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Bobby L. Anderson

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CORRELATING SPIRITUALITY AND INTEGRATION THEORY
AMONG NCAA DIVISION I ATHLETES IN THE NORTHEAST

A Dissertation

Submitted to the School of Graduate Studies and Research

in Partial Fulfillment of the

Requirements for the Degree

Doctor of Education

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Indiana University of Pennsylvania

May 2018

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The purpose of this study was to explore the relationship between aspects of spirituality and their relationship to factors of persistence, specifically academic and social integration, among varsity-level student-athletes competing in the Northeast Conference of the NCAA's Division I tier. For the purposes of this study, the traits of spirituality were obtained from the Spiritual Involvement and Beliefs Scale (SIBS) developed by Hatch et al. (1998) and later revised (SIBS-R) in 2001. Additionally, the traits of academic and social integration were obtained from the Academic and Social Integration Scales (ASIS) developed by Pascarella and Terenzini (1980). The revised spirituality instrument, referred to as SIBS-R, included 22 items measuring individuals' spiritual involvement and existential beliefs from an unbiased and universally ecumenical perspective. The ASIS instrument included 30 items grouped into five categories and was designed to test the predictability of college students' decisions to continue their enrollment (more commonly referred to as persistence). The five categories of the ASIS instrument included: Peer-Group Interactions, Interactions with Faculty, Faculty Concern for Student, Academic and Intellectual Development, and Institutional and Goal Commitment. The findings included many significant positive correlations and factors of predictability between traits of spirituality and traits of academic and social integration for the 233 respondents. Of significance, the spirituality traits of acceptance of life circumstances, hopefulness, gratitude, and altruism appear to return the most correlation and predictability of academic and social

integration traits. Limitations of the study, implications for educational practice, and recommendations for further research are provided by the researcher.

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CHAPTER 1

INTRODUCTION

“Those who have a 'why' to live, can bear with almost any 'how'.” – Viktor Frankl

To begin, a personal story...

As a recruited student-athlete in college, the opportunity to continue to compete in the sport that I loved at the college level was a significant aspect of my personal identity. However, after sustaining a critical injury in my first year at college, that identity was shaken. Having lost my ability to play my sport, which had been up until that time a major factor in choosing to attend college and in choosing which college to attend, I also began to lose my spiritual and religious identity. It seemed, for a time, that I was unsure of who I was, where I was going, and what my experiences as a college student really meant to me. I began to struggle socially and found it difficult to connect with others who shared my values as my own values had been rapidly deteriorating. Rather, I began to socialize with those who previously had seemed so different than me. I began to struggle academically and found it difficult to connect to my coursework and migrated from department to department looking to declare a major. After my second year in college, I experienced a rediscovery of my personal values and a spiritual awakening that caused me to see a confluence of those three significant elements of my life: spiritual, social, and academic/intellectual. For the first time in a long time, I began to have a sense of hope for where my life might be going; I found new friends who seemed to have my best interests at heart, and I was finally confident in my chosen major, seeing possibilities emerge for what I could be doing professionally after graduation. It took a great deal of struggle and learning from many mistakes; however, I found a sense of meaning right when I needed it most.

Looking back now at those first years of my own college experience, and considering the many encounters I have enjoyed with the college students that I have advised and mentored thus far in my professional career, I am intrigued by the relationship that spirituality may share with a student's ability to persist through adversity. As someone who strongly identified as a student-athlete, I am further captivated by these themes and the possible implications they may have in developing meaningful pathways to help student-athletes achieve success in college.

When comparing student-athletes to the general population of college students, the 2005 National Survey of Counseling Center Directors suggested that student-athletes are at a greater risk than the general population of undergraduate students for experiencing psychological issues and that institutions should focus on learning more about the many factors that contribute to this phenomenon (Watson & Kissinger, 2007). Ting (2009) suggests that student-athletes should be considered to be as much at-risk as minority students and non-traditional students since their environmental pressures are non-normative. Ridnour and Hammermeister (2008) observed that student-athletes who displayed characteristics of spiritual well-being presented a "mentally tougher" profile when compared to peers who demonstrated fewer of these same characteristics. The student-athletes identified as "mentally tougher" were observed as having higher levels of confidence and achievement motivation, goal-setting/mental preparation, and freedom from worry.

The broader topic of personal identity as a component of psychosocial development is rooted in the works of the classical psychologist, Erik Erikson, particularly in his 1968 work, *Identity: Youth and Crisis*. In this seminal work, Erikson addresses the role of spirituality in youth identity development. Erikson (1968) argues, "Religion restores, at regular intervals and through rituals significantly connected with the important crises of the life cycle and the turning

points of the yearly cycle, a new sense of wholeness, of things rebound” (pg. 83). Astin et al. (2011) assert that without spiritual development, students’ learning becomes fragmented and less connected with their personal values through a loss of context or personal meaning. Given Erikson’s (1968) synopsis of the natural restoration and wholeness that religion provides and the assertion given by Astin et al. (2011) in which spirituality provides necessary context to learning, perhaps higher education professionals may want to assess their efforts in developing spiritual identity among students with the intent of promoting stronger personal connections to newly acquired academic knowledge.

Astin et al. (2011) go on to suggest that the existential quest will have strong implications for many important decisions that students have to make, including their choices of courses, majors, careers, and decisions to persist in college. Keeling (2004) states that “learning, development and identity formation can no longer be considered as separate from each other, but rather that they are interactive and shape each other as they evolve” (p. 10). Perhaps through effective spiritual engagement, students will develop more holistically, connecting multiple aspects of their identities within the greater context of their lives, including academic learning. This holistic approach to education, including supporting students’ spiritual and religious identity development, could help students to have more fulfilling learning experiences and to display stronger levels of persistence.

The topic of persistence as it relates to retention is one of the most heavily researched and published areas in higher education. Persistence is most commonly understood as a student’s demonstrated commitment to graduate (Davidson, Beck, & Milligan, 2009; Mangold, 2003; Pascarella & Terenzini, 1980; Tinto, 1975). Researchers credit a wide range of factors that influence a student’s choice to enroll and to persist towards college graduation. Although the

choice to attend college may be made by the students themselves, Cabrera et al. (2006) assert that the impetus is informed by the actions and behaviors of parents, schools, and communities, all of which affect student planning for enrollment.

Dispositions toward learning and success in college may be partially developed prior to college enrollment. The higher education institution itself then assumes much of the responsibility for maintaining a supportive environment and facilitating relevant experiences to help the student persist towards graduation. Certainly, if the student's credentials warrant admission into the college or university, it is then the role of each faculty member, advisor, counselor, and coach to provide methods of achievement and expect attitudes of persistence to be displayed by the student. Teachers who provide higher levels of engagement within the classroom see a more positive effect on students' capacity for learning (Kuh et al., 2008; Kuh, 2011; Tinto, 1997). It is worth considering, then, that the areas of development emphasized by the students' mentors (e.g., teachers, coaches, etc.) may become areas of focus for students. Perhaps it is necessary for educators to concern themselves over what students are seeking during their college experiences. Through this inquiry, educators may attempt to find a common platform by which to engage students in relevant and meaningful ways. One possible platform on which to engage students may be spirituality.

It goes without saying that technical knowledge and technical skills are becoming increasingly important for one's effective functioning in modern society, but technical knowledge alone will not be adequate for dealing with some of society's most pressing problems; violence, poverty, crime, divorce, substance abuse, and the religious, national, and ethnic conflicts that continue to plague our country and our world. At root, these are problems of the spirit, problems that call for greater

self-awareness, self-understanding, equanimity, empathy, and concern for others.

(Astin, 2011, p. 8)

Statement of the Problem

The National Center for Education Statistics (2015) reported that the 2013 six-year federal graduation rate for first-time, full-time undergraduate students was 59 percent – in comparison, the six-year graduation rate for student-athletes among that same cohort was 66 percent (New, 2014). The federal graduation rate was established as a component of the Student Right-To-Know and Campus Security Act (1990). This establishment amended the Higher Education Act of 1965 to “require all institutions of higher education participating in any program under HEA Title IV (Student Assistance) to disclose the completion or graduation rate of certificate- or degree-seeking, full-time students entering those institutions” (Student Right-To-Know and Campus Security Act of 1990). Although it does appear that student-athletes may graduate at a higher rate than their non-athletic peers, Ting (2009) suggests that helping student-athletes to participate in opportunities for their psychosocial development is of particular importance for their academic success. In recent years, the NCAA and the academic community have been working to improve the experiences of student-athletes and to strengthen the balance between the rigors of intercollegiate athletics and academics (Comeaux, 2015; Johnson, 2013).

Given the increasing volume of research on spirituality in higher education (Astin, 2004; Astin et al., 2007; Astin et al., 2011; Bryant, 2011; Gilley, 2005; Gutierrez, 2005; Jacobsen & Jacobsen, 2008; Kress et al., 2015; Kuh & Gonyea, 2006; Parks, 2000; Reymann et al., 2015; Subbiondo, 2011; Tolliver & Tisdell, 2006), it is still unclear as to how spirituality may impact persistence among students – particularly among student-athletes. Currently, little research has directly explored the relationship between student-athletes’ spirituality and their persistence in

college. Further, despite the common practice of many professional and college-level athletes crediting their spirituality as a major influence in their success, spirituality is not commonly associated with other factors contributing towards college persistence. This study will analyze student-athletes' spiritual involvement compared to their academic and social integration, both significant factors in student persistence, which then leads to degree attainment or graduation. This study will focus on the evaluation of college-level student-athletes while enrolled as full-time, degree-seeking students at four-year institutions. Specifically, this study will explore how spirituality, as measured by Hatch, et al.'s 2001 Spiritual Involvement and Beliefs Scale – Revised (SIBS-R), may impact two of the most influential factors of persistence, academic and social integration as measured by the Academic and Social Integration Scales (ASIS) (Pascarella & Terenzini, 1980). This study will contribute to the larger collection of research on spirituality in higher education, college persistence factors of academic and social integration, and strategies to assist college student-athletes with improving persistence – thus leading to increased retention and further increased degree-completion.

Purpose of the Study

The purpose of this quantitative study is to explore the relationship between spirituality and academic and social integration among student-athletes. Through this study, the broader emerging topic of spirituality in higher education is being examined in a new way, concerning the specific population of college student-athletes for the purposes of understanding persistence, retention, and degree completion.

Significance of the Study

The study will contribute to scholarly research in the emerging topic of spirituality/religiosity as a potential factor in the practices of student development/affairs,

athletics, and various student support services in higher education. Additionally, it will benefit college and university administrators who oversee intercollegiate athletics programs at their institutions and all other individuals who view student-athletes as institutional investments and seek to positively affect psychological well-being and to further increase retention and graduation rates.

Research Design

This study will be classified as quantitative research as the study will rely on statistical data to draw a conclusion based upon a set of research questions. To collect the quantitative data, the researcher used existing scholarly research surveying instruments developed to measure spirituality and academic and social integration. The study used correlational research to utilize the recorded data to determine what, if any, relationship exists between student-athletes' spirituality and five scales of academic and social integration.

This study reviewed undergraduate student-athletes within the Northeast Conference (NEC) of the National Collegiate Athletic Association (NCAA) and attempted to derive a correlation between their levels of spirituality using the Spirituality Involvement and Beliefs Scale – Revised (SIBS-R) (Hatch et al., 2001) and their levels of academic and social integration using the Academic and Social Integration Scale (ASIS) (Pascarella & Terenzini, 1980). (See Appendix A for the combined survey instrument).

Once approved to conduct the study, the researcher contacted each of the ten NEC institutions to seek participation in the study. Six of the ten agreed to participate and provided IRB approval for the study of human subjects. The participating institutions then forwarded the invitation to participate to their respective student-athlete populations who, upon agreement, participated in an electronic survey combining both the Spiritual Involvement and Beliefs Scale

– Revised (SIBS-R) and the Academic and Social Integration Scale (ASIS). Once the surveys were completed and the data analyzed, the researcher then determined the correlation between spirituality and academic and social integration among the student-athletes. The researcher’s experimental hypothesis prior to conducting the study was that student-athletes’ traits of spirituality would correlate to their academic and social integration experiences.

Theoretical Framework of the Study

This study attempted to illustrate various theories related to identity development through social and intellectual stimulation. Astin et al. (2011) assert that students’ spiritual lives both impact and are impacted by how they perceive the world around them. Their perception of the world comes through both lived experiences and acquired information and insight. This symbiotic relationship between lived experiences with acquired information and spiritual interpretation and motivation is the very construct directing this particular study. Tinto (1997) argues that persistence, likely a longitudinal process affected by shifting balance from social integration in the earlier years of college to more academic integration in the later years, cannot be adequately understood without first acknowledging the possible parallels with moral and intellectual development. Others have, in one way or another, studied this developmental and phenomenological parallel between the intellect and the spirit. From a perspective of intellectual development, Baxter-Magolda has led the study of *self-authorship*, the process in which students engage in learning experiences as a transferal of knowledge and insight from external sources to themselves (Baxter-Magolda, 2009; Hodge, Baxter-Magolda, & Haynes, 2009). This process is detailed as beginning with identity development, then leading to critical evaluation, and eventual confidence in the new knowledge or insights experienced through series of crises or struggles. Similarly, Mezirow (2007) describes *transformative learning* as the process by which emerging

adults develop personal meaning and deeper understanding of knowledge through an analysis of their own life experiences and insights – requiring a higher level of engagement within the academy.

Coinciding with these intellectual processes, from a more spiritual perspective, Parks' (2000) research on emerging adults and their practices of meaning-making posits that emerging adults organize their lives based on a set of firmly held beliefs. Parks' work suggests that these beliefs develop through experiences, followed by critical evaluation and discernment, and eventual acceptance and assimilation of new or refined beliefs – similar to *self-authorship*. Fowler's (1981) seminal work in stages of faith development, in many ways also mirrors the intellectual process of self-authorship, in that humans engage within processes to deepen their own sense of personal understanding and meaning in their spiritual/religious lives. Fowler's theory describes faith development as initially an acceptance of external constructs to an eventual combination of one's own interpretation of life experiences.

Observing the parallels that exist among these various theories, it is the purpose of this study to explore the potential relationship and interconnectedness between the spirit and the intellect. Considering the non-normative pressures that college-level student-athletes commonly experience, to what level, if any, does a relationship exist between their spiritual and intellectual experiences? Further, with a focus on the phenomenon of persistence, to what level, if any, does a relationship exist between their spirituality and their integration within the academic and social spheres of their institution?

Research Questions

This study will focus on one overarching question: Is spirituality a potential factor of college persistence among student-athletes? To explore this question, the researcher will attempt to provide supporting arguments based on findings from the following research questions:

1. Is there a relationship between *spirituality* and *peer-group interactions* among student-athletes?
2. Is there a relationship between *spirituality* and *interactions with faculty* among student-athletes?
3. Is there a relationship between *spirituality* and *faculty concern for student development and teaching* among student-athletes?
4. Is there a relationship between *spirituality* and *academic and intellectual development* among student-athletes?
5. Is there a relationship between *spirituality* and *institutional and goal commitments* among student-athletes?

Definition of Terms

For the purpose of the study, the following definitions are offered:

1. *Academic and Social Integration* – as defined by Davidson, Beck, and Milligan (2009), “reflect the ways in which students change on the basis of their interactions with the campus environment, incorporating academic and social experiences into their perceptions and involvement behaviors” (p. 376).
2. *Division I* – a classification within the NCAA (also see Division II and III); member institutions are allowed to operate at different levels of competition based on a number of criteria including number of required sports (particular emphasis on gender equity, or

Title IX of the Education Amendments of 1972), scheduling, and financial aid criteria for student-athletes (e.g., institutions operating Division I programs can grant athletic scholarships in an amount equal to tuition) (NCAA 2010, retrieved from <http://www.ncaa.org/wps/wcm/connect/public/ncaa/about+the+ncaa>).

3. *Persistence* – a term that refers to students’ behaviors related to the decision to continue their college education and ultimately satisfying the requirements for degree completion (Davidson, Beck, & Milligan, 2009).
4. *NCAA* – the National Collegiate Athletic Association; “is a member-led organization dedicated to the well-being and lifelong success of college athletes” (NCAA, 2015). The NCAA furthers its purpose through its commitment to supporting academic success, student-athlete well-being, and a fair and inclusive environment. (NCAA, 2015)
5. *NEC* – the Northeast Conference; a grouping of small NCAA Division I institutions within the northeast region. (NEC 2014, retrieved from http://www.northeastconference.org/Sports/gneral/2004/gen_aboutnec.asp?nl=1).
6. *Retention* – the institution’s ability to preserve a student’s enrollment from year to year (Davidson, Beck, & Milligan, 2009).
7. *Spirituality* – a subjective term of existentialism; a deeper understanding of one’s identity and personal values as it relates to their interconnectedness to others and overall sense of meaning and purpose (Astin et al., 2011).
8. *Religiousness/Religiosity* – the adherence to a set of faith-based beliefs and specific ritualistic practices typically conducted as a defined population or community (Astin et al., 2011).

