with the K-S test, when the sample size is large, small differences in group variances can produce a Levene's test that is significant" (Field, 2009, p. 150).

Accordingly, when this assumption is violated and the sample sizes for each group differ, "the independent samples t -test output also includes an approximate t statistic that is not based on assuming equal population variances" (Yeager, 2017, para. 3). This alternative statistic is

known as the Welch t Test statistic and “it may be used when equal variances among populations cannot be assumed” (Yeager, 2017, para. 3).

The Welch t Test statistic showed a value of .000, thus the results were significant. For the results to be significant, the .05 or less would have to be achieved, which in this case it was achieved. Therefore, the results are statistically different in mean scores of *grade point average* between varsity student-athletes and non-varsity student-athletes.

Table 7

Levene's Test and t-test for GPA by Athletic Participation

	Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig.
Equal Variances Assumed	8.544	.004	2.815	894	.005
Equal Variances Not Assumed			4.019	101.035	.000

Results. An independent samples *t* test was conducted to evaluate the hypothesis that there is a difference in *grade point average* between students involved in athletics and those not involved in athletics. The test was significant, $t(894) = 2.815, p = .005$, therefore the null was rejected.

Students participating in varsity athletics ($M = 3.55, SD = .337$) on the average reported a higher GPA than those students not involved in varsity athletics ($M = 3.37, SD = .518$). Results indicated there is a statistical difference in *GPA* between varsity athletes and non-varsity athletes. Cohen's *d* was calculated as 0.412 and it is a small to medium effect size as .5 is considered to be a medium effect size (Field, 2009). In addition, Sawilowsky (2009) suggests that Cohen's *d* medium effect size is .50 and a small effect size would be .20.

Because GPA scores for varsity athletes and non-varsity athletes were not normally distributed, a non-parametric Mann-Whitney's *U* independent samples *t*-test is being used to compare the GPA scores of athletes and non-athletes. The Mann-Whitney *U* test revealed a statistically significant difference in GPA scores, $U = 24516.00, p < .05$. GPA scores for students who participated in varsity athletics ($Mdn = 3.8$) and students who did not participate in varsity athletics ($Mdn = 3.3$) were different, $U = 24516.00, z = -2.465, p = .014$. The median was used because this was a non-parametric test (Fields, p. 550). Therefore, the null was rejected as

there is a difference in median GPA among varsity student-athletes when compared to the median of non-varsity student-athletes. See Table 8 for descriptive statistics of the Mann-Whitney U Test.

Table 8

Descriptive Statistics for Mann Whitney U Test for GPA Scores

Athletic Participation	N	<i>Mdn</i>	Mean Rank	Sum of Ranks
Varsity	71	3.8	515.7	36615
Non Varsity	825	3.3	442.72	365241
Total	896			

Null Hypothesis Three.

Null Hypothesis Three stated that there is no statistically significant difference between the mean engagement scores as measured by the SEI among student-athletes participating in individual sports and student-athletes participating in team sports. An independent *t*-test was used to analyze the first null hypothesis.

Data Screening. Data screening was conducted on the dependent variable in regard to outliers, normality and data inconsistencies. Using a box and whiskers plot, no outliers were detected, so the researcher proceeded with the data analysis. Figure 9 shows a box plot for SEI scores by athletic participation (individual sports, team sports).

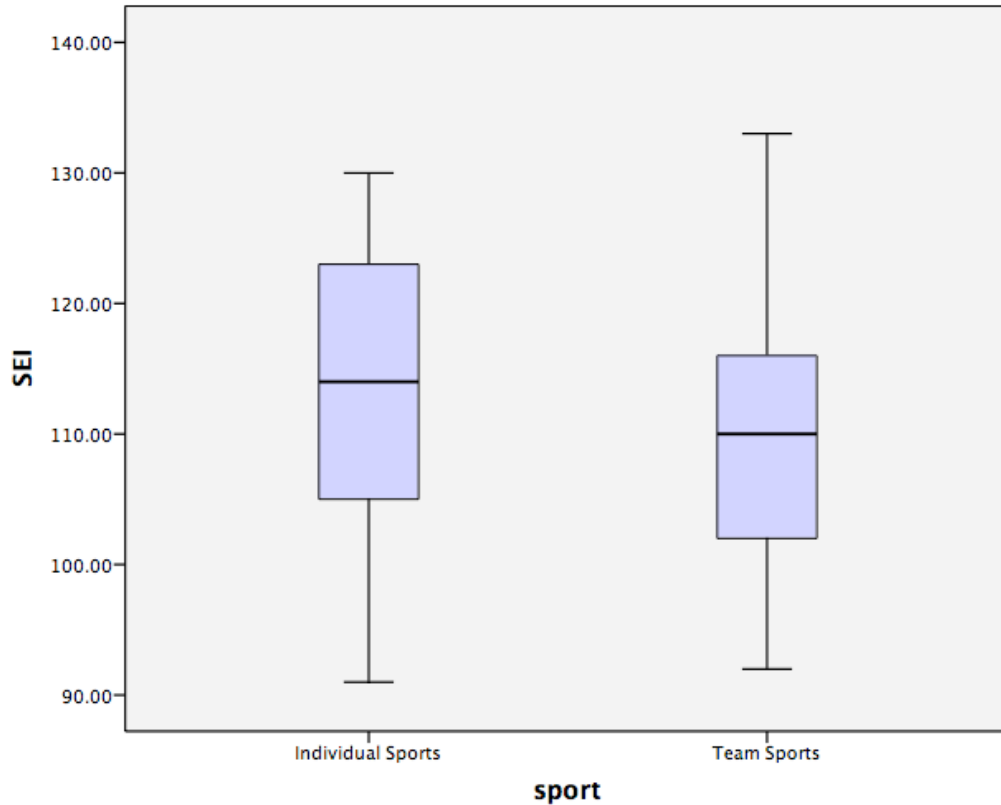


Figure 9. Box plot for SEI by varsity athletic participation (individual sports, team sports)

Assumption Testing. The independent samples t test required that the assumptions of normality and homogeneity of variance were met. Normality was tested using the Kolmogorov-Smirnov test, $p < .05$ and Levene's Test for Equality of Variance was used to determine equality of variance, $p < 0.5$. No violation of normality was found.

Normality. Normality was explored using the Kolmogorov-Smirnov test. Since the sample size was greater than 50, the Kolmogorov-Smirnov test was utilized. The evidence demonstrated that normality for all groups at $p < .05$ can be assumed. See Table 9 for Kolmogorov-Smirnov test.

Table 9

SEI Test of Normality

Variable	Kolmogorov-Smirnov Significance
Individual Sports	.200
Team Sports	.200

Variance. Levene's Test for Equality of Variance was also used to determine if the data satisfied the assumption of equality of variance. As referenced in Table 10, the variances were equal for individual sports and team sports, $F(1, 69) = 2.29, p = .134$. Since .134 is greater than .05, equal variances are assumed.

Table 10

Levene's Test and t-test for SEI by Athletic Participation

	Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig.
Equal Variances Assumed	2.299	.134	1.205	69	.232
Equal Variances Not Assumed			1.118	38.157	.271

Results. An independent samples *t*-test was conducted to evaluate the hypothesis that there is a difference in *academic engagement* as measured by the Student Engagement Instrument (SEI) between student-athletes participating in individual sports and student-athletes participating in team sports. The test was not significant, $t(69) = 1.205$, $p = .232$, therefore the null cannot be rejected.

Results indicated there is no statistical difference in *academic engagement* as measured by the SEI between student-athletes participating in individual sports and student-athletes participating in team sports. Cohen's $d = 0.2907$ was calculated and it is small as .2 or less is a small effect. In addition, Sawilowsky (2009) states that Cohen's d medium effect size is .50 and a small effect size would be .20. Therefore, the effect size was small.

Overview

This chapter provides an overall summary of the findings of this study. Results for each research question are examined and summarized. In addition, conclusions, implications and limitations of this study are explored in detail. Lastly, recommendations for future research based upon the findings of this study are examined and discussed.