Description of Variables

For the purposes of this study, the demographic data that will be collected includes gender, primary sport, and year in school.

Gender will be used to identify whether participants are either male or female and will be based on the participants' selection of their primary sport, as each sport is generally categorized as either a male or female sport.

Primary Sport is the single sport/team activity that the student commits most of his or her athletic involvement towards, as some students may participate in more than one sport.

Year in School will be used to identify which year of undergraduate study each participant is in when the survey was completed.

For the purposes of this study, the independent variable used to conduct research and analysis is *spirituality*. Specifically, the 22 items of the Spiritual Involvement and Beliefs Scale – Revised (SIB-R) as originally developed by Hatch et al. in 1998 and later revised in 2001 will serve as individual traits of spirituality. It is these traits that will be tested for correlation among the dependent variables. The dependent variables of this study include five sub-scales of academic and social integration as designed by Pascarella and Terenzini's (1980) Academic and Social Integration Scale (ASIS), which are identified as: *peer-group interactions, interactions with faculty, faculty concern for student, academic and intellectual development, and institutional and goal commitment*. The 30 items of the ASIS instrument will be assessed as unique experiences of academic and social integration.

Summary

Over the past few decades, the study of college students, their values, and their sense of purpose has received much support by the academic community, resulting in many scholarly

publications. Research suggests that spiritual development promotes identity and an ability to cope with life's pressures. However, much of the literature focuses on the effects of spirituality/religiosity on students in general and does not focus on the effects they may have on student-athletes specifically. Division-I student-athletes represent one of the largest investments in higher education today, while simultaneously providing an at-risk population of students and a significant diversion from academic study. With the financial commitment that so many institutions provide to offer an intercollegiate athletics experience to students, alumni, and community, this study may be of some interest to institutions looking to provide a more holistic learning experience, including spiritual development, to their student-athletes. In order to support the spiritual development of student-athletes for the purposes of academic success and persistence, further research is needed. It is expected that the results of this study will indicate that there exists some level of correlation between spirituality and academic and social integration. It is hypothesized that student-athletes who indicate an absence of spirituality traits will likely also indicate an absence of significant experiences of academic and social integration. A significant correlation between traits of spirituality and experiences of academic and social integration would indicate a potential need for a more intentional invoking of student spirituality to bolster their engagement and integration within their academic and social environments – thus developing stronger behaviors towards persistence.

In the subsequent chapters, the researcher will provide an in-depth review of existing literature on the relevant topics of this study. Additionally, the researcher will offer a proposed methodology that will assist in obtaining sufficient statistical data for this particular study.

The following chapter will provide a literature review related to college persistence and the many factors that contribute to this phenomenon. Additionally, the researcher will review

literature pertaining to the student-athlete experience and the various risks that have been identified for this population. Finally, the literature review will provide an expansive look at spirituality to assist the reader in understanding the term in its intended use for this study. Given the subjective nature of spirituality, the extensive review on this topic will explore many perspectives in an attempt to derive a single term that is both objective and comprehensible.

CHAPTER 2

A REVIEW OF RELATED LITERATURE

The body of literature related to spirituality in higher education emphasizes the importance that spirituality plays in college student identity development. In 2003, a research team from the Higher Education Research Institute (HERI) at the University of California Los Angeles conducted a pilot study of nearly 4,000 students from over 40 institutions. Their initial findings showed that three-quarters of respondents reported that they identify as spiritual beings (77 percent) and that they are searching for meaning and purpose in their lives (75 percent) (HERI, 2010). Convinced that the subject of spirituality merited further research this same research team, headed by famed higher education expert Alexander Astin, then proceeded with a seven-year longitudinal study that initially invited more than 112,000 college students from some 236 institutions nationwide regarding this very topic (Astin et al., 2011). The purpose of their study was to determine a distinction between students' spirituality and religiosity, as well as to discover the level of importance that college students place on this aspect of personal development and how their institutions were contributing towards this development. With this extensive look into the interior lives of students, it is important to develop a dialogue on our college campuses that promotes and stimulates the development of spirituality.

The recent work of Astin et al. (2011) serves as the impetus behind this particular study, which intends to expand upon the team's research and provide further depth to the phenomenon of spirituality in higher education. This literature review will provide scholarly context for the purpose of examining the correlation between spirituality and persistence among NCAA Division-I student-athletes in the northeast region of the U.S. and the levels at which they leverage their spirituality as a source of stability and confidence towards degree completion.

This study seeks to provide further research toward the question of whether or not spirituality should be considered a factor in college persistence among student-athletes.

In this chapter, the researcher will provide an extensive review of literature on three specific topics. First, the researcher provides an exploration on persistence and the factors that contribute to this phenomenon, giving particular attention to both academic and social integration. Secondly, the researcher will review findings on the student-athlete experience and the various risk factors that are attributed to students' participation in intercollegiate athletics. Finally, the researcher will provide an extensive review of the literature on the topic of spirituality in higher education, accounting for various views and perspectives and the implications of spiritual development in the academy.

Persistence in Higher Education

The topic of persistence, as it relates to retention, is one of the most researched and published areas in higher education. Mangold et al. (2003) define persistence simply as a student's level of commitment to achieve graduation. Researchers on this topic credit a wide range of factors that influence a student's choice to enroll and to persist towards college graduation. It is important to note that attrition rates of college students have hovered around 50 percent for nearly 150 years (Brock, 2010; Burks & Barrett, 2009; Spradlin et al., 2010; Tinto, 1982), meaning that only half of all students who enroll will complete a college degree. This section will review the literature on persistence and the many factors thereof.

Although the choice to attend college may be made by the students themselves, Cabrera et al. (2006) posit that the impetus is provided by the actions and behaviors of students' parents, schools, and communities, all of which affect students' pre-planning for college enrollment. Dispositions toward learning and success in college may be developed prior to college

enrollment; however, they are not finite throughout the students' enrollment. The institution itself assumes much of the responsibility for maintaining an environment of relevant experiences in which the student is provided encouragement and support towards degree completion regardless of educational background (Brock, 2010). Certainly, if the student's credentials warranted admission into the college or university, it is then the role of each faculty member, advisor, counselor, and coach to provide methods of achievement and expectations for persistence.

Well known educational researcher Patrick Terenzini offers this perspective in a 1993 presentation to the Association for General and Liberal Studies: "...what happens to students after they arrive on campus has far more impact on student change than the kind of institution they attend" (p. 17). Herein lies the argument that teachers who provide higher levels of engagement in the classroom see a more positive effect on students' capacity for learning and engagement (Braxton et al., 2008; Kuh et al., 2008; Kuh, 2011; Pascarella, Seifert, & Whitt, 2008; Tinto, 1997; Tinto, 2000). Therefore, the areas of development emphasized by the students' mentors (e.g., teachers, coaches, etc.) would also become areas of interest for the students themselves and would support the earlier claims made by Terenzini (1993) and Cabrera et al. (2006) in reference to the impetus for choosing a college education being led by parents, educators, and community – that impetus is now assumed by the institution. Through guided inquiry, educators may attempt to find a common platform by which to engage students in a relevant and meaningful way, captivating their interest in learning and succeeding.

Understanding the importance of providing an academic experience that is both challenging and rewarding, as well as fulfilling the need for a vibrant social experience, Demaris et al. (2008) posit that:

If a student's expectation is matching or exceeds his/her evaluation of reality, then seemingly the student is satisfied. On the other hand, if a student's expectation is higher than his/her evaluation of reality then seemingly the student is dissatisfied.

(p. 5)

Academic and Social Integration

The student enters a university with unique personal and academic characteristics and skills, including personal goals and intentions towards studying. The environment she encounters consists of structures of the institution and the members of its academic and social systems. The academic system consists of grades and intellectual development, and the social system of relationships with peers and staff. The student's personal goals and commitment to the institution will be either weakened or strengthened depending on the fit between the student and the educational environment s/he has entered. The interplay between the individual and the academic, as well as the social, system will affect the student's decisions to continue, withdraw or drop out. (Lahteenoja & Pirttila-Backman, 2006, p. 642)

Pascarella and Terenzini (1979) and Tinto (1982) have long proclaimed that with respect to students' decision-making to persist, the educational experiences of students, performing as internal factors, are just as important to understand as the external factors of students' personal and family lives and other pre-college characteristics (e.g., parents' educational level, high school achievement, educational aspirations, etc.) Many scholars and researchers have catalogued internal factors related to student persistence in the academy. Davidson, Beck, and Milligan (2009), in developing the College Persistence Questionnaire, conducted a thorough

literature review that resulted in the following compilation of persistence factors: academic integration, academic motivation, academic efficacy, financial strain, social integration, collegiate stress, advising, degree commitment, institutional commitment, and scholastic conscientiousness.

Despite this extensive compilation of factors, the most frequently studied persistence factors are academic and social integration (Tinto, 2000). Tinto (1975) introduces these factors in his seminal contribution to the issues of college student attrition and retention; he proposed that the higher the levels of academic and social integration, the higher the student's commitment to his/her institution and to graduating from that institution, resulting in higher levels of persistence in the student. More recently, Tinto (2017) encourages institutions to consider persistence from the perspective of the student who does merely seek to be retained but to persist. Further, he explains that the impact of the college experience ought to be measured by a set of outcomes including interactions between student goals, self-efficacy, sense of belonging, and the perceived worth or relevance of the academic curriculum. The perception of students as students is the primary focus of a Bowman & Felix (2017) study on student identity centrality, which is when a student's perception of himself or herself as a *student* is central to their personal identity. They go on to suggest that activities that reinforce this identity can be effective in promoting retention and persistence. "... [R]etention and academic performance are predicted by the early transition experiences of academic integration, social integration, and institutional commitment" (Woosley & Miller, 2009, p. 1266). Further acknowledging the relationship among interpersonal resilience, intrapersonal resilience, and overall mental health of college students with respect to both academic and social integration, Hartley (2011) succinctly defines these terms:

[A]cademic persistence is the complex interplay between the student and his/her ability to integrate *academically*, referring to student's motivation to attend class and study, and *socially*, referring to student's subjective sense of fitting in the university. (p. 596)

Despite the overwhelming support for social integration as part of the college experience, faculty have mixed reviews on the value and overall effectiveness of social integration (Lahteenoja & Pirtilla-Backman, 2006). One group of faculty in the study goes as far as to suggest that social integration, combined with massive enrollment increases, has led many students further away from the pursuit of intellectualism, making college more of a social experience and less of an academic experience. The argument here is that students who are more intentional about their studies are inclined to make healthier, academically-related decisions regarding social engagement. Further, many faculty are disturbed by the expectation to graduate students who are less engaged academically as graduation rates are connected to funding, resulting in a lower standard of graduates who have successfully subsidized their education for the mere purposes of obtaining a social life (Lahteenoja & Pirtilla-Backman, 2006). Despite the argumentation over the balance of academic versus social integration, it is clear that attitudes of persistence and strategies of retention are inextricably linked by both students and institutions. "The task of preparing students to succeed in higher education and increasing student success, persistence, and graduation rates are the responsibility of both the student and higher education institutions," (Stewart, Lim, & Kim, 2015, p. 18).

One strategy to avoid extreme socialization at the expense of healthy academic integration is the establishment of *learning communities*. These groupings meet frequently both inside and outside of the classroom, but it is in this frequent interaction within these groupings

that students are more positively influenced to persist despite any challenges they may experience (Burks & Barrett, 2009; Spradlin et al., 2010; Tinto, 1997; Tinto, 2000). Tinto (2000) suggests that by providing a *pseudo-bridge* between the academic experience and the social experience, students gain a sense of depth from what they are learning in the classroom and then share outside of the classroom. Supporting Tinto's suggestion of a more academically focused social experience is Woosley and Miller's (2009) study of first-year students' academic and social integration impact on retention. After surveying over 2,700 first-year students from a large public residential Midwestern institution, they concluded that although social integration can be related to institutional commitment, academic integration correlated more with the retention of this research population. Offering further support for the integration theory, despite what some experts may perceive as unessential to the academic mission (Lahteenoja & Pirtilla-Backman, 2009; Wolniak, Mayhew, & Engbert, 2012), a recent study of over 2,400 first-year students suggests that students exposed to co-curricular opportunities, interaction with peers, and, to a lesser degree, quality teaching, are more likely to persist to the second year (Wolniak, Mayhew, & Engbert, 2012). Given the support for increased interaction among peers, it may be worth considering the diversity and cultural differences of students as potential factors of successful social integration.

Integration and Diverse Populations

Given the extensive support for the effect of academic and social integration on persistence, it is important to consider diverse populations and how persistence may differ from group to group. One area to consider is students' varying individual needs for social and cultural acceptance. Cabrera et al. (1999) investigated the impact of racial climate as it relates to student adjustment to college. The team of researchers suggests that where prejudice and intolerance

exist, students are less likely to be comfortable in their college environment, which could have negative implications for persistence. They suggest improving education through effective policies and practices that do not focus on any one particular culture, but rather all cultures.

Similarly, Kevin Murphy (2006) suggested a blending of both *retention* theory and *assimilation* theory. He posits that students who integrate themselves into the institution will likely persist, or be retained, whereas assimilation theory asserts that students who maintain a strong connection to their families and home communities will likely persist. The blending of these two theories of practice is especially significant given a surge in enrollment of minority (30 percent of enrolled students), foreign-born (20 percent), and foreign-speaking (11 percent) students (Choy, 2002).

Further support for Murphy's (2006) suggested practices is found in Hausmann's et al. (2009) research on the effects of social integration and sense of belonging and how they differ between white and African-American first-year students. Results indicated that a sense of belonging is directly related to levels of institutional commitment; however, African-American students displayed lower levels of persistence in comparison to white students. Further, according to Mamiseishvili (2012), a study of academic and social integration factors among international students indicates that academic integration held a positive correlation to persistence, whereas social integration produced negative effects on persistence. Among the international students involved with this study, experiences related to integration within the campus culture, spiritual life, academic course work, and extracurricular activities were cited as elements of their intentions to persist (Mamiseishvili, 2012).

However, culture and race/ethnicity are not the only conditions for effective social integration. Jones (2010) sought to understand the impact of social integration and its

subsequent effects on institutional commitment related to gender. He surveyed 408 first-year students from eight private faith-based institutions. Jones' findings suggest that social integration plays a much stronger and significant role in institutional commitment for female students than for male students; similar results among genders were found in an earlier study conducted by Pascarella and Terenzini (1980). Further, Strauss and Volkwein (2004) sought to understand differences in institutional commitment among students attending two-year and four-year institutions. After analyzing nearly 2,500 students at four-year institutions and over 5,700 students at two-year institutions, the most influential factors of institutional commitment were academic integration, followed by social integration. They go on to explain that, according to their analysis, academic and social integration remain the most influential factors across such differences as age, ethnicity, marital status, and even financial aid status. It would appear, then, that regardless of race/ethnicity, domestic/international status, and gender, among other differences, academic and social integration remain prominent factors contributing to attitudes of persistence.

[...] active learning practices that faculty use shape in students the perception that their college or university is committed to their welfare in general and their growth and development in particular, a perception that leads to their sense of social integration. The greater a student's degree of social integration, the greater is his or her level of subsequent commitment to the college or university. The greater the student's level of subsequent commitment to the college or university, the greater is his or her likelihood of persistence in the college or university of initial choice. Thus, active learning plays an indirect but formative role in the retention of [...] students. (Braxton et al., 2008, p.81)

In summary, it certainly behooves higher education administrators, student affairs professionals, and faculty to implement practices for effective academic and social integration. Such practices, regardless of pre-enrollment characteristics, should be sensitive to specific populations and demographics in order to positively impact student persistence towards degree completion.

The Student-Athlete Experience

Despite much criticism and controversy over the value of the student-athlete experience (Adler & Adler, 1985; Bowen & Levin, 2003; Kirk, 2005; Miller & Wooten, 1995), particularly under the structure of the National Collegiate Athletic Association (NCAA), much research suggests that the student-athlete experience can positively affect academic and social integration, both for the student-athletes and the larger community. “Athletics energizes community, strengthens morale, instills pride, and deepens campus spirit” (Clopton, 2009, p.85). Before one can develop intentional learning strategies for the student-athlete experience, it is important first to understand the student-athlete experience, particularly regarding the risks associated with student-athletes’ well-being.