Discussion

The purpose of this study was to examine the level of academic engagement as measured by the SEI based upon participation in intercollegiate varsity athletics. An ex post facto causal-comparative design was used to examine the effects of participation in varsity intercollegiate athletics in regard to academic engagement as measured by the SEI. The sample population consisted of 896 total participants ($N=896$). There were 825 students that did not participate in varsity athletics ($N=825$). There were 71 varsity student-athletes ($N=71$).

The primary conclusion of this study is that there is no significant difference in academic engagement scores as measured by the SEI based upon student's participation in varsity intercollegiate athletics. The study also found that there is no significant difference in academic scores as measured by the SEI between varsity student-athletes participating in individual sports and varsity student-athletes participating in team sports. However, the study did find that there was a significant difference in mean GPA based upon student's participation in varsity intercollegiate athletics. This is consistent with Astin's (1999) theory of involvement that argues that the more one is involved in their campus, the greater the amount of learning and personal development. This finding is consistent with other studies that also find that those that participate in varsity athletics report a higher GPA and experience academic success at a higher rate than their peers that do not participate in varsity athletics.

According to Fredricks (2012), participation in extracurricular activities was correlated with positive test scores and grades. Horton (2009) commented that collegiate experience and subsequent success as a student and athlete were enhanced through the support and encouragement due to their participation in athletics (Horton, 2009, p. 24). This study also confirms Naughton's (1997) analysis where NCAA Division III faculty members say that students who play varsity sports were "thoroughly integrated into the social and academic lives of their institutions" (p. 42).

In regard to GPA, the results are mixed. Routon and Walker's (2015) study revealed that athletic participation negatively impacted GPA. Other studies such as Payne, Bredthauer, Martin, and Merrell (2014) and Umbach et al., (2006) support the findings that athletics participation does not negatively impact GPA. In fact, Payne, et al.'s (2014) study examining varsity athletes at the U.S. Air Force Academy found that being a varsity athlete is not associated with a lower GPA. The bottom line is while there are conflicting results of previous studies exploring athletic participation on GPA, this study contributes another finding in the line of literature examining GPA and athletics participation.

When discussing student engagement, the findings of this study confirm that athletes were just as engaged as their peers who do not participate in varsity athletics. While there was no significant difference between varsity athletes and those students who do not participate in varsity athletics and SEI scores, the findings show that both populations were engaged according to the scoring procedures of the SEI. Furthermore, there was no significant difference among varsity student-athletes who participate in individual sports and those that participate in team sports. Umbrach, et al. (2006) argued that students at Division III schools are "more engaged, feel more supported, and report greater gains than their peers at other types of schools" (p. 725).

Therefore, it stands to reason that athletes at Division III institutions would be more engaged than students at other types of institutions which explains the high GPAs and the high engagement scores (Umbach, et al., 2006). As such, NCAA Division III institutions are non-scholarship by definition, and Umbach et al. (2006) conclusion resonates with this study on non-scholarship varsity student-athletes.

This study also follows the directive of the Grier-Reed, et al. (2012) study where future research “exploring the SEI with college students is needed, and we recommend additional research in this vein” (p. 94). This study accomplishes this task by helping to “improve continuity in how engagement is defined and measured across secondary and postsecondary settings [and] advancing the understanding of the importance of engagement to different facets of the student experience” (Grier-Reed, et al., 2012, p. 94). While the SEI was originally designed to measure secondary students’ academic engagement by surveying another college population, this study helped expand the use of the SEI in measuring academic engagement across populations to include secondary and post-secondary students.

Null Hypothesis One

The first null hypothesis examined the differences in academic engagement scores as measured by the SEI based upon a student’s participation in athletics. An independent samples *t*-test did not produce significant results ($p = .285$). Varsity student-athletes scored a 110.92 ($M = 111$) while students not participating in varsity sports scored a 109.45 ($M = 109$). Scores indicate that both populations were “engaged” according to the scoring procedures of the SEI.

The SEI was originally constructed to measure engagement in middle and high school and has also been piloted for use at the elementary level (Carter et al., 2012). The designers of the SEI argued that the instrument “needs to be examined closely and ultimately be used in

another collegiate setting” (Grier-Reed et al., 2012). While the SEI has been used on at least one college population, there has been no known research on athletic participation as it relates to the SEI. However, research exploring academic engagement and athletic participation has been conducted where the researchers utilized other instruments to measure engagement. Symonds (2009) uncovered “significant differences between both categories of independent variable-athletes/non-athletes and revenue/non-revenue sport participation” (p. 161). Similar to Symonds (2009) findings, the overall results of this study indicated that varsity student-athletes were as engaged as their non-athlete peers.

In another study, using data from The National Survey of Student Engagement (NSSE) to compare the collegiate experiences of student-athletes with those of their non-athlete peers, Umbach et al. (2006) found that on average, student-athletes are as engaged in most educationally purposeful activities as their peers. (p. 718). Results of the Umbrach et al. (2006) study show that “student-athletes are at least as engaged overall, and in some areas are more engaged, compared with their non-athlete peers” (p. 725). The findings of both Umbach et al. (2006) and Symonds (2009) compare favorably with the results of this study.

Null Hypothesis Two

The second null hypothesis examined the differences in mean GPA scores based upon a student’s participation in athletics. Because GPA scores for varsity athletes and students not participating in varsity athletics were not normally distributed, a non-parametric Mann-Whitney’s *U* independent samples *t*-test was used to compare the GPA scores of athletes and non-athletes. The Mann-Whitney *U* test revealed a statistically significant difference in GPA scores, $U = 24516.00, p < .05$. GPA scores for students who participated in varsity athletics ($Mdn = 3.8$) and students who did not participate in varsity athletics ($Mdn = 3.3$) were different,

$U = 24516.00$, $z = -2.465$, $p = .014$. The median was used because a non-parametric test was conducted (Fields, 2013, p. 550). Therefore, the null was rejected as there is a difference in median GPA among varsity student-athletes when compared to the median of non-varsity student-athletes.

These findings are comparable to other studies that have examined GPA among varsity student-athletes. While Umbach et al., (2006) found that all students at Division I schools have statistically significantly higher self-reported grades than all students at Division III schools, Routona and Walker (2015) concluded that participation in athletics had a negative impact on GPA. Another study finds that when varsity athletes are educated in a setting that incorporates representativeness and integration, academic performance is on par with their contemporaries who do not compete in varsity athletics (Payne et al., 2014). Payne et al., (2014) found that varsity student-athletes did not underperform when compared to their non-athletic peers. This study compares with those findings in that there was a significant difference in GPA with varsity student-athletes reporting a higher GPA (Payne et al., 2014).

Null Hypothesis Three

The third null hypothesis examined the differences in academic engagement scores as measured by the SEI between student-athletes participating in individual sports and student-athletes participating in team sports. An independent samples *t*-test did not produce significant results ($p = .232$). Therefore, the results are not statistically different in mean scores of academic engagement as measured by the SEI between student-athletes participating in individual sports and student-athletes participating in team sports. Varsity student-athletes participating in individual sports scored a 113 ($M=113$) while varsity student-athletes participating in team sports

scored a 109.85 ($M=110$). Scores indicate that both populations were “engaged” according to the scoring procedures of the SEI.

Similar studies have been conducted examining revenue sports and non-revenue sports or marquee sports and non-marquee sports. While the terminology may be different, there are similarities to this study in that a marquee or revenue sport may be similar to team sports. The non-revenue and non-marquee sports are similar to individual sports in this study.

In examining self-reported GPA, Routon and Walker (2015) report that the negative GPA impact for athletes is consistent across marquee status. In another study examining engagement, Symonds (2009) uncovered significant differences between revenue and non-revenue sport participation where non-revenue sports participants had higher mean scores than revenue sports participants on 20 of 29 dependent variables.