The student-athlete, particularly in the NCAA Division I sub-division, is a unique breed. Considering their unique routines, expectations, and standards, it is understandable why such a population may be identified as at-risk (Lu et al., 2012). In comparison to the general student population, student-athletes are at a greater risk of experiencing psychological problems including physical and emotional exhaustion, among other symptoms, as categorized as *burnout* (Eklund & DeFreese, 2015). Institutions and educators, therefore, should focus on learning more about the many factors that contribute to this phenomenon. Ting (2009) suggests that student-athletes should be considered just as at-risk as minority students and non-traditional students

because their environmental pressures are non-normative (i.e., they do not experience the college environment in the same way that a non-athletic student might). In fact, Watson and Kissinger (2007) assert that, due to the combination of such factors as expectations to perform well both academically and athletically, as well as the looming fear of injury, identifying social opportunities, and forming relationships, student-athletes often experience emotional, physical, and developmental difficulties.

In order to encourage student-athletes to remain in school and to progress towards degree completion, developmental services should be provided to help keep student-athletes motivated and focused on achievement and wellness. This approach to wellness is defined as “a way of life oriented toward optimal health and well-being in which the body, mind, and spirit are integrated by the individual to live more fully” (Myers, Sweeney, & Witmer, 2000, p. 252). Further, Hermon (2005) suggests that this holistic approach to student-athlete wellness impacts academic persistence.

This approach to wellness is not without contradiction when considering the work of Mangold, Bean, and Adams (2003), whose research compared the graduation rates of 97 institutions who offer both NCAA Division I basketball and football from 1996 to 1999. Their research supports the claim that successful athletic programs produce distractions; when considering Tinto’s (1975) interactionist model, exploring the relationship among academic and social integration with student persistence, successful athletic programs influence students to overindulge in socialization, even to dangerous levels, thereby negatively impacting students’ commitment to academic goals. “It is likely that as athletic participation becomes a life focus, the growth and development of other areas of individual functioning of the student-athlete may be neglected or inhibited” (Miller and Wooten, 1995, p. 172).

In a review of Bowen and Levin's 2003 book entitled *Reclaiming the Game: College Sports and Educational Values*, David Kirk (2005) recounts the authors' study of admissions practices and academic performance of nearly three dozen U.S. institutions that do not offer athletic aid. Kirk summarizes the study by saying although recruited student athletes have some advantages over their non-athletic peers, recruited student-athletes tend to come to college with lower SAT scores and academically underperform compared to the non-athletes (p. 90). Additionally, Kirk goes on to restate Bowen and Levin's position that recruited student athletes tend to limit their academic pursuits to only a few majors, limit their socialization only to fellow student athletes, and limit their extra-curricular experiences to only athletics (p. 90). The authors' concern is that college athletics culture seems to produce academic mediocrity. Of course, with so many stressors in their daily lives, many could argue that the academic underperformance observed in so many college student-athletes could be a by-product of the intercollegiate student-athlete experience:

These stressors include regimented schedules and time constraints; negative stereotyping by the media, faculty and students; time constraints; physical stress and fatigue; commitment to attend practice sessions and games; and performing a dual role as both athletes and students. (Rensburg, Surujlal, & Dhurup, 2011, p. 248)

Acknowledging this combination of potential stressors, the need to address various areas of wellness, including physical, emotional, intellectual, spiritual, social, and other environmental factors, is worthy of consideration. However, despite institutional efforts to support student athlete wellness, evidence suggests that as athletes participate more in their respective sports, their participation in academic and personal development declines (Rensburg, Surujlal, &

Dhurup, 2011). Similarly, a study by Adler and Adler (1985) asserts that the academic goals and even the personal behavior of many athletes become increasingly influenced by their involvement in athletics and that individual student-athletes begin to focus more on the persona of their respective teams and less on individual academic achievement. Parsons (2013) indicates that although there does exist some criticism over student-athletes missing classes due to athletic-related conflicts, student-athletes still largely exhibit behaviors of academic commitment. Further complicating the concern over a student's decision to immerse themselves within the arena of sport, a study conducted by Hagiwara et al. (2017) concluded that the relationships athletes develop among their teammates could be a significant factor in reducing mental health problems, particularly among female athletes. Their study is inconclusive as it relates to the impact of social support from teammates on male athletes and recommends further research on effective strategies to reduce mental health problems among male athletes.

Considering all the warning signs of both academic and social disengagement and mental health concerns among student-athletes, higher education professionals should consider other means of support for student engagement and integration. The remaining sections of this review of literature will focus on perspectives of spirituality as an important area of development among students.

Spirituality

It is a natural part of existence to face times of great difficulty and moments of emotional destitution. The great psychiatrist Viktor Frankl (2006) explored this very concept through his own life story and in his work in logotherapy in his 1946 book, *Man's Search for Meaning*. Frankl's theory of *logotherapy* can be summarized as a deep motivation in all human persons to find meaning in life. The inevitable ebb and flow of life is difficult for anyone to explain or

comprehend. As an innate characteristic of the human psyche, spirituality and its very subjective definition has provided researchers a seemingly mythical yet undeniable sense of intrigue.

It is challenging to succinctly define the term spirituality when considering the many different cultures, religions, and deeply subjective philosophies that exist. Sandra M. Estanek (2006) examined the definitions of spirituality in higher education literature. She utilized qualitative research methods to conduct a thorough review of literature on the topic of spirituality in higher education. Her research was driven by the question, “What do we mean when we say spirituality and why is it important?” and focused on understanding the meanings and interpretation behind the various definitions of the term. She argues that understanding spirituality is an important component to the work of student affairs professionals as it relates to holistic student development. Estanek argues that it may be useful to maintain a working definition of spirituality without any specific reference to God or religion, per se, to be compliant with the nation’s church and state separation. Her findings suggest that the terms *spirituality* and *spiritual development* are interchangeable and that the two terms can be used to define the process by which students develop a sense of meaning and purpose. This definition is consistent with Astin et al.’s (2011) definition: “...our sense of who we are and where we come from, our beliefs about why we are here—the meaning and purpose that we see in our work and our life—and our sense of connectedness to one another and to the world around us” (p.4). The research team goes on to add that “spirituality is a multidimensional construct and that no single measure can adequately capture all that we mean when we use the term...” (pp.13-14) Following suit, Parks (2000) provides even greater context to the term spirituality:

In a society and an academy grown weary and restless with hardening definitions of who and what counts in determining what matters—what we will invest our

lives in and how we will name that investment—there is a desire to break through into a more spacious and nourishing conception of the common life we all share.

(p.16)

These three experts provide a conceptual framework of the terms *spirituality* and *spiritual development* that refers to the subjective methods of each individual's search for understanding and meaning. The term *spirituality* can still be confused with *religiousness* or *religiosity*; it is then necessary to compare the two in order to draw clearer distinction between them.

Spirituality and Religiosity

Although many researchers have attempted to derive a single definition of spirituality, the term is often confused with behaviors relating to religious practices, or *religiosity*. The two terms do seem to offer a common understanding that one's meaning-making strategies can be attributed to one's individual faith or faith practice. Similar as they may appear, synonymous they are not. Although many students are self-described spiritual beings, many decrease their overall commitment to their pre-college religious practices (Astin et al., 2011; Kuh & Gonyea, 2006; Mayrl & Oeur, 2009; Mooney, 2010), suggesting that the two terms can be, and often are, exclusive from each other:

[...] while many students no doubt express their spirituality in terms of some form of organized religion, the fact that others do not requires that we view religiousness and spirituality as separate qualities, and that we attempt to develop separate measures of each. (Astin et al., 2011, p.14)

In an effort to distinguish the two terms, Astin et al. (2011) developed measurements of both spirituality and religiosity. With regard to spirituality, the research team coded data into five categories, including Spiritual Quest (a search for meaning and purpose), Equanimity (a

sense of spiritual balance or calm amidst challenge), Ethic of Caring (caring about others), Charitable Involvement (the act of providing care for others), and Ecumenical Worldview (a sense of interconnectedness with others.) Religiousness, or religiosity, was also coded into its own five categories, including Religious Commitment (religion's degree of importance), Religious Engagement (behavior or practice of Religious Commitment), Religious/Social Conservatism (the degree of religion-based values in a social context), Religious Skepticism (degree of doubt one has in religion and its ability to explain natural phenomena), and Religious Struggle (degree of instability one has with their religious beliefs). To summarize the distinction, *spirituality* is perceived as a more subjective method of connecting personal meaning to one's life experiences (Astin, 2004; Astin et al. 2011), whereas *religiosity* continues to be perceived more as a prescribed set of practices and beliefs shared in a structured community (Astin et al., 2011). Simply put, spirituality is a seeking of answers to life's bigger questions, such as: *Why are we here? What does this particular life experience mean for me? Where am I going? What is the purpose of my life?* (Astin et al., 2007; Parks, 2000), whereas "religion connotes a common belief system, a set of principles and practices, a code of conduct, and doctrine or dogma" (Bryant, 2007, p. 835).

While differentiating the two terms, it is acceptable to consider both spirituality and religiosity as socio-cultural phenomena based on a set of cultural experiences. In understanding the processes of developing faith and spirituality, Fowler (1981) posits that spirituality and faith are socially constructed through the use of conscious and unconscious meaning-making of expressions like music, art, poetry, imagery, and symbolism. Later in this chapter, the researcher will consider the subjective construction of personal spirituality within a shared religious culture through the lens of Parks (2000) and Fowler's (1981) faith development theories.

The following section investigates multiple interpretations of the separation of church and state with respect to education. First, the approach of complete separation of religion from education will be explored, followed by research supporting a position of religious inclusion in order to provide contrast to the debate.

Religion and Education: Church and State Separation

The role of religion in public education has always been a major topic of debate in our nation. However, in this post-modern, pluralistic, and globalized era, the topic seems to draw more attention each day. The separation of church and state continues to provide the basis of many arguments in political and social debates. The foundational concept behind the separation suggests that religion is to have no influence in our public education system in order to allow for a more liberal and global learning environment – free from the pressures of religious conformity. The nation’s founders believed that the protection afforded by the separation of church and state was an inherent right of the people encompassed by the First Amendment – written out of fear of a political threat from dissenting Protestant groups in colonial America (Gutierrez, 2005). In Thomas Jefferson’s letter to the Danbury Baptist Association in 1802, he wrote:

I contemplate with sovereign reverence that act of the whole American people which declared that their legislature should make no law respecting an establishment of religion, or prohibit the free exercise thereof, thus building a wall of separation between church and state. (Singer, 2000, p. 463)

This very powerful statement went virtually unnoticed until the 1960s, when the U.S. experienced rapid growth in its social, cultural, and inevitably, legal climates (Curry, 2009; Gutierrez, 2005; Judge, 2002; Singer, 2000). However, few can convincingly argue that the founding fathers were not deistic when manufacturing their new nation. Clear evidence of their

belief in a “creator” continues to be present to Americans today and is seen in constitutional documents, American currency, architectural structures, and even the nation’s *Pledge of Allegiance*. The lines or “wall” separating religion from government are sometimes misunderstood or misinterpreted.

Since its very inception, America evolved from the idea of liberty. The nation’s early leaders envisioned a new society in which oppression and dictatorial rule would no longer be the standard. Upon the chartering of this new nation, it was established that government would neither support nor hamper any exercise of religious expression, including religious establishment. Religious liberty was undoubtedly one of the major factors for establishing independence from England, as it was important enough to be in the first two clauses (also known as the “religion clauses”) in the very first amendment proposed in the Bill of Rights. Religious liberty has special significance in the education arena. The Bill of Rights was established to protect the people from their government. The youth represent the future of our nation’s people and, therefore, must be granted protection from political manipulation and propaganda.

A major part of the separation of church and state involves state-allocated, tax-payer dollars and how those dollars are invested into the educational system. Despite the apparent unconstitutionality of providing financial assistance to religiously affiliated schools, the U.S. Congress established and supported the Child Benefit test, also known as the “Lemon Test,” to determine what is or is not constitutional in dealing with cases of religious inequity in public schools (Russo & Mawdsley, 2001). In order for the court to become involved in a case, the claim must satisfy three elements: first, the claim must convince the court that there is a clear and distinct legislative purpose; secondly, the claim must provide a primary effect that neither

advances nor inhibits religion, as supported by the Bill of Rights; and third, the claim must ensure that there will be no long-term involvement, or “entanglement,” with the government (Lowery, 2005; Russo & Mawdsley, 2001). However, the court has supported the aid of individual students attending sectarian schools through such means as transportation, textbooks, and other instructional materials (including computers), as these services support the educational welfare of the students and do not directly support the schools themselves (Judge, 2002; Russo & Mawdsley, 2001). Although this decision can be interpreted as violating the First Amendment, it does provide an option for families who wish to receive a religious education. However, the fact remains that public schools are agencies of the state and therefore should neither favor religion nor prohibit it.

Furthermore, with respect to the financing of America’s public education, the First Amendment is in place to also protect educational institutions from litigation related to religious expression. For example, where public education is concerned, states who fund, even partially, sectarian schools are considered to be misappropriating tax-payer funds. In fact, the argument could be made that any state support for sectarian schools could be deemed unconstitutional (Curry, 2010). Since tax dollars go to fund institutions of public education, there should be no funding of any kind to aid religiously affiliated institutions. All public education is seen as an institution of the state; therefore, the state shall insist that all students, being recipients of a tax-funded education, shall not be subjected to any pretenses of coercion regarding religion and religious exercise. Supporters of the “religious right” have been observed as working with their local and state representatives in order to gain religious favor in schools as a means to cultivate communities to conform to their own religious beliefs (Nelson, Palonsky & McCarthy, 2010) even to the point of “stealth evangelism” (Boston, 2010).

The Americans United for Separation of Church and State, more commonly known as AU, is an independent non-profit educational organization dedicated to working with federal and state legislators to defend religious liberty in the U.S. (www.au.org). Their stance on religious freedom is well articulated on their website:

The right to practice a chosen faith – or refrain from practicing any – is cherished by the American people. The separation of church and state protects this right by freeing religion from obtrusive government interference. Government must show a compelling interest before restricting religious exercise. (www.au.org/issues/freedom-of-religion).

AU continues to monitor state legislatures that intend to introduce religion and religious philosophies into public schools. A more recent issue for AU comes from Oklahoma, where outspoken Republican state representative Sally Kern introduced House Bill 1551, the “Scientific Education and Academic Freedom Act.” If passed, the bill would permit educators to offer a creationist viewpoint when educating students in science (Bathija, 2011). Kern’s rationale for the proposal was to promote open dialogue regarding the differing perspectives in the subject of science education (Bathija, 2011). The bill was initially rejected but revised and accepted one year later (National Center for Science Education, 2012).

Given the polarity of the subject, perhaps a serious word of caution can be taken from Carper and Hunt: “State establishment of religion, no matter how benign, inevitably breeds dissent, which in turn, often leads to persecution of those who depart from the prevailing orthodoxy” (Carper & Hunt, 2011, p. 83). To provide further context to the topic of the separation of church and state, the following section will consider the incorporation of religion in our nation’s history and in our educational systems.

“In God We Trust.” “One Nation Under God.” “God Bless America.” In our nation’s short history, there has never been any ambiguity regarding the belief of “Divine Providence.” The nation’s first leaders most certainly held a reverence for the mystical. Fleeing the tyranny of England for many reasons, early Americans also cited religious freedom as a major cause for their separation from the British crown. The signers of the Declaration of Independence both open and close the document with a profound acknowledgement of a deity (Sewall et al., 2000). It is unclear to what degree faith may have influenced the nation’s founders; however, as the interpretation of their intentions may be disputed, the sociological significance of religion may still be worthy of consideration.

For some, religion is credited for shaping communities, often providing the impetus for charitable works and providing innumerable individuals with introspection and even vocation (Astin et al., 2011). Religious ignorance could promote such societal problems as “intolerance, bigotry, violence and even legislation that has the effect of preferring particular religions” (Rosenblith, 2008, p. 509). The role of religion in education would then be to ensure that religion, or education about religion, is a prominent component in the public education curriculum in a way that would complement other important public conversations (Rosenblith, 2008). However, under the current construct, educators are challenged to rethink their curriculum as it relates to civic education and the role in which religion supports the further development of communities (Gutierrez, 2005; Sewall et al., 2000).

With so much confusion and frustration about how best to educate students, perhaps the religious and the academic sectors could consider the importance of each other and realize a state of interdependence. In response to an article supporting a separationist approach to religion in education, famed religious-education expert Warren Nord (2000) argues that both theologians

and scientists are now part of a larger conversation regarding science and nature and both *truths* can learn from each other. School systems who would choose to embrace both sides of “truth” could find some means of commonality from which to educate future citizens. McJunkin (2003) has suggested that public schools “adopt an attitude of flexibility that shows our children how to live with religious differences” (p.27). As a testament to Nord’s and McJunkin’s challenge to educators, Feinberg (2010) describes his observations of a school setting in which religion is meticulously and cautiously incorporated to teach students multiculturalism, awareness of global perspectives, and the value of pluralism; he finds that the dialogue among students is rich and embracing of differences. Abo-Zena (2012) asserts that open and respectful inquiry in the classroom is what is most important in order to establish critical multicultural scholarship. Take, for instance, the six-step “common ground” program suggested by Charles C. Haynes (2012). He provides an outline for local educators to work together by using the constitutional “safe harbor” approach to create an educational environment that supports religious liberty. “Safe harbor” refers to a provision in the Religious Land Use and Institutionalized Persons Act (2000, 2015) that allows state and local governments to lift the burden of religious exercise in institutions where individual liberties may be otherwise threatened.

While many Americans are wrestling with the role of religion in society, let alone in education, the very term *religion* can be mysterious. Jacobsen and Jacobsen (2008) posit that “Public religion is like a social compass, supplying a sense of location and direction in life and pointing the way forward to a better world” (p. 47). This definition of public religion does not specifically address the unrest that many citizens struggle with in a very personal way. However, many contemporaries will acknowledge that although many citizens may struggle with

religion, they are, in fact, fully embracing and seeking the *spiritual* (Astin et al., 2011; Gilley, 2005; Gutierrez, 2005; Jacobsen & Jacobsen, 2008).

If education is to maintain a holistic approach to human development, multiculturalism, global awareness, and the advancement of society, there must be a clear and distinct role for religion. Feinberg (2010) highlights the paradigm shift of parents choosing to send their children to religiously affiliated institutions because of public schools' failure to acknowledge the critical role that religion plays in their lives. In addition, horrific tragedies like 1999s massacre in Columbine, Colorado, have presented educators with a dilemma in how students view morality and how education can address societal issues (Rosenblith, 2008). Church-state attorney Melissa Rogers (2010) proposes that in order for religion to be more equitably and ethically taught in our public schools, we must 1) prioritize teacher training and education on the First Amendment; 2) make more room for permissible student religious expression in academic settings; and 3) expand the coalition for teaching about religion in public schools. She argues that:

[...] when religion is overlooked in the study of history, literature, and art, for example, it not only disserves students by distorting their understanding of these subjects, it also raises questions about a school's motives. Educating students about the debate of moral issues while acting as if religious perspectives play no role has a similar effect. (p. 40)

Perhaps the consideration given here is for the American educational system, K-12 and higher education alike, to take a serious look at religion in the curriculum and to provide a more strategic design to our educational system, placing emphasis on the argument of learning about religion as opposed to what may be confused as learning from religion (Teece, 2010) – certainly, the “learning from” will be a natural by-product of the “learning about.”

“We cannot have peaceful pluralism when so many lack understanding of and respect for fundamental religious liberty guarantees.” (Rogers, 2011, p. 42)

Religion, Spirituality, and the Academy

By the end of the nineteenth century, the role of the American university as an extension and enactment of the religious and spiritual values of the community had changed to the view of the academy as a research institution dedicated to the exploration of knowledge as a means of investigating and mastering science and technology – often at the expense of and in contrast to spiritual explorations and understandings of the natural world (Murphy, 2005, p. 23).

In an account of the 1947 President’s Commission on Higher Education, Ethan Schrum (2007) describes the report as an attempt to proselytize democracy as a religion in and of itself, minimizing the role of traditional religions in society and education. Arguments against including spirituality and religion in higher education include concerns about the detriment of liberal education (Carpenter, 2007), diminishing advancements in academic excellence (Mixon, Lyon, & Beaty, 2004), and fear of violating certain laws and statutes in conjunction with civil liberties (Lowery, 2005). However, spirituality continues to play a significant role in higher education. Key factors of the higher education experience like the student’s choice of institutional type, parental attachment, and curricular and co-curricular engagement are all worthwhile discussions regarding the impact that higher education has on spirituality and spiritual development. Perhaps it is inevitable that a major life experience, such as attending college, will provide a profound experience in meaning-making and personal existentialism.

The very nature of a modern-day university offers a broad and *universal* education introducing theoretical perspectives and philosophical debates on a myriad of subjects. Religious and faith-based student-groups remain free to organize and proselytize in a non-

threatening, non-coercive manner – allowing students the opportunity to express their values and opinions in an open environment. However, many believe that for institutions of higher learning, a religious mission or religiously based curriculum could hinder the institution’s ability to provide a world-class, elite education and may leave them as mediocre in comparison to national non-sectarian institutions (Mixon, Lyon, & Beaty, 2004).

With regard to institutions that promote a liberal education, the free exploration and acquisition of knowledge is essential. Therefore, a religiously affiliated liberal-arts institution, of any denomination, is considered an oxymoron and promulgates a slanted world-view (Carpenter, 2007). When considering spirituality/religiosity in academia, true academicians will assert that a student’s individual pursuit of a religious or spiritual truth is perfectly acceptable, so long as it is done outside of the classroom and is most appropriate when reflecting upon the subject of religion/spirituality (Carpenter, 2007). Additionally, academicians can choose whether or not to pursue a religious/spiritual truth, but only on their own time, and would certainly not share it in the classroom in order to avoid coercion or manipulation of their students (Astin et al., 2011).

The taboo of spirituality in higher education is not only a contemporary conflict. Following World War II, President Truman called for a Commission on Higher Education that supported a Deweyan approach to education, positing that “democracy was an end in itself, that it required no religious or metaphysical foundations” (Schrum, 2007, p. 280). The Commission sought to establish a standard pedagogy in state-related institutions that would focus on the development of students for democratic citizenry and would essentially eliminate religiously affiliated private institutions from receiving public funding (Schrum, 2007).

By the end of the nineteenth century, Harvard had transformed itself from a religious school to the most respected American institution of higher learning (Mixon, Lyon, & Beaty,

2004). In *The Innovative University*, Christenson and Eyring (2011) detail Harvard's innovation in higher education. It may have been innovative decision making and transforming from sectarian to secular that led Harvard and other elite U.S. institutions to their international prestige. Perhaps, then, the Commission on Higher Education was a strategic initiative enacted by two visionaries, Truman and Dewey.

A recent study of college students found that an overwhelming majority identify themselves as "spiritual" beings (Astin et al., 2011). In a recent review of that study, Astin (2016) concludes that 51 percent of the student respondents identified as *religious and spiritual*, another 23 percent identified as *neither religious or spiritual*, 20 percent claim to be *spiritual but not religious*, and only about 5 percent claim to be *religious but not spiritual* – an experience that lacks much insight from the research community. The quest for meaning, purpose, and existential spirituality, however, is prevalent among America's students (Astin et al., 2011; Gilley, 2005). Without discrediting Dewey's (1934) contributions in promoting a more democratic educational experience, Erikson's (1968) work on spirituality and identity must also be considered if we are to commit to a holistic view of education and human development. Erikson believed that, for some, religiosity/spirituality play a critical role in identity development (Gebelt & Leak, 2009; Gebelt et al., 2009; Kiesling & Sorell, 2009). Keeling (2004) asserts that "learning, development and identity formation can no longer be considered as separate from each other, but rather that they are interactive and shape each other as they evolve" (p. 10).

Marshall (2010) argues that faith-based institutions are vital partners in addressing global educational challenges identified in the Millennium Development Goals (United Nations, 2000), which included educational concerns as priorities. Marshall (2010) asserts that with regard to education, world religions, particularly Judaism, Christianity, and Islam, advocate for social

justice, operate very large educational systems that provide access to impoverished societies, incorporate culturally significant religious teachings into their curricula, develop religiously literate leaders, and provide innovation in teaching global citizens. Herein lies the argument that the role of religion in education should be responsibly explored rather than forcefully prohibited.

Mayrl and Oeur (2009) conducted a review of studies on the effects of religiosity in education. They strongly suggest that students who actively incorporate religion into their lives are more satisfied with their college experience. Certainly, since the work of the Commission on Higher Education, the public reaction to World War II, and the threat to democracy in the 1940s, Americans appear to be redefining the term *democracy* and the role of religion in education.

“The serious dialogue that world citizenship demands is impossible if the citizen enters discussion convinced of the truth – or even just the superiority – of his or her own perspective.” (Gummer, 2005, p.46)

Religious memberships have grown rapidly over the past century, and many college academicians have done an “about-face” as a result of the many global and cultural issues we are experiencing in the modern era (American Academy of Religion, 2009). This religious phenomenon has also resulted in a dramatic increase in the number of students enrolling in religious studies majors, as well as the growth of religious studies programs at state institutions (American Academy of Religion, 2009). At many of these institutions, faculty members are seeing an increase in the quest for cultural and religious understanding as a means to develop real-world solutions for world problems. They go on to attest that the problems of the world are not solved without academic study and public literacy of religion and religious phenomena. In their exploration of college students’ spiritual struggles, Rockenbach, Walker, and Luzader (2012) assert, “Although this contrast [spiritual struggle] was affected by external contexts and

experiences, it manifested in participants' lives as an internal wrestling – a struggle over who to be and how to live in the world” (p.62).

Margarita Mooney (2010) directly addresses correlations between religion and college students' grades and satisfaction at elite institutions. She concludes that religious participation has a direct correlation with GPA and that both religious participation and religious observance increase students' levels of college satisfaction. She references Astin, et al.'s (2011) longitudinal study; while her findings support his work, hers focuses on academically elite institutions. Astin et al. conclude that spirituality is of utmost importance to nearly 80 percent of students and that it directly contributes to academic learning and success, whereas Mooney's research examines the nation's most selective institutions to determine spiritual and religious significance in student success. Further, she finds that “in addition to religious students spending more hours studying, something about religious practice may improve the quality of time spent studying, such as concentration, self-esteem, or simply a sense of purpose” (p. 211). In a paper regarding spirituality's place in higher education, authors Salleh, Ahmad, and Kumar (2009) emphatically conclude:

[...] and the fact that human is primarily spiritual but only embodied in the physical for locomotion, we strongly argue that a curriculum based upon the epistemological mould restricted to observed knowledge only and devoid of spirituality is unlikely to produce graduates that meet the needs of being human. It is only through recognizing that human is not machine and that consciousness is a significant element of the universe that the idea of the real purpose of education and the role of a university can become apparent. (p.68)

Spirituality and Institutional Environment

In a university setting, students who are healthy and have a meaning and purpose in life may become stronger academically. As the university community cultivates an environment in which students may discuss meaning and purpose in life, the students may emerge successfully from college with a sense of purpose to support their individual goals, whether focused on career, family, or further education. In addition to individual goals, students can aspire to a higher meaning in life that includes a connectedness to others and giving back to society on a larger scale, (Reymann, Fialkowski, & Stewart-Sicking, 2015, p. 111).

The accessibility of spirituality-enhancing opportunities and a student's desire to pursue spirituality and meaning-making may be pre-determined based on such factors as a student's choice of institutional type. In choosing a secular institution versus a religiously sponsored institution, a student may be afforded different levels of exposure and opportunities for development in spirituality. This section examines the literature linking spirituality and institutional environment.

In one example, Ackerson (2009) investigates the relationship between the Catholic collegiate culture and student spiritual development. The theoretical framework behind her study incorporated Chickering's (1993) theory of student development, Fowler (1981) and Parks' (2000) theories of spiritual development, as well as the Catholic culture framework developed by Morey and Piderit (2006). She utilized survey data from the National Survey of Student Engagement (NSSE) and its Consortium of Catholic colleges and universities. One of the most significant findings from the study confirms a direct relationship between students' spiritual development and their perceptions about how their respective institutions support student

spiritual development – suggesting that Catholic colleges and universities should work to ensure that spiritual development is applied equally and consistently throughout all parts of the institution. Of course, spirituality and the development thereof would be a part of the cultural discourse at an institution of religious sponsoring. Then, what of the secular institutions?

A student's chosen institution and its innate culture could affect a student's spiritual quest. A comparative study of freshman college student beliefs and values between private and public institutions was the focus of Combs' 2009 study. After surveying 579 students from two Kentucky institutions, he found that regardless of institutional type, students are highly concerned about spirituality and the development of their "interior life." Specifically, five of the 12 constructs in this research demonstrated major statistical significance, including indicators of students' spirituality, spirituality, ecumenical worldview, social/political views, and physical well-being. Kuh and Gonyea's (2006) study supports these findings, as their work suggests that institutional type and selectivity have "only trivial effects" on students' spiritual quest, which again supports the claims by Astin et al. (2011) regarding the three-quarters of surveyed students seeking a spiritual experience while in college.

The selection of institutional type is not the only factor when considering spiritual development as a component of a student's education. As students transition into the college environment, it is conceivable that they may find difficulty in continuing their personal spirituality and faith journeys while away from their families. Madigan (2009) conducted a correlational study on parental attachment and the spiritual development of college students. After surveying over 6,000 traditional-age undergraduate students from two regional campuses of a northeastern U.S. university, a positive correlation between parental attachment and spiritual development was found. Her data-collection methods included the use of the Parental

Attachment Questionnaire (PAQ) and the Spiritual Experience Index-Revised (SEI-R). Later in this chapter we will again see the role that the family plays in the choice to attend college.

To further support the link between spirituality and physical well-being as introduced earlier (Combs, 2009), Nelms (2005) studied undergraduate students at the University of Tennessee and reported a correlation between a student's health and his/her level of spirituality. This study utilized the College Student Appraisal of Risks Survey, or CARS, and the Spirituality Scale (SS). The study emphasizes the important relationship between college students' spirituality and overall physical health. Physical health in college can be attributed to many factors, including students' decisions on whether or not to engage in unhealthy or risky behaviors and activities. Continuing to examine how spirituality may impact student behavior and risk, Kuh and Gonyea (2006) conducted a study of 149,801 first-year and senior students from 461 institutions who participated in the National Survey of Student Engagement (NSSE). One of their key findings was that students who frequently engage in spirituality-enhancing activities are more likely to be involved with co-curricular activities and spend less time in less productive activities, such as partying. These two quantitative studies suggest a very strong correlation between spiritual development and risk-averse behaviors. From the perspective of college counselors, Kress et al. (2015) encourage counselors to acknowledge the significance that spirituality/religiosity play in prevention and intervention for individuals at risk for self-injury.

When discussing the college experience and the college environment's effects on students, it may be worth considering the social habits and behaviors of students. It is important to consider a more holistic education model, one that is not exclusively academic or intellectual. In a review of spirituality in contemporary higher education, Waggoner (2016) argues that "it remains for college and university leadership to choose to develop coherent institutional plans to

advance campus climates wherein the spiritual development of students may be cultivated” (p. 155). Understanding that the developmental aspects of spirituality/religiosity also involves difficult periods of struggle, Bryant (2011) encourages institutions to adequately prepare for such encounters: “Clearly students’ discomfort and struggle is developmentally significant, but safeguards must be in place on campuses to ensure that students have adequate resources for managing the difficult questions and emotions that may emerge when they encounter differences” (p. 457). Craft (2014) challenges student affairs practitioners, in particular, by recommending that campus residence facilities are ideal environments to assist students in their open exploration and discussions regarding matters of religion and spirituality understanding the very real interest that exists on this topics as expressed by students. “Simply stated, we can seek to encourage ecumenicism among college students by creating spaces conducive to development; however, it is the student’s prerogative to make the most of our provisions,” (Bryant, 2011, p. 477).

Spirituality in the College Classroom

With three-fourths of today’s college students expressing a desire – even a need – for a deeper more meaningful existence, a life with purpose and meaning, it may be time to reconsider the role we have assumed as modern teachers, to move from the purely intellectual, rational, and logical and consider the value of embracing the mysterious. (Gilley, 2005, p.94)

According to Carpenter (2007), religion and the incorporation of religious teachings in higher education poses a very real threat to the overall quality of an institution’s educational breadth. However, based on the very convincing evidence provided by HERI (Astin et al. 2011),

spirituality and spiritual development, not religion, is almost inevitable when considering the effects of teaching and learning in today's higher education classroom.