Therefore, while there is no significant statistical difference between individual sports and team sports in regard to SEI scores, varsity student-athletes participating in individual sports scored a 113 ($M=113$) while varsity student-athletes participating in team sports scored a 109.85 ($M=110$). Both groups demonstrated a score that is defined as “engaged” as measured by the scoring procedures of the SEI.

Implications

This study adds to the literature in examining the effects that varsity athletic participation has on academic achievement. Specifically, there is limited research that explores the correlation between academic success and academic engagement as it pertains to four-year colleges and universities among non-scholarship athletes. In regard to academic engagement, there is also little research on whether student-athletes engage in academic practices in a similar manner as other students (Umbach et al., 2006). Furthermore, this study examined how non-scholarship

student-athletes score on an instrument measuring academic engagement. In doing so, this study added to the literature regarding the effects sports participation has on academic engagement and achievement. This study addresses this concern by examining non-scholarship varsity student-athletes in regard to GPA and academic engagement as measured by the SEI.

As mentioned, the SEI was initially designed to measure academic engagement among secondary students. Few studies have utilized the SEI to measure academic engagement in a college population. Since its inception, the SEI has been used primarily as an instrument to measure academic engagement among secondary students. Other researchers have piloted an elementary version as well as a collegiate version (Carter et al., 2012). Therefore, in addition to the above mention benefits of this study, the SEI was used on another college population, further validating the instrument as a tool to measure academic engagement.

In addition, the concept of social engagement and belongingness further explores the idea that institutions should not eliminate, but rather add athletics activities and other student engagement opportunities for students in order to promote academic success as well as combat student retention issues plaguing higher education. Beaver's (2014) examination of non-selective Division III institutions' use of athletics to increase enrollment further confirms the need for this study and its results since these findings help to dispel the fear many administrators held that reliance on athletics as a tool to increase enrollment would undermine "the academic environment" (p. 40). Thus, administrators should feel comfortable in looking to athletics to help meet enrollment needs and stabilize retention as student-athletes prove to be as academically engaged as their peers.

Complimenting this study, Weiss and Robinson (2013) examined NCAA Division II athletes in their study found that students who become integrated into the social and academic

systems in the institution tend to persist and attain academic success thus supporting the findings of this study that varsity student-athletes would be academically engaged as measured by the SEI. Furthermore, the authors imply that social integration and belongingness are contributing factors to the overall success of students (Weiss & Robinson, 2013). Weiss and Robinson (2013) found that factors that led to persistence and retention included faculty interaction and positive relationships with team members.

Accordingly, this study examined academic engagement among student-athletes as measured by the SEI. Since student-athletes scores equate to being academically engaged, one could infer that the student-athlete is satisfied with their institution, and thus more likely to persist until graduation. Therefore, higher scores on academic engagement instruments could be used to predict retention. This study confirmed that there is cause for administrators to add varsity sports, rather than eliminate them in order to address retention issues.

Furthermore, this study also confirmed the practice by many private NCAA DIII institutions that purposely add sports in order to address student enrollment as well as retention issues (Beaver, 2014). This study has shown that varsity student-athletes are academically engaged at high levels and report high GPAs thus validating the practice described by Beaver (2014). This initiative presents a viable option for administrators looking to increase student enrollment with the assurance that these student-athletes recruited for their respective sports will succeed from an academic vantage point.

Limitations

Several limitations were identified in this study. The first limitation was that the random sample was only taken from one university system. While the sample included four different

geographically, regional campuses, the culture of this university system and the students attracted to the brand of this university system could have had an impact on the data collected.

Another limitation was since students were self-reporting their answers on both the SEI and Grade Point Average (GPA), they may not have provided honest answers in regard to the SEI and GPA. As such, students may have exaggerated their scores that could have skewed the responses to the higher end of both measures.

Another limitation could be that forms of academic engagement for college students may include factors/content not addressed by the SEI. As discussed, the SEI was developed for secondary students in high school and middle school (Grier-Reed et al., 2012). The college version of the SEI simply changed names of terminology, while the actual content of the questions remained in tact (Grier-Reed, et al., 2012).