Several studies have found importance in the relationship that spirituality has for learning. For example, in support of incorporating spirituality in academia and civic education, Gutierrez (2005) asserts, "Civic education should be based on a definite set of values not from those in power deciding what they should be, not from religious theology, but from a non-ending study of what has led societies to survive and advance" (p.72). In a review of higher education and interreligious dialogue, Subbiondo (2012) suggests that "a) interreligious dialogue requires religious pluralism; b) religious pluralism requires religious literacy; and c) religious literacy requires higher education," (p. 5). Illustrating this point, Root (2007) studied nine students enrolled in a class on group development in the social work profession. Her research focused on the impact of pedagogical strategies designed to increase culturally responsive education incorporating a spiritual worldview. Her findings include the observation that students would go beyond their Christian religious beliefs to accept other forms of spirituality and to discover an interconnection between spirituality and culture. In a related study, Green and Noble (2010) studied a group of 14 students enrolled in a course entitled "The Farther Reaches" that challenged students to develop a deeper understanding of consciousness. Using the Beliefs about Consciousness and Reality Questionnaire (BACARQ) as the pre- and post-test data collection tool, the researchers sought to understand students' beliefs about consciousness, reality, and the commitment to scientific materialism versus the non-physical transcendent. Their findings suggest that students, although unchanged in their beliefs about religion, developed a broader awareness of self and spiritual dimensions. Fisler et al. (2009) conducted a study on how college seniors experienced and resolved spiritual struggles in college. The theoretical framework

behind the study was a blend of student development theory and the multiple theories on spiritual development and stages of faith. They invited college seniors to participate in a series of interviews if they had experienced spiritual struggle while in college. Their findings concluded that academic activities did, in fact, provide students the opportunity to evaluate and grow spiritually. Jacobsen and Jacobsen (2008) also offer insight into discussions about spirituality and religion in the context of liberal education: “[T]he inclusion of religion – historic, personal, and public – has the potential to deepen and enrich the learning that takes place on college and university campuses” (p. 49). Tolliver and Tisdell (2006) extend this thought to the possibility of incorporating spirituality into active learning environments, suggesting: “Engaging learning in multiple dimensions, including the rational, affective, somatic, spiritual, and sociocultural, will increase the chances that new knowledge is actually constructed and embodied, thus having the potential to be transformative” (p. 39). Further supporting faculty in their incorporation of spirituality into student dialogue, Subbiondo (2011) recommends encouraging self-reflection related to their education, integrating meditation into coursework focused on how their learning supports or conflicts with their core values.

Talking about faith entails what truly matters to people, what they do about those matters, and the difference these beliefs and actions make in the world. Such conversations are about big questions – and about the disciplinary ethos of critical thinking we all presume to encourage through our classroom aims, goals, and practices. (Medine, Penner, & Lehman, 2015, p. 379).

It is possible that, for spirituality and spiritual development to be inculcated into the learning environment, it must span beyond the classroom environment.

Spirituality as Institutional Culture

As researchers continue to explore students' sense of meaning-making and purpose, or spirituality, and how it can be enhanced by their academic environments, it is also important to explore how spirituality may already be integrated in institutional culture. Additionally, it may also be worth considering the importance of spiritual development for faculty and staff and how they incorporate their own spirituality into their professional lives. Several studies of higher education professionals, both teaching faculty and student affairs staff, address these questions.

Riley (2010) interviewed 18 new faculty members at a public research university to understand the role of spirituality as a factor of holistic adult development during their professional transitional years. Her research questions focused on the importance of spirituality during personal and professional adjustment, experiences that either inhibited or promoted spiritual development, and ways in which the institution may support holistic development. The findings suggest that spirituality is very important for faculty development through references to God, meaning, and purpose; through connection and community; and through the development of self-identity.

Kiessling (2010) studied student affairs professionals and their self-reported spirituality and professional practices in regard to the integration of spirituality, as well as predictors of holistic spiritually-infused practices in student affairs. The survey tool used was developed from scales from the Higher Education Research Institute (HERI) and utilized the theories of Fowler (1981), Parks (2000), and Tisdell (2003). Findings from the study indicate a discrepancy between the practices of student affairs professionals and the common definition and goals of holistic student development. In similar work, Moran and Curtis (2004) conducted a phenomenological study of 24 student affairs professionals to gain a better understanding of how

they incorporate their own sense of religiosity/spirituality into their work. Through heuristic coding of the interview transcripts, Moran and Curtis' findings included the notion that student affairs administrators are indeed impacted by their own sense of religiosity/spirituality and that this also affects how they develop relationships and display personal values. However, Moran and Curtis also report that the respondents do not always feel encouraged to incorporate their religious/spiritual selves for fear of controversy and political correctness. This qualitative study supports the quantitative data collected by the HERI Spirituality in Higher Education research team (Astin et al., 2011), indicating that higher education professionals tend to be spiritual in their private lives but spiritually oppressed in their professional lives.

Acknowledging the taboo-like effect in dealing with such subjective and personal topics as one's spirituality, one may consider the church and state laws in the Constitution and its Bill of Rights. However, as we have differentiated the terms of religion and spirituality, can spirituality still be considered an appropriate platform from which to lead and teach from?

In contrast to Riley (2010) and Astin et al. (2011) in their observations of spirituality among faculty, Gilley (2005) criticizes faculty for their myopic approach to education and lack of understanding of certain human realities: "It is also sometimes found among professionals who are so knowledgeable in their specific field that they have failed to develop an appreciation and understanding for ideas outside of their world that go beyond the commonplace" (p.97).

Understanding the confusion, and controversy, surrounding the debate of whether or not it is safe for the institution to incorporate spirituality into pedagogical practices, perhaps it would be more "academic" to consider the various developmental theories that exist to help weigh in on the discussion.

Spirituality and Cultural Identity

In today's post-modern, multicultural, globalist society, both desensitized by popular culture yet hyper-sensitized to individuality and individual rights, the topic of spirituality in the context of cultural identity is appropriate. This section will explore several studies on spirituality and its relationship to cultural identity.

Tisdell (2006) explains that students' sense of spirituality can be engaged through culturally responsive education. That is to say, educators ought to seek ways to incorporate the cultural identities of their students (particularly of minority and traditionally oppressed groups) into their experiences, whether curricular or co-curricular. As Fowler (1981) has suggested, much of spirituality is constructed subconsciously through music, art, and the use of symbolism. Tisdell (2006) also suggests that culture and cultural identity is an effective method of engaging the spiritual self. Chae, Kelly, Brown, and Bolden (2004) conducted a survey of nearly 200 students of various ethnic descents (African-American, Asian-American, Caucasian-American, and Latin-American) to discern what correlation, if any, exists between ethnic identity and spirituality. The findings suggest that ethnic identity and spirituality are directly correlated. Nance (2006) studied five African-American Christian students and explored their first-year experience as shaped by their spirituality and religious views. Nance's interviews of the students and analysis of their journal submissions indicated a strong correlation between persistence in college and the students' spirituality/religiosity. Dancy (2010) sought to explore the intersection of spirituality and identity among African-American male college students. Conducting interviews with 24 students, Dancy collected and analyzed data using grounded theory, phenomenology, and case study approaches. Findings affirmed that African-American male college students do rely upon their spirituality for persistence through college – and as a

foundation of their identity; they also weigh other possible identities against their spiritual identity.

If higher education hopes to enhance the active citizenship of its students, it is going to have to take a serious look at the very real impact that spirituality provides for cultural identity. Gummer (2005) argues that “the serious dialogue that world citizenship demands is impossible if the citizen enters discussion convinced of the truth – or even just the superiority – of his or her own perspective” (p. 46).

Spirituality and the Student-Athlete Experience

Student-athletes are performers. They commit countless hours to displaying physical feats while simultaneously developing intellectually. What is the force behind their ability to take on more than the average non-athletic student? Gaillardetz (2005), a professor of Catholic studies at the University of Toledo in Ohio, captures the spiritual quality of competitive sports: “They’re a human laboratory displaying for us the mystery of who we are as humans, possessors of resources and capabilities that cannot be measured by calipers, stop watches, scales, or scorecards” (p. 32)

In that same year, Murray, Joyner, Burke, Wilson, and Zwald (2005) studied collegiate softball teams in an effort to determine the differences in the levels of team cohesion and spirituality between the teams. After administering the Group Environment Questionnaire and the Spirituality in Sports Test to nearly 100 participants, they found that prayer and the incorporation of spirituality was believed to aid team cohesion.

According to a study by Dillon and Tait (2000), college athletes who are described as being “in the zone” are more likely to display such attributes as positive mental attitude, positive pre-competitive and competitive affect, maintaining appropriate focus, physical readiness,

enjoyment, satisfaction, better performance, hypnotic susceptibility, prior experience, readiness, skill level, perceived ability, intrinsic motivation, and mastery-oriented focus. Their study of over 60 collegiate student-athletes sought to compare levels of spirituality to levels of being “in the zone.” They administered the Spirituality in Sports Test and the Zone Test. A significant correlation between the student-athletes’ levels of spirituality and experiences of being “in the zone” was found. An additional finding was that high scores in the Zone Test also correlated with high scores in the Higher Athletic Coping Skills Inventory – 28. Dillon and Tait suggest that there may still be a correlation between the Higher Athletic Coping Skills Inventory – 28 and the Spirituality in Sports Test. Similarly, Ridnour and Hammermeister (2008) observed that student-athletes who displayed characteristics of spiritual well-being presented a “mentally tougher” profile when compared to peers who had a lesser display of these same characteristics. The student-athletes identified as “mentally tougher” were observed as having higher levels in confidence and achievement motivation, goal-setting/mental preparation, and freedom from worry. These findings suggest that student-athletes who are more developed in their spiritual identity may perform better academically than those student-athletes who have a less developed, or lack of, spiritual identity. Is it just student-athletes who experience this phenomenon, or is it part of the student-athlete culture?

Athletic coaches can serve in a role that is closely identified with student affairs/student development professionals. Hazelbaker (2008) conducted case study research interviewing five NCAA Division I basketball coaches from large secular state universities. In addition to extensive interviewing, the coaches were presented scenarios, or dilemmas, in which they were asked to provide solutions as a means to understand how their personal spirituality presented in high-pressure situations. Findings suggest that spirituality is indeed incorporated into their

leadership and that, in times of high stress and pressure, spiritual fullness and personal wholeness provides that leadership.

Other education leaders may include spirituality in their roles on campus. Ellison (2007) used Critical Race Theory (CRT) in his qualitative study of African-American male leaders in higher education. Data analysis included interviews and observations of the men in their work environments. The findings were consistent with other studies on the subject in that the participants connected their spirituality to their leadership practices.

Theoretical Frameworks and Research Models

In reviewing the literature on topics related to spirituality and college persistence in higher education, several key studies were identified as providing significant theoretical and research support for this inquiry. This section provides a brief overview of each theory and/or model in order to provide the reader a “bridge” by which to connect this particular study.

Self-Authorship

Baxter-Magolda’s extensive work on Self-Authorship provides a critical look at how learning outcomes are derived from complex life situations in addition to intellectual stimuli (2009). The three stages of Self-Authorship include “a shift from uncritical acceptance of external authority...to critical analysis of authority...in order to establish one’s own internal authority” (Hodge, Baxter-Magolda, & Haynes, 2009, p. 16).

This theory of developing one’s own authority and meaning making of both information and experiences aligns with Erikson’s (1968) psychosocial development theory, in which the subject begins to reject pre-cognitive elements received from external sources and begins to construct one’s own cognition and accept new knowledge from personal experiences.

Additionally, the work of Chickering and Reisser (1993) provides further context to the development of personal identity in college students through seven domains of interpersonal and intrapersonal competence. Baxter-Magolda (2009) stresses, however, that most students do not derive authoritative decision-making from their college experiences and that they still require external authority as they have not yet experienced the complexities associated with independent personal and professional lives until sometime after graduation. The researcher further highlights case studies of effective pedagogy in co-curriculum in which students gradually progress from the identification of values, exposure to diversity, and then towards a refining of values and working collaboratively with others, to finally reflecting on their role as global citizens and determining their life plans. Baxter-Magolda (2009) also posits that student affairs divisions utilize various models of self-authorship as a model of practice to achieve twenty-first-century learning outcomes like the development of mature relationships, expansion of worldview, and critical thinking skills applied to real-world problems.

This theory of self-authorship also aligns with a model of learning communities offered by Tinto (2000) in which three components of effective learning communities include “shared knowledge,” “shared knowing,” and “shared responsibility.” Although both Baxter-Magolda’s theory of self-authorship and Tinto’s model of effective learning communities are rooted in the framework of cognitive, intrapersonal, and interpersonal dimensions in academia, there is reason to suggest that both could be applied in a social construct for students outside of the classroom but still in the higher education setting. Is it then possible that a social environment, such as an athletics team or a faith-sharing group, may provide similar experiences in offering opportunities to clarify values, provide exposure to diverse cultures and beliefs, and to work collaboratively to learn and share new knowledge resulting in early development of self-authorship?

Transformative Learning

Similar to self-authorship is Mezirow's (1997) transformation theory of adult learning. Mezirow posits that transformative learning is accomplished through "frames of reference" through which emerging adults begin to assemble meaning and understanding of their life experiences (1997). He explains that "frames of reference" are comprised of both "habits of mind" and "a point of view":

Habits of mind are broad, abstract, orienting habitual ways of thinking, feeling, and acting influenced by assumptions that constitute a set of codes. These codes may be cultural, social, educational, economic, political, or psychological. Habits of mind become articulated in a specific point of view – the constellation of belief, value judgment, attitude, and feeling that shapes a particular interpretation.

(pp. 5-6)

Mezirow (1997) continues that one's point of view may change only through trial and error as we learn that our own assumptions are often incorrect and that habits of mind are much more rigid and inflexible: "Learning to think for oneself involves becoming critically reflective of assumptions and participating in discourse to validate beliefs, intentions, values and feelings" (1998, p. 197). This transformation of experiences to socially responsible autonomous thinking is in direct alignment with self-authorship, again supporting the notion that learning, whether social or academic, is in play when faced with new thoughts, beliefs, cultures, and experiences. "Self-authorship enables learners to evaluate information critically, form their own judgments, and collaborate with others to act wisely" (Hodge, Baxter Magolda, & Haynes, 2009, p. 19).

Stages of Faith Development and Meaning-Making

Meaning-making and purpose are key terms in a larger topic of research on emerging adults. James Fowler and Sharon Daloz Parks are just two of the leading voices on the topic of assisting college students in synthesizing information and experiences to come to a deeper understanding of life, how to make sense of their unique experiences, and how to cope and adjust to life's unexpected occurrences, ultimately leading to a more confident, adaptive, and purposeful life (Fowler, 1981; Parks, 2000).

James Fowler's (1981) seminal work, *Stages of Faith*, introduces the process by which humans develop a sense of existential meaning and purpose, particularly as it involves religion and matters of spirituality. According to Fowler (1981), the stages of faith development include Undifferentiated Faith (pre-stage), Intuitive-Projective Faith (first stage), Mythic-Literal Faith (second stage), Synthetic-Conventional Faith (third stage), Individuative-Reflective Faith (fourth stage), Conjunctive Faith (fifth stage), and Universalizing Faith (sixth stage). These six stages encompass the life span and describe a process by which one develops key insights and understandings based upon accumulating understandings of the interconnectedness of life experiences, societal interactions, and moral dilemmas (Fowler, 1981). There are multiple connections and derivatives between Fowler's (1981) work and the extensive research conducted by psychologists Piaget and Erikson. To briefly describe each stage, Fowler offers the following:

- *Undifferentiated Faith* serves as a pre-stage during infancy in which early indicators of such qualities as trust, courage, hope, and love compete against their opposing forces such as abandonment, inconsistencies, and deprivations. (p. 121)

- *Intuitive-Projective Faith* is developed in toddlerhood to early childhood, or, as Fowler suggests, ages two through six or seven. This stage is marked by exploration and basic-level inquiry with persistent questioning involving “what” and “why.” As children in this stage are rarely able to perceive deeper meaning and reasoning to the received information, their worlds largely depend upon feelings and less upon logic and reasoning (p. 123). Due to a lack of understanding, logic, and reasoning, children in the Intuitive-Projective stage tend to fantasize or imitate the examples, moods, actions, and stories of the adults they are most closely associated with. (p. 133)
- The *Mythic-Literal Faith* suggests that one begins to personally identify as a member of a larger faith community based upon the stories, beliefs, and observances experienced within the faith community. Individuals in this stage still largely identify with symbols and mythological explanations of faith and reasoning. Fowler suggests that this stage occurs in pre-adolescence, or about seven years of age until about 12 (p. 149).
- *Synthetic-Conventional Faith* is described as occurring during adolescence, between 13 and 21 years of age – although Fowler offers that many adults can find permanence in this stage. It is further described as the expansion of one’s perspectives and experiences beyond the family, as outside spheres of influence (e.g., peers, school, work, media, and perhaps religion) provide a more complex environment for the individual who still seeks conformity for the purposes of maintaining personal identity (p. 172).
- *Individuative-Reflective Faith* occurs in post-adolescence, or during young adulthood, but Fowler notes that many adults never reach this stage and that, for most, it occurs in the mid-thirties to mid-forties. Fowler suggests that this stage is developed as a dual role in both the self and the outside world to develop what is more commonly referred to as

“world view.” Individuative-Reflective Faith involves the demystification of faith and develops into a more sophisticated system of meanings, judgements, and behaviors still commonly predicated by governance and other sociological structures (p. 182).

- *Conjunctive Faith* expands into free-thinking and a realization of the interconnectedness in all things and an attempt to avoid labeling, cataloguing, or categorizing into previously developed mind-sets. It is described as more of a transition towards a *plus/and* perspective and further from an *either/or* perspective and thought to be rare before mid-life stages. Although Fowler is not fully convinced that Conjunctive Faith can be obtained by most individuals, he describes it as a natural evolutionary phase beyond the previous four stages (pp. 184-185).

The final stage can be succinctly described as “radicalized actualization,” or Universalizing Faith, the rarest stage to be realized by any persons – typically during later stages of life, if at all. These individuals are capable of seeing the human experience beyond social, political, economic, and ideological structures and are extremely empathic, selfless, and even sacrificial in terms of the lengths they will go to seek justice and inclusiveness (pp. 198-201).

Parks (2000) applies the broad theory of Fowler’s (1981) stages of faith and zeros in on emerging adulthood, focusing primarily on college students and the process by which they navigate the college experience through a more spiritual lens while coming to an understanding of who they are, where they are going, and why it matters. This reflects Fowler’s Individuative-Reflective stage. Parks (2000) challenges higher education professionals to embrace the spiritual development of students:

Understanding the potential significance of the reformation of meaning, purpose, and faith in the twenty-something years may deepen our appreciation of the

courage and costs of the journey towards a mature, adult faith, and encourage us to reexamine our assumptions about the formation of adulthood, our participation in the lives of emerging adults, and our own capacity to live meaningful adult lives. (p. 10)

The theories summarized above represent an attempt by the researcher to draw parallels among the related body of literature concerning areas of persistence – particularly with academic and social integration, as well as the student-athlete experience, and spirituality. Additionally, the theories inform the researcher’s topic by identifying a critical need in the area of higher education, particularly student development and academic success.

Summary

This chapter has reviewed much of the literature on the topics of spirituality in higher education, the NCAA student-athlete experience, and the phenomena of persistence. We explored the ongoing debate over spirituality/religiosity and its place in education, giving respectful consideration to various perspectives to the issues of both church and state positions. We have reviewed many anecdotal passages and scholarly research studies through the lens of several theoretical frameworks, including Baxter Magolda’s theory of self-authorship, Mezirow’s theory of transformative learning, and finally Fowler’s and Parks’ theories on stages of faith and meaning making. A common definition and understanding of the terms spirituality and religiosity was provided in an effort to move beyond the confusion of the two terms and to promote a clear and distinct application and differentiation of the two terms. Linkages were provided between spirituality, spiritual development, teaching and learning, student engagement, and persistence to provide a rich dialogue when discussing the college experience, particularly through the life of a NCAA Division-I student-athlete. Higher education is going to have to

change its approach in personal epistemology in areas like spirituality if it wants to have a greater effect in reaching students, particularly this special population of student-athletes.

The world's problems are not going to be solved by math and science and technology; they are human problems, problems of beliefs and values and feelings expressed, for example by racism or nationalism or religious fundamentalism. It would behoove higher education to begin to attend more to these aspects of students' development. (Astin in Schroeder, 2003, p. 14)

The next chapter will provide an in-depth review of the research methodologies to be used in this study.

CHAPTER 3

RESEARCH METHODOLOGY

The purpose of this study is to examine whether or not a correlation exists between spirituality and college persistence factors among student-athletes. The data necessary to determine the correlation will be acquired through the use of an electronic survey administered to full-time degree-seeking student-athletes attending four-year colleges and universities in the Northeast Conference (NEC), an athletic conference comprised of 10 small-to-medium sized public and private, and religious and secular, institutions competing at the Division-I level of the National Collegiate Athletics Association (NCAA). This chapter will review the research methods used to conduct the study, as well as the problem and specific research questions anchoring the study. Additionally, it will also present a description for how participants were selected, the data collection methods used, and the reliability and validity of the survey instruments.

Research Questions and Null Hypothesis

This study will focus on one overarching question: Is spirituality a factor in student-athlete persistence. Using the Spiritual Involvement and Beliefs Scale – Revised (SIBS-R) (Hatch et al., 2001) and the Academic and Social Integrations Scale (ASIS) (Pascarella & Terenzini, 1980) the researcher will consider this driving question by addressing the following research questions:

1. Is there a relationship between *spirituality* and *peer-group interactions* for student-athletes? The researcher's null hypothesis is that there is no direct correlation between *spirituality* and *peer-group interactions* for student-athletes for the population surveyed.

2. Is there a relationship between *spirituality* and *interactions with faculty* for student-athletes? The researcher's null-hypothesis is that there is no direct correlation between *spirituality* and *interactions with faculty* for student-athletes in the population surveyed.
3. Is there a relationship between *spirituality* and *faculty concern for student development and teaching* for student-athletes? The researcher's null-hypothesis is that there is no direct correlation between *spirituality* and *faculty concern for student development and teaching* for student-athletes in the population surveyed.
4. Is there a relationship between *spirituality* and *academic and intellectual development* for student-athletes? The researcher's null-hypothesis is that there is no direct correlation between *spirituality* and *academic and intellectual development* for student-athletes in the population surveyed.
5. Is there a relationship between *spirituality* and *institutional and goal commitments* for student-athletes? The researcher's null-hypothesis is that there is no direct correlation between *spirituality* and *institutional and goal commitments* for student-athletes in the population surveyed.

The overall null-hypothesis is that there is no relationship between spirituality and any of the five factors related to persistence for student-athletes, thereby being rejected as a possible indirect factor for college persistence.

Research Design

Several different approaches could be used to study spirituality and factors of persistence in higher education, including quantitative, qualitative, and mixed methods research. For this study, the researcher chose a quantitative method approach to acquire and analyze data related to the research questions. Quantitative research is "the collection and analysis of numerical data to

describe, explain, predict, or control phenomena of interest” (Gay, Mills, & Airasian, 2009, p. 7). Based on this definition, the research questions were designed in a way that promoted the use of an explanatory correlational study to describe the relationship between two or more variables or where changes in one variable are reflected in the other (Cresswell, 2008). In this case, the corresponding levels of spirituality and five scales related to college persistence factors of academic and social integration of college student-athletes represent the variables. Correlational research involves collecting data “to determine whether, and to what degree, a relation exists between two or more quantifiable variables” (Gay, Mills, & Airasian, 2009, p. 9). This data were collected through an electronic survey instrument from a sample population of student-athletes from the NEC.

Target Population and Participant Selection

The population for this study was varsity-level intercollegiate student-athletes. The sample population is comprised of student-athletes participating in varsity-level intercollegiate athletics in the Northeast Conference (NEC). The NEC represents approximately 4,000 student-athletes from 10 small-to-medium sized member-institutions, competing in 22 intercollegiate athletic programs, including baseball, men’s and women’s basketball, women’s bowling, men’s and women’s cross country, football, men’s and women’s golf, men’s and women’s indoor track and field, men’s and women’s lacrosse, men’s and women’s outdoor track and field, men’s and women’s soccer, softball, women’s swimming, men’s and women’s tennis, and women’s volleyball (www.northeastconference.org). It is estimated that each of the 10 member-institutions of the NEC enroll approximately 400 student-athletes. The criteria for selecting students to participate in this quantitative study were based on the following characteristics:

- full-time, degree-seeking undergraduate students;

- active members of their institution's NEC affiliated NCAA Division I athletics program

Due to the testing of human subjects and the subjectivity of the topic of spirituality, prior approval through each institution's Institutional Review Board (IRB) was required. The commissioner of the NEC was instrumental in communicating the purpose and value of the study to each institution's athletics director. Once approved by six of the ten institution's IRB offices, the researcher requested the assistance of each institution's athletics director, or her/his designee, to identify students who met the aforementioned criteria and to release the survey to the student-athletes via email. From each institution's qualified population with email addresses, the student-athletes received a request to participate in the study. In the email, each participant was presented with a description of the study and its intent and a request for participation along with an option to withdraw from the study at any time. Once student-athletes agreed to participate, they would then begin the researcher's modified electronic survey instrument as administered through a statistical software program. The completed surveys were used in the analysis (discussed in the fourth chapter of this dissertation) while the incomplete surveys were eliminated. There were a total of 233 completed survey responses collected.

Research Settings

In order to accurately measure the correlation of spirituality to college persistence factors of academic and social integration for student-athletes in the northeast, the research had to be conducted with multiple institutions of varying type (e.g., public vs. private, religious vs. secular). Therefore, the research was conducted among full-time enrolled, degree-seeking student-athletes attending four-year colleges and universities within the Northeast Conference (NEC). According to their website, for the 2016-2017 academic year the NEC was comprised of

10 institutions, competing in 22 sports, and enrolling approximately more than 4,000 students-athletes (www.northeastconference.org).

Instrumentation

The two instruments used for this study were selected based on their relevance to this study, their established validity and reliability, and for their general ease of administering and scoring.

The Spiritual Involvement and Beliefs Scale (SIBS) (Hatch, et al., 1998) is widely used in determining levels of spirituality among participants across religious traditions and faith practices (see Appendix C). Understanding that psychological factors are related to physical wellness, Hatch et al. (1998) proposed that spirituality also be a factor in medicine when physicians are seeking to better understand their patients. Hatch et al. developed a 26-item Likert-type scale that has proven to be inclusive of broader definitions of spirituality, simple to administer and score, and generalizable across faith traditions, thus avoiding religious and cultural biases (Hatch et al., 1998). Since its creation, the Spiritual Involvement and Beliefs Scale (SIBS) has been widely used and displayed consistent reliability and validity. In 2001, the team decided to revise the scale based on feedback on the wording of certain survey items and an exclusion of certain domains within spirituality. The team then tested a revised version of the scale resulting in a shorter 22-item Likert-type scale that has been used in many newer studies, each producing consistently reliable scores. Given the research team's extensive work on the revision, the new scale was titled Spiritual Involvement and Beliefs Scale – Revised, or SIBS-R. Both the SIBS and SIBS-R have since become two of the most widely used assessment tools on the topic of spirituality, having been used in at least 28 other studies.

The Academic and Social Integration Scales (ASIS) (Pascarella & Terenzini, 1980) was originally developed to test the predictive value of Tinto's (1975) model (see Appendix D). Tinto's model was developed to explain student attrition and focused on the factors of academic and social integration based on students' levels of commitment to both their institutions and their personal goals. Pascarella and Terenzini's work then looked at the predictive value of the model, focusing on freshman students, which returned a significant predictive value over previous models that were based solely on students' pre-college characteristics.

The researcher used an electronic survey comprised of the 22-item Likert-type Spiritual Involvement and Beliefs Scale – Revised (Hatch et al., 2001) and the 30-item Likert-type Academic and Social Integration Scales (Pascarella & Terenzini, 1980). Additionally, just four demographic questions were posed regarding participants' institution of enrollment, month and year of birth (for codifying purposes), year in school, and their primary sport of participation. Appendix E displays all questions that appeared on the combined research instrument distributed to the research participants.

Reliability and Validity of Instruments

The researcher first piloted the study at a nearby institution that was omitted from the final study. A pilot test of a questionnaire or interview survey “is a procedure in which a researcher makes changes in an instrument based on feedback from a small number of individuals who complete and evaluate the instrument” (Cresswell, 2008, p. 402). The results of the pilot study, which comprised of 40 completed survey responses, included Chronbach alpha reliability coefficients for the following scales:

- SIBS-R $\alpha = 0.886$
- ASIS – Combined Scales $\alpha = 0.883$

- ASIS – Peer-Group Interactions $\alpha = 0.689$
- ASIS – Interactions with Faculty $\alpha = 0.890$
- ASIS – Faculty Concern for Student $\alpha = 0.714$
- ASIS – Academic and Intellectual Development $\alpha = 0.802$
- ASIS – Institutional and Goal Commitment $\alpha = 0.651$

Despite two of the ASIS subscales returning lower reliability coefficients, it was determined that the instrumentation returned acceptable reliability to pursue the intended study. Given the fact that the two surveys were previously published works and property of other researchers, there would be no need to adjust the wording or sequencing of the survey items. Hatch et al.'s (1998) Spiritual Involvement and Beliefs Scale was developed to provide a more comprehensive and more widely applicable instrument across various religious traditions. The impetus behind the development was primarily for usage in health and medicine, as spirituality had been a growing topic in medical literature. A 26-item Likert-type scale was developed and distributed to 50 family practice patients and 33 family practice educators, producing a Cronbach alpha score of .92, test-retest reliability of .92, and a high correlation ($r = .80$) with another well-established measure of spirituality, the Spiritual Well-Being Scale (Bufford et al., 1991). Hatch et al. (2001) revised their scale for clarity of wording and to include elements of spirituality that had been omitted in the 1998 version. Their unpublished pilot test results from the revised 22-item instrument, Spiritual Involvement and Beliefs Scale – Revised (SIBS-R), has since been successfully used in 16 other studies after having produced Cronbach alpha results of .92, .84 and .83 (see Table 1 below) in other studies.

Table 1

Published Studies Using SIBS-R

Author(s)	Study	Cronbach alpha
Arevalo, S., Prado, G., Amaro, H.	Spirituality, sense of coherence, and coping responses in women receiving treatment for alcohol and drug addiction. <i>Evaluation and Program Planning</i> , 2007. 31(1): 113-123.	.83
Boscaglia, N., Clarke, D.M., Jobling, T.W., Quinn, M.A.	The contribution of spirituality and spiritual coping to anxiety and depression in women with a recent diagnosis of gynecological cancer. <i>International Journal of Gynecological Cancer</i> , 2005. 15(5): 755-761.	NA
Brown, A., Tonigan, J.S., Pavlik, V.N., et al.	Spirituality and confidence to resist substance use among celebrate recovery participants. <i>Journal of Religion and Health</i> , 2013. 52(1): 107-113.	NA
Cadell, S., Regehr, C., & Hemsworth, D.	Factors contributing to post-traumatic growth: A proposed structural equation model. <i>American Journal of Orthopsychiatry</i> , 2003. 73(3), 279-287.	NA
Conner, N.E.	Predictive factors of hospice use among blacks: Applying Andersen's behavioral model. <i>American Journal of Hospice and Palliative Medicine</i> , 2012. 29(5): 368-374.	NA
Finkel, R., Petry, J.J.	Spirituality and choice of health care provider. <i>Journal of Alternative and Comprehensive Medicine</i> , 2004. 10:939-945.	NA
Hyland, M.E., Garaghty, Joy OET, Turner, S.I.	Spirituality predicts outcomes independently of expectancy following flower essence self-treatment. <i>Journal of Psychosomatic Research</i> , 2006. 60(1):53-58	NA
Hyland, M.E., Whalley B., Geraghty, Joy OET.	Dispositional predictors of placebo responding: A motivational interpretation of flower essence and gratitude therapy. <i>Journal of Psychosomatic Research</i> , 2007. 62(3):331-340.	.92
Joshanloo, M.	Investigation of the contribution of spirituality and religiousness to hedonic and eudaimonic well-being in Iranian young adults. <i>Journal of Happiness</i>	.84

	<i>Studies</i> , 2010. DOI: 10.1007/s10902-010-9236-4	
Kashdan, T.B., Nezlek, J.B.	Whether, when, and how is spirituality related to well-being? Moving beyond single occasion questionnaires to understanding daily process. <i>Personality and Social Psychology Bulletin</i> , 2012. 38(11): 1523-1535.	NA
Langman, L., Chung, M.C.	The relationship between forgiveness, spirituality, traumatic guilt, and post-traumatic stress disorder (PTSD) among people with addiction. <i>Psychiatric Quarterly</i> , 2013. 84(1): 11-26.	NA
Litwinczuk, K.M., Groh, C.J.	The relationship between spirituality, purpose in life, and well-being in HIV-positive persons. <i>Journal of the Association of Nurses in AIDS Care</i> . 18 (3): 13-22, May-June, 2007.	.83
Luquis, R.R., Brelsford, G.M., Rojas-Guyler, L.	Religiosity, spirituality, sexual attitudes, and sexual behaviors among college students. <i>Journal of Religion and Health</i> , 2012. 51(3): 601-614.	NA
McDamniel, B.L., Grice, J.W., Eason, E.A.	Seeking a multi-construct model of morality. <i>Journal of Moral Education</i> , 2010. 39(1):37-48	NA
Roscoe, L.A., Corsentino, E., Watkins, S., McCall, M., Sanchez-Ramos, J.	Well-being of family caregivers of persons with late-stage Huntington's disease: Lessons in stress and coping. <i>Health Communication</i> , 2009. 24:239-248	NA
Rubin, D., Dodd, M., Desai, N., Pollock, B., Graham-Pole, J.	Spirituality in well and ill adolescents and their parents: the use of two assessment scales. <i>Pediatric Nursing</i> , Jan-Feb 2009. 35(1): 37	NA

Pascarella and Terenzini's (1980) Academic and Integration Scale (ASIS) instrument was designed to test the predictive validity of Tinto's (1975) integration model. A successful longitudinal collection from 763 respondents over five differentiated scales (peer-group interactions, interactions with faculty, faculty concerns for student development and teaching, academic and intellectual development, and institutional and goal commitments) relating to academic and social integration yielded alpha reliabilities ranging from .71 and .84. The testing

population was then divided into two samples of approximately 2/3 (n = 497) and 1/3 (n = 266), with the larger sub-population used as a calibration sample and the smaller sub-population used for cross-validation to correctly classify those respondents who persist versus voluntarily drop out. Results indicated that both sub-population correlations were significant at $p < .01$. The intercorrelations among the five scales ranged from .01 to .33 with a median correlation of .23. “Thus, the scales would appear to be assessing dimensions of institutional integration that are substantially independent of one another” (p. 67). Pascarella and Terenzini (1980) report that their instrument, measuring student responses across five scales of institutional integration, increased the correct identification of both persisters and dropouts from 58.2 percent to 81.4 percent and from 34.5 percent to 75.8 percent, respectively.