Finally, students who completed this survey may not accurately reflect the total views of the population. Students who took the time to complete the voluntary survey could be construed as high achieving students who are already socially and academically engaged in the university system thus further confirming Astin's (1999) theory of involvement. Therefore, the students who completed this survey could be labeled as academically "high-achieving" students who would answer that they were academically engaged and possess higher the normal GPAs.

Recommendations for Future Research

Even though studies exist examining athletes and academic achievement, more research needs to be conducted on non-scholarship varsity student-athletes, especially in the realm of academic engagement. Additional studies need to be conducted using different universities and university systems across the United States. Future research involving intercollegiate varsity student-athletes should also look expand to look at athletes from all different athletic conferences

to include NCAA Division I, Division II and Division III as well as NAIA institutions. This will help draw larger conclusions for all colleges and universities.

Another suggestion would be to examine all students of this university system in a mandatory fashion in order to truly assess the academic engagement of all varsity student-athletes and non-varsity student-athletes. This would assist leaders of the university system to accurately make decisions regarding ways to address academic engagement and or continue to add varsity sports in order to attract new students and work to increase retention. In doing so, faculty and administrators alike can look at means to enhance or add programs that will address student integration, improve academic engagement and thus improve retention rates at their respective institutions.

Another recommendation would be to use the SEI on another college population, further validating its use post secondary populations. Gender and race could be explored as sub-components of student-athletes in order to address any issues that may arise within those populations. Socio-economic status could also be explored to see if there are differences among students who hail from various levels of median family incomes. Therefore, administrators within the university system can work to meet deficiencies, if any, that may be uncovered within these various populations

Finally, while this study only examined the overall total SEI score, perhaps examining the sub-scales of the SEI could be examined to see what differences exist, if any, between populations. This might be particularly interesting to administrators deciding whether to add individual sports or team sports in an effort to increase overall student enrollment if any differences emerge between the types of sports examined.

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APPENDICES

APPENDIX A: INFORMED CONSENT

Consent Form

A Comparative Study of Student's Engagement Based on Intercollegiate Athletics Participation

David Woolever
Liberty University
School of Education

You are invited to be in a research study of how intercollegiate athletes and non-athletes score on the Student Engagement Instrument (SEI). You were selected as a possible participant because you enrolled as an undergraduate student at Johnson & Wales University. I ask that you read this form and ask any questions you may have before agreeing to be in the study. This study is being conducted by David Woolever in the School of Education at Liberty University.

Background Information:

The purpose of this quantitative research is to examine the level of academic engagement based upon participation in varsity athletics as measured by the Student Engagement Instrument (SEI). This study incorporates the tenants of student involvement, engagement, and retention. Inferences from this study can be drawn as they relate to academic success, retention and student graduation. The theory guiding this study is Bandura's self-efficacy theory, Astin's theory of involvement and Tinto's theory of integration in that if a student is involved and socially integrated into the university, they will in turn be more academically engaged and will enjoy academic success to include graduation. This study will provide insight to the issues affecting academic success, retention and graduation among small, private universities

Procedures:

If you agree to be in this study, you will be asked the following:

You will be asked to answer a set of questions about your academic engagement at Johnson & Wales University. The questionnaire should take approximately 15-20 minutes to complete.

Risks and Benefits of being in the Study:

The study has minimal to no risks. The risks are no more than any participant would encounter in everyday life. This study will provide insight to the issues affecting academic success, retention, and graduation among small, private universities.

Compensation:

You will not receive compensation for participating in this study.

Confidentiality:

The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely and only the researcher will have access to the records. All data will be maintained for three years after the completion of the study and then shredded.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University or Johnson & Wales University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:

The researcher conducting this study is David Woolever. You may ask any questions you have now. If you have questions later, you are encouraged to contact me by email at [REDACTED]

You may contact the chair of my dissertation committee, [REDACTED] at [REDACTED]

You may also contact Dr. [REDACTED] Institutional Research at [REDACTED]

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact the Institutional Review Board, 1971 University Blvd, Green Hall, Suite 1837, Lynchburg, VA 24515 or email at [REDACTED]

Statement of Consent:

By continuing on to the survey I acknowledge I am 18 years of age or older, have read and understood the information contained on this page, and am voluntarily participating in this survey.