Given the reliability of these two instruments for measuring attitudinal levels of both spirituality and academic and social integration, the researcher is confident that using a combination of the two instruments showed whether or not a correlation exists between the two variables in question. The researcher obtained permission from the authors to use their research instruments as part of this research study. Those permission communications are available in Appendices A and B.

Data Collection Procedures

To acquire the data needed to study the correlation between spirituality and persistence for college student-athletes, approval was first needed by Indiana University of Pennsylvania Institutional Review Board (IRB) for the Application for Human Subjects Review Protocol. The survey instrument was a combination of the 22-item Likert-type Spiritual Involvement and Beliefs Scale – Revised (SIBS-R) designed by Hatch et al. (2001) and the 30-item Likert-type Academic and Social Integration Scale (ASIS) as designed by Pascarella and Terenzini (1980).

In order to test the functionality of the combined SIBS-R and ASIS surveys, the researcher first conducted a pilot test in March of 2017 at a small local college that does not participate in the NEC conference. The data from the pilot test participants is not included in the official study; however, the data collected allowed the researcher an opportunity to make any necessary adjustments to the survey before administering the research survey for the official study. No changes were made to the questions regarding spirituality and academic and social integration as a means to preserve the integrity of the authors' original instruments. The demographic question related to institution was added to the instrument following the pilot for the purposes of the research study. Additionally, following the pilot, the demographic question related to primary sport was adjusted to reflect the sports sponsored by the NEC. Once the pilot test was conducted and the survey was calibrated for the research study, the electronic survey instrument was then distributed and collected in April, May, and June of 2017 to the NEC institutions that accepted the researcher's invitation to participate in the study. Each of the 10 member-institutions of the NEC received an email letter that presented the proposed study and the role of the researcher. The researcher then invited each athletics office to forward the researcher's email (which included the survey link) to student-athletes who met the criteria. Criteria included full-time undergraduate enrollment for participants in the institution's varsity intercollegiate athletics program.

Students who met the participation criteria were then forwarded the researcher's email, which described the study, the participant's role, informed consent, and the survey instrument. The researcher collected data from April 1, 2017, through June 30, 2017. During this period, each participant was invited to participate in the survey.

Data Analysis

The researcher used a statistical software program to analyze the survey data. The analysis used the Pearson r correlational test to explain what correlation exists (if any) between participant spirituality and the five scales related to college persistence factors of academic and social integration (i.e. peer-group interactions, interactions with faculty, faculty concerns for student development and teaching, academic and intellectual development, and institutional and goal commitments). The researcher used descriptive statistics for the initial analysis of the demographic variables (gender [as determined by sport], primary sport, and institution [including institution type]). Inferential statistics were then used to analyze the relationship between the independent variables in terms of the dependent variables (Cresswell, 2008). Table 2 displays the research questions and which items from the survey instrument will address them.

Table 2

No.	Research Question	Correlation of Survey Item(s)
1	Is there a relationship between <i>spirituality</i> and <i>peer-group interactions</i> for student-athletes?	Analysis of items 2-23 correlated with items 24-30
2	Is there a relationship between <i>spirituality</i> and <i>interactions with faculty</i> for student-athletes?	Analysis of items 2-23 correlated with items 31-35
3	Is there a relationship between <i>spirituality</i> and <i>faculty concern for student development and teaching</i> for student-athletes?	Analysis of items 2-23 correlated with items 36-40
4	Is there a relationship between <i>spirituality</i> and <i>academic and intellectual development</i> for student-athletes?	Analysis of items 2-23 correlated with items 41-47
5	Is there a relationship between <i>spirituality</i> and <i>institutional and goal commitments</i> for student-athletes?	Analysis of items 2-23 correlated with items 48-53

Expected Findings

The research suggests that students who exhibit traits of spirituality or who are supported in their spiritual development by their institutional environments will also display positive

attitudes towards persistence through both academic and social integration. Using statistical analysis, the researcher used the SIBS-R test (Hatch et al., 2001) to show that student-athletes who exhibit traits of spirituality will also exhibit traits of academic and social integration as measured by the five ASIS scales (Pascarella & Terenzini, 1980), thereby indirectly displaying a greater capacity by which to persist and succeed academically than student-athletes who self-report as less spiritually active. The researcher was aware that a Type I error may occur since the null hypothesis was rejected.

Summary

The literature review suggests that students who exercise spirituality while in college experience better college persistence, leading to increased retention rates and degree completion. This quantitative study uses survey data to analyze the correlation between spirituality and academic and social integration, both powerfully influential factors of college persistence. Full-time undergraduate students participating in NCAA Division I athletic programs through six of the ten colleges and universities affiliated through the Northeast Conference (NEC) provided the data analyzed in the next chapter of this study. The data from a sample population of 233 participants was entered into the statistical analysis software program and then analyzed for possible correlation. Full data analysis, synthesized results, and implications for further research will be discussed in Chapter Four and Chapter Five of this research study.

CHAPTER 4

DATA AND ANALYSIS

This chapter will feature the findings and data analysis utilized for this study.

Quantitative data was collected from six participating member institutions of the Northeast Conference (NEC), a small athletic conference within the NCAA Division-I subset. Data was collected from May through June of 2017 and includes completed survey responses from 233 full-time undergraduate students participating in their respective institutions' varsity athletics programs. Eligibility to participate in the study included full-time undergraduate enrollment at a member institution of the NEC athletic conference and active participation within a varsity athletics program. The purpose for this study is to explore the relationship between spirituality and academic and social integration, as factors of persistence, in NCAA Division I intercollegiate athletics.

Quantitative Data and Findings

To collect data relevant to the research questions, two survey instruments were combined to represent independent and dependent variables related to spirituality and academic and social integration. The 22-item Spiritual Involvement and Beliefs Scale – Revised (SIBS-R) (Hatch, et. al, 2001) represents independent variables of spirituality. The items contained within the SIBS-R scale focus on various aspects of spirituality, including existential seeking, interconnectivity with others and with nature, finding meaning and purpose in life events, possibilities of a higher power, personal reflection, meditation, and/or prayer, among others. The 30-item Academic and Social Integration Scales (ASIS) (Pascarella & Terenzini, 1980) represents dependent variables of academic and social integration. The items contained in the ASIS scales focused on specific observations and experiences within both the social and academic environments of students,

including peer group interactions, interactions with faculty, faculty concern for student, academic and intellectual development, and institutional and goal commitment.

The research population for this study included full-time undergraduate students participating in varsity athletics in member institutions of the Northeast Conference (NEC). The NEC is comprised of 10 small to medium-sized institutions in the states of Connecticut, Maryland, New Jersey, New York, Pennsylvania, and Rhode Island. Of the 10 member-institutions of the NEC athletic conference, six institutions participated in the study. They distributed the survey to their student-athletes who met the research criteria of full-time undergraduate enrollment and active participation in a varsity sport. The total number of responses (n = 233) is represented by the following distribution: Institution 1 (n = 21, 9.0%), Institution 2 (n = 37, 15.9%), Institution 3 (n = 35, 15.0%), Institution 4 (n = 27, 11.6%), Institution 5 (n = 80, 34.3%), and Institution 6 (n = 28, 12.0%). There were a few responses, labeled Unknown (n=5, 2.1%), for which survey submissions did not include demographic data, therefore limiting determinable responses by institution to 228. Table 3 displays the number of responses by institution as well as by institution type, such as religious or secular.

Table 3

Number of Responses by Institution

Institution	Number of Respondents	Type
Institution 1	21	Secular
Institution 2	37	Secular
Institution 5	35	Religious
Institution 6	27	Secular
Institution 9	80	Religious
Institution 10	28	Secular
Unknown	5	NA
Total	233	

Primary Sport was another demographic data set for the survey. The NEC athletic conference sponsors 10 men's sports and 12 women's sports. Understanding that some students may be participating in multiple sports, the survey requested that they indicate which sport they felt was their "primary" sport. The total number of responses (n=233) is represented by the following distribution related to the students' Primary Sport: Baseball (n = 3, 1.29 percent), Men's Basketball (n = 2, 0.9 percent), Women's Basketball (n = 9, 3.86 percent), Women's Bowling (n = 6, 2.58 percent), Men's Cross-Country (n = 3, 1.29 percent), Women's Cross-Country (n = 10, 4.29 percent), Men's Golf (n = 3, 1.29 percent), Women's Golf (n = 3, 1.29 percent), Football (n = 14, 6.01 percent), Men's Lacrosse (n = 7, 3.00 percent), Women's Lacrosse (n = 14, 6.01 percent), Men's Soccer (n = 6, 2.58 percent), Women's Soccer (n = 35, 15.02 percent), Softball (n = 17, 7.30 percent), Women's Swimming (n = 18, 7.73 percent), Men's Tennis (n = 5, 2.15 percent), Women's Tennis (n = 4, 1.72 percent), Men's Indoor Track & Field (n = 2, 0.9 percent), Women's Indoor Track & Field (n = 0, 0.0 percent), Men's Outdoor Track & Field (n = 14, 6.01 percent), Women's Outdoor Track & Field (n = 20, 8.58 percent), and Women's Volleyball (n = 13, 5.58 percent). There were a few responses submitted under a Primary Sport of "Other." This is entirely possible as member-institutions' athletics programs may include sports or "teams" outside of those 22 sports sponsored by the NEC athletic conference. Since the survey was distributed to all full-time undergraduate students participating in varsity athletic sports at institutions who themselves are member-institutions of the NEC athletic conference, there are many student-athletes participating in sports or other "teams" sponsored by their own institutions. The responses for which Primary Sport could not be categorized as an NEC sport resulted in a final group of Non-NEC (n = 20, 8.58 percent). There were a few responses, labeled Unknown (n=5, 2.15 percent), for which survey submissions did

not include demographic data, therefore limiting determinable responses by primary sport to 228.

Table 4 displays the number of responses by primary sport.

Table 4

Number of Responses by Primary Sport

Primary Sport	Number of Respondents
Baseball	3
Men's Basketball	2
Women's Basketball	9
Women's Bowling	6
Men's Cross-Country	3
Women's Cross-Country	10
Men's Golf	3
Women's Golf	3
Football	14
Men's Lacrosse	7
Women's Lacrosse	14
Men's Soccer	6
Women's Soccer	35
Softball	17
Women's Swimming	18
Men's Tennis	5
Women's Tennis	4
Men's Indoor Track & Field	2
Women's Indoor Track & Field	0
Men's Outdoor Track & Field	14
Women's Outdoor Track & Field	20
Women's Volleyball	13
Other	20
Unknown	5
Total	233

Of the total number of completed responses (n = 233) a disproportionate distribution of responses related to students' gender. The data was derived by comparing the number of responses indicating the students' Primary Sport. Within the NEC, all sponsored sports are categorized by either "Men's" or "Women's" sports. Using these categories, the researcher translated all responses indicating participation in a "Men's" sport as male and all responses indicating participation in a "Women's" sport as female. The total number of responses (n =

233) is represented by the following distribution by gender: male (n = 63, 27.03 percent) and female (n = 163, 69.96 percent). Only a few responses were submitted under a Primary Sport of “Other” (n = 20); however, the survey did allow respondents to indicate which sports they were participating in that were not sponsored by the NEC athletic conference. Of the 20 responses under the primary sport of “Other,” 18 did provide open responses for which gender could be determined, leaving only two responses where gender could not be determined, resulting in a final group of Undetermined (n = 2, 0.9 percent). A few responses, labeled Unknown (n=5, 2.15 percent), did not include demographic data, therefore limiting determinable responses by gender to 226. Table 5 displays the number of responses by gender.

Table 5

<i>Number of Responses by Gender</i>	
Gender	Number of Respondents
Male	63
Female	163
Undetermined	2
Unknown	5
Total	233

Of the total number of completed responses (n = 233) there is sufficient representation among the distribution of responses related to the students’ Year in School. The total number of responses (n = 233) is represented by the following distribution of Year in School: first year (n = 64, 27.47 percent), second year (n = 77, 33.05 percent), third year (n = 41, 17.6 percent), and fourth year (n = 46, 19.74 percent). There were a few responses, labeled Unknown (n=5, 2.15 percent), where survey submissions did not include demographic data, therefore limiting determinable responses by year in school to 228. Table 6 displays the number of responses by year in school.

Table 6

<i>Number of Responses by Year in School</i>	
Year in School	Number of Respondents
First Year	64
Second Year	77
Third Year	41
Fourth Year	46
Unknown	5
Total	233

The data displayed in tables 3-6 provide a brief analysis of the demographic responses of the survey participants. The total number of responses, or sample population (N = 233), represents approximately 10 percent of the research population.

Findings for Spirituality and Peer-Group Interactions

Data were collected from the survey to compare scores related to spirituality and peer-group interactions. The data collected within these two sets of items addresses the following research question: Is there a relationship between *spirituality* and *peer-group interactions* for student-athletes?

The dependent variables of Peer-Group Interactions include:

1. Since coming to this university, I have developed close personal relationships with other students (referred to as PG1).
2. The student friendships I have developed at this university have been personally satisfying (referred to as PG2).
3. My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values (referred to as PG3).
4. My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest in ideas (referred to as PG4).

5. It has been difficult to meet and make friends with other students (referred to as PG5).
6. Most students at this university have values and attitudes different from my own (referred to as PG6).
7. Few of the students I know would be willing to listen to me and help me if I had a personal problem (referred to as PG7).

Comparing the scores of the 22-items of the SIBS-R spirituality scale to the scores of the seven items of Peer-Group Interactions of the ASIS scale, there are six significant positive correlations at the $p < .05$ level, 11 significant positive correlations at the $p < .01$ level, 2 significant negative correlations at the $p < .05$ level, and 2 significant negative correlations at the $p < .01$ level found using a Pearson-r, 2-tailed test.

Pearson Correlations for Spirituality and Peer-Group Interactions

Table 7 outlines the Pearson Correlation coefficients between spirituality and peer group interactions.

A significant positive correlation was found between the dependent variable (PG1) *Since coming to this university I have developed close personal relationships with other students* and two independent variables of spirituality. The independent variables of *When I help others, I expect nothing in return* ($r(233) = .143, p < .05$) and *In difficult times, I am still grateful* ($r(233) = .183, p < .01$) were positively correlated to the dependent variable (PG1) *Since coming to this university I have developed close personal relationships with other students*. This suggests that when the sample population exhibits spirituality aspects of either *When I help others, I expect nothing in return* or *In difficult times, I am still grateful*, there is a positive correlation to a student's ability to develop close personal relationships with other students.

Table 7

Pearson Correlations for Spirituality and Peer-Group Interactions

SIBS-R Spirituality Scale	ASIS Peer-Group Interactions Scale						
	PG1	PG2	PG3	PG4	PG5	PG6	PG7
I set aside time for meditation and/or self-reflection.					-.207**		
A person can be fulfilled without pursuing an active spiritual life.			-.186**				
I find serenity by accepting things as they are.			.210**	.192**			
Prayers do not really change what happens.					.154*	.130*	
In times of despair, I can find little reason to hope.		.136*			.233**	.225**	.192**
When I help others, I expect nothing in return.	.143*	.184**	.204**	.178**			
I don't take time to appreciate nature.							.135*
In difficult times, I am still grateful.	.183**	.154*	.263**	.237**			
I solve my problems without using spiritual resources.			-.149*				
I examine my actions to see if they reflect my values							-.160*

Notes. PG1 = Since coming to this university, I have developed close personal relationships with other students.

PG2 = The student friendships I have developed at this university have been personally satisfying.

PG3 = My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values.

PG4 = My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest in ideas.

PG5 = It has been difficult to meet and make friends with other students.

PG6 = Most students at this university have values and attitudes different from my own.

PG7 = Few of the students I know would be willing to listen to me and help me if I had a personal problem.

**p < 0.01 level

*p < 0.05 level

A significant positive correlation was found between the dependent variable (PG2) *The student friendships I have developed at this university have been personally satisfying* and three independent variables of spirituality. The independent variables of *In times of despair, I can find little reason to hope* ($r(233) = .136, p < .05$); *When I help others, I expect nothing in return* ($r(233) = .184, p < .01$); and *In difficult times, I am still grateful* ($r(233) = .154, p < .05$) were positively correlated to the dependent variable (PG2) *The student friendships I have developed at this university have been personally satisfying*. This suggests that when the sample population exhibits spirituality aspects of *In times of despair, I can find little reason to hope*; *When I help others, I expect nothing in return*; or *In difficult times, I am still grateful*, there is a positive correlation to a student's perception that their friendships have been personally satisfying.

A significant positive correlation was found between the dependent variable (PG3) *My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values* and three independent variables of spirituality. The independent variables of *I find serenity by accepting things as they are* ($r(233) = .210, p < .01$); *When I help others, I expect nothing in return* ($r(233) = .204, p < .01$); and *In difficult times, I am still grateful* ($r(233) = .263, p < .01$) were positively correlated to the dependent variable (PG3) *My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values*. This suggests that when the sample population exhibits spirituality aspects of *I find serenity by accepting things as they are*; *When I help others, I expect nothing in return*; or *In difficult times, I am still grateful* there is a positive correlation to students' feelings that their interpersonal relationships with other students have a positive influence on their personal growth, attitudes, and values.

A significant negative correlation was found between the dependent variable (PG3) *My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values* and two independent variables of spirituality. The independent variables *A person can be fulfilled without pursuing an active spiritual life* ($r(233) = -.186, p < .01$) and *I solve my problems without using spiritual resources* ($r(233) = -.149, p < .05$) were negatively correlated to the dependent variable (PG3) *My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values*. This suggests that when the sample population exhibits spirituality aspects of *A person can be fulfilled without pursuing an active spiritual life* or *I solve my problems without using spiritual resources*, there is a negative correlation to students feeling that their interpersonal relationships with other students have a positive influence on their personal growth, attitudes, and values.

A significant positive correlation was found between the dependent variable (PG4) *My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest in ideas* and three independent variables of spirituality. The independent variables of *I find serenity by accepting things as they are* ($r(233) = .192, p < .01$); *When I help others, I expect nothing in return* ($r(233) = .178, p < .01$); and *In difficult times, I am still grateful* ($r(233) = .237, p < .01$) were positively correlated to dependent variable (PG4) *My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest in ideas*. This suggests that when the sample population exhibits spirituality aspects of *I find serenity by accepting things as they are*; *When I help others, I expect nothing in return*; or *In difficult times, I am still grateful*, there is a positive correlation to students feeling that their interpersonal relationships with other students have a positive influence on their intellectual growth and interest in ideas.

A significant negative correlation was found between the dependent variable (PG5) *It has been difficult for me to meet and make friends with other students* and one independent variable of spirituality. The independent variable of *I set aside time for meditation and/or self-reflection* ($r(233) = -.207, p < .01$) was negatively correlated to dependent variable (PG5) *It has been difficult for me to meet and make friends with other students*. This suggests that when the sample population exhibits the spirituality trait of *I set aside time for meditation and/or self-reflection* there is a negative correlation to students' feelings that it is difficult for them to meet and make friends with other students.

A significant positive correlation was found between the dependent variable (PG5) *It has been difficult for me to meet and make friends with other students* and two independent variables of spirituality. The independent variables of *Prayers do not really change what happens* ($r(233) = .154, p < .05$) and *In times of despair, I can find little reason to hope* ($r(233) = .233, p < .01$) were positively correlated to dependent variable (PG5) *It has been difficult for me to meet and make friends with other students*. This suggests that when the sample population exhibits spirituality aspects of *Prayers do not really change what happens* or *In times of despair, I can find little reason to hope* there is a positive correlation to students' feelings that it is difficult for them to meet and make friends with other students.

A significant positive correlation was found between the dependent variable (PG6) *Most students at this university have values and attitudes different than my own* and two independent variables of spirituality. The independent variables of *Prayers do not really change what happens* ($r(233) = .130, p < .05$) and *In times of despair, I can find little reason to hope* ($r(233) = .225, p < .01$) were positively correlated to the dependent variable (PG6) *Most students at this university have values and attitudes different than my own*. This suggests that when the sample

population exhibits spirituality aspects of *Prayers do not really change what happens* or *In times of despair, I can find little reason to hope*, there is a positive correlation to students' feelings that most students at their university have values and attitudes different than their own.

A significant negative correlation was found between the dependent variable (PG6) *Most students at this university have values and attitudes different than my own* and two independent variables of spirituality. The independent variables of *I set aside time for meditation and/or self-reflection* ($r(233) = -.207, p < .01$) and *I examine my actions to see if they reflect my values* ($r(233) = -.160, p < .05$) were negatively correlated to the dependent variable (PG6) *Most students at this university have values and attitudes different than my own*. This suggests that when the sample population exhibits spirituality aspects of *I set aside time for meditation and/or self-reflection* or *I examine my actions to see if they reflect my values*, there is a negative correlation to students' feelings that most students at their university have values and attitudes different than their own.

A significant positive correlation was found between the dependent variable (PG7) *Few of the students I know would be willing to listen to me and help me if I had a personal problem* and two independent variables of spirituality. The independent variables of *In times of despair, I can find little reason to hope* ($r(233) = .192, p < .01$) and *I don't take time to appreciate nature* ($r(233) = .135, p < .05$) were positively correlated to the dependent variable (PG7) *Few of the students I know would be willing to listen to me and help me if I had a personal problem*. This suggests that when the sample population exhibits spirituality aspects of *In times of despair, I can find little reason to hope* or *I don't take time to appreciate nature*, there is a positive

correlation to students' feelings that few of the students they know would be willing to listen to them and help them with personal problems.

Hierarchical Regression Models for Spirituality and Peer-Group Interactions

Table 8 presents the results of the linear regression model of the dependent variable PG1 (*Since coming to this university I have developed close personal relationships with other students*) and the independent variable *In difficult times, I am still grateful*. The model displays the R^2 at the bottom. The significance level was set at $p < .05$.

Table 8

SIBS-R Spirituality Scale	ASIS Peer-Group Interactions Scale: PG1		
	Model 1		
	β	t	Sig
<i>In difficult times, I am still grateful.</i>	.123	2.824	.005**
R^2	.033		
Δ in R^2	-		

Notes. PG1 = *Since coming to this university I have developed close personal relationships with other students*.

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 3.3 percent of the variance in the dependent variable of PG1. The predictive independent variable in this model is *In difficult times, I am still grateful* ($\beta = .123$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable PG1. Although a 3.3 percent R^2 indicates a low level of predictability, the model does display a positive predictive effect on the dependent variable PG1, *Since coming to this university I have developed close personal relationships with other students*.

Table 9 presents the results of the linear regression models of the dependent variable PG2 (*The student friendships I have developed at this university have been personally satisfying*) and

the independent variables *When I help others, I expect nothing in return* and *In times of despair, I can find little reason to hope*. The models display the R^2 and the change (Δ) in R^2 at the bottom. The significance level was set at $p < .05$.

Table 9

Hierarchical Multiple Regression Models for Peer-Group Interactions and Spirituality: PG2

SIBS-R Spirituality Scale	ASIS Peer-Group Interactions Scale: PG2					
	Model 1			Model 2		
	β	t	Sig	β	t	Sig
When I help others, I expect nothing in return.	.106	2.842	.005**	.104	2.801	.006**
In times of despair, I can find little reason to hope.				.056	2.039	.043*
R^2	.034			.051		
Δ in R^2				.017		

Notes. PG2 = The student friendships I have developed at this university have been personally satisfying.

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 3.4 percent of the variance in the dependent variable of PG2. The predictive independent variable in this model is *When I help others, I expect nothing in return* ($\beta = .106$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable PG2.

Model 2 indicates that the independent variables are predictive at 5.1 percent of the variance when the combined predictive independent variables are *When I help others, I expect nothing in return* ($\beta = .104$) and *In times of despair, I can find little reason to hope* ($\beta = .056$). In this model, both independent variables have a positive β , indicating a positive effect on the dependent variable PG2. When both of these independent variables are combined, the predictability improves by 1.7 percent, and although a 5.1 percent R^2 provides a low level of

predictability, the model does display a positive predictive effect on the dependent variable PG2, *The student friendships I have developed at this university have been personally satisfying.*

Table 10 presents the results of the linear regression models of the dependent variable PG3 (*My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values*) and the independent variables *In difficult times, I am still grateful* and *A person can be fulfilled without pursuing an active spiritual life*. The models display the R^2 and the change (Δ) in R^2 at the bottom. The significance level was set at $p < .05$.

Table 10

<i>Hierarchical Multiple Regression Models for Peer-Group Interactions and Spirituality: PG3</i>						
SIBS-R Spirituality Scale	ASIS Peer-Group Interactions Scale: PG3					
	Model 1			Model 2		
	β	t	Sig	β	t	Sig
<i>In difficult times, I am still grateful.</i>	.176	4.139	.000**	.175	4.183	.000**
<i>A person can be fulfilled without pursuing an active spiritual life.</i>				-.083	-2.946	.004**
R^2	.069			.103		
Δ in R^2				.034		

Notes. PG3 = My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values.

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 6.9 percent of the variance in the dependent variable of PG3. The predictive independent variable in this model is *In difficult times, I am still grateful* ($\beta = .176$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable PG3.

Model 2 indicates that the independent variables are predictive at 10.3 percent of the variance when the combined predictive independent variables are *In difficult times, I am still grateful* ($\beta = .175$) and *A person can be fulfilled without pursuing an active spiritual life* ($\beta = -.083$). In this model, one independent variable has a positive β , indicating a positive effect on

the dependent variable PG3, whereas the other independent variable has a negative β , indicating a negative effect on the dependent variable PG3. When both of these independent variables are combined, the predictability improves by 3.4 percent and although a 10.3 percent R^2 indicates a low level of predictability, the model does display a predictive effect on the dependent variable PG3, *My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values.*

Table 11 presents the results of the linear regression model of the dependent variable PG4 (*My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest in ideas*) and the independent variable *In difficult times, I am still grateful*. The model displays the R^2 at the bottom. The significance level was set at $p < .05$.

Table 11

SIBS-R Spirituality Scale	ASIS Peer-Group Interactions Scale: PG4		
	Model 1		
	β	t	Sig
<i>In difficult times, I am still grateful.</i>	.167	3.711	.000**
R^2	.056		
Δ in R^2	-		

Notes. PG4 = *My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest in ideas.*

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 5.6 percent of the variance in the dependent variable of PG4. The predictive independent variable in this model is *In difficult times, I am still grateful* ($\beta = .167$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable PG4. Although a 5.6 percent R^2 indicates a low level of predictability, the model does display a positive predictive

effect on the dependent variable PG4, *Since coming to this university I have developed close personal relationships with other students.*

Table 12 presents the results of the linear regression model of the dependent variable PG5 (*It has been difficult for me to meet and make friends with other students*) and the independent variable *In times of despair, I can find little reason to hope.* The model displays the R^2 at the bottom. The significance level was set at $p < .05$.

Table 12

Hierarchical Multiple Regression Model for Peer-Group Interactions and Spirituality: PG5

SIBS-R Spirituality Scale	<u>ASIS Peer-Group Interactions Scale: PG5</u>		
	Model 1		
	β	t	Sig
In times of despair, I can find little reason to hope.	.150	3.636	.000**
R^2	.054		
Δ in R^2	-		

Notes. PG5 = It has been difficult for me to meet and make friends with other students.

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 5.4 percent of the variance in the dependent variable of PG5. The predictive independent variable in this model is *In times of despair, I can find little reason to hope* ($\beta = .150$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable PG1. Although a 5.4 percent R^2 indicates a low level of predictability, the model does display a positive predictive effect on the dependent variable PG5, *It has been difficult for me to meet and make friends with other students.*

Table 13 presents the results of the linear regression model of the dependent variable PG6 (*Few of the students I know would be willing to listen to me and help me if I had a personal*

problem) and the independent variable *In times of despair, I can find little reason to hope*. The model displays the R^2 at the bottom. The significance level was set at $p < .05$.

Table 13

<i>Hierarchical Multiple Regression Model for Peer-Group Interactions and Spirituality: PG6</i>			
<i>ASIS Peer-Group Interactions Scale: PG6</i>			
<i>SIBS-R Spirituality Scale</i>	<i>Model 1</i>		
	β	t	Sig
<i>In times of despair, I can find little reason to hope.</i>	.155	2.980	.003**
R^2	.037		
Δ in R^2	-		

Notes. PG6 = Few of the students I know would be willing to listen to me and help me if I had a personal problem.

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 3.7 percent of the variance in the dependent variable of PG6. The predictive independent variable in this model is *In times of despair, I can find little reason to hope* ($\beta = .155$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable PG6. Although a 3.7 percent R^2 indicates a low level of predictability, the model does display a positive predictive effect on the dependent variable PG6, *Few of the students I know would be willing to listen to me and help me if I had a personal problem*.

Table 14 presents the results of the linear regression model of the dependent variable PG7 (*Most students at this university have values and attitudes different from my own*) and the independent variable *In times of despair, I can find little reason to hope*. The model displays the R^2 at the bottom. The significance level was set at $p < .05$.

Table 14

Hierarchical Multiple Regression Model for Peer-Group Interactions and Spirituality: PG7

ASIS Peer-Group Interactions Scale: PG7

SIBS-R Spirituality Scale	Model 1		
	β	t	Sig
In times of despair, I can find little reason to hope.	.133	3.515	.001**
R ²	.051		
Δ in R ²	-		

Notes. PG7 = Most students at this university have values and attitudes different from my own.
 ** p < .01
 * p < .05

Model 1 indicates that the independent variable is predictive at 5.1 percent of the variance in the dependent variable of PG7. The predictive independent variable in this model is *In times of despair, I can find little reason to hope* ($\beta = .133$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable PG7. Although a 5.1 percent R^2 indicates a low level of predictability, the model does display a positive predictive effect on the dependent variable PG7, *Most students at this university have values and attitudes different from my own.*

Findings for Spirituality and Interactions With Faculty

Data were collected from the survey comparing scores related to spirituality and interactions with faculty for participants in the study. The data collected for these two sets of items addresses the research question: Is there a relationship between *spirituality* and *interactions with faculty* for student-athletes?

The dependent variables of Interactions with Faculty include:

1. My nonclassroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes (referred to as IF1).

2. My nonclassroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas (referred to as IF2).
3. My nonclassroom interactions with faculty have had a positive influence on my career goals and aspirations (referred to as IF3).
4. Since coming to this university I have developed a close, personal relationship with at least one faculty member (referred to as IF4).
5. I am satisfied with the opportunities to meet and interact informally with faculty members (referred to as IF5).

Comparing the scores of the 22-items of the SIBS-R spirituality scale to the scores of the five items of Interactions with Faculty of the ASIS scale, there are 13 significant positive correlations at the $p < .05$ level, 11 significant positive correlations at the $p < .01$ level, and three significant negative correlations at the $p < .05$ level using a Pearson-r, 2-tailed test.

Pearson Correlations for Spirituality and Interactions With Faculty

Table 15 outlines the Pearson Correlation coefficients between spirituality and interactions with faculty.

A significant positive correlation was found between the dependent variable (IF1) *My nonclassroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes* and six independent variables of spirituality. The independent variables of *I set aside time for meditation and/or self-reflection* ($r(233) = .173, p < .01$); *I find serenity by accepting things as they are* ($r(233) = .239, p < .01$); *When I help others, I expect nothing in return* ($r(233) = .210, p < .