APPENDIX B: PERMISSION TO CONDUCT RESEARCH LETTER

JOHNSON & WALES
UNIVERSITY

UNIVERSITY OFFICE

Institutional Research

October 31, 2016

Dear Members of the Liberty University Institutional Review Board,

As the chairperson of Johnson & Wales University's Research Review Committee, the group approving research studies conducted at the University, I wish to inform you that the committee has approved David Woolever's request to utilize email addresses of students enrolled at Johnson & Wales for his research. The committee has granted him access to the email addresses of those students enrolled at Johnson & Wales University for the purpose of distributing a link for the anonymous administration of the student engagement instrument (SEI). Email access applies only to those students who have not placed a confidential block on their records. As the Director of Institutional Research I will provide the student email addresses to the JWU Student Communications Office. The Student Communications Office will be responsible for sending all communications to the JWU students in coordination with the researcher. This approval is conditional on his research receiving final approval from the Liberty University Institutional Review Board.

Should you have any questions, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, which appears to be "George Rezendes".


Director of Institutional Research &
Chair, University Research Review Committee
Email george.rezendes@jwu.edu

8 Abbott Park Place, Providence, RI 02903
401-598-2029 Fax 401-598-1040 www.jwu.edu
Providence, R.I. North Miami, Fla. Denver, Colo. Charlotte, N.C.

APPENDIX C: IRB APPROVAL
LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

November 11, 2016

David M. Woolever
IRB Exemption 2681.111116: A Comparative Study of Student Engagement Based on
Intercollegiate Athletics Participation

Dear David M. Woolever,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.


Your study falls under exemption category 46.101(b)(2), which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:101(b):

- (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:
- (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and
 - (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Please note that this exemption only applies to your current research application, and any changes to your protocol must be reported to the Liberty IRB for verification of continued exemption status. You may report these changes by submitting a change in protocol form or a new application to the IRB and referencing the above IRB Exemption number.

If you have any questions about this exemption or need assistance in determining whether possible changes to your protocol would change your exemption status, please email us at irb@liberty.edu

Sincerely,


Administrative Chair of Institutional Research
The Graduate School

LIBERTY
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APPENDIX D: RECRUITMENT LETTER



To<Student>

From: Director of Institutional Research

I am writing to ask for your help in supporting the research of David Woolever, a doctoral candidate at Liberty University and a faculty member in the College of Arts & Sciences at the Denver Campus of Johnson & Wales University. David is conducting a research study exploring academic engagement among undergraduate students and student-athletes enrolled full time at Johnson & Wales University as measured by the Student Engagement Instrument (SEI). If you are 18 years of age or older and are willing to participate, please follow the link [Click here for Survey](#) to complete a 40 question questionnaire. It should take approximately 10-15 minutes for you to complete the questionnaire. Your participation will be completely anonymous, and no personal, identifying information will be required. A consent document containing additional information about his research is provided as the first page of the survey. Reading this page and proceeding to the survey acknowledges your consent to participate.

There are no direct benefits to you for participating in this research, however, the research will provide insight to issues affecting academic success, retention, and graduation among, private universities. Your participation in this study is voluntary. If you decide to participate you may withdraw at any time without negative consequences by just closing the browser you are using.

The research has been reviewed and approved by the Johnson & Wales Research Review Committee. If you have any questions about the specific study, please contact the principal researcher, David Woolever, at David.Woolever@jwu.edu. Other questions about the research process may be directed to myself at [401-598-2029](tel:401-598-2029) or girezendes@jwu.edu.

Thank you for your time and consideration.



We strongly advise that you DO NOT unsubscribe. Doing so will result in you receiving NO further notices from JWU Wildcat Greetings - which is an official form of communication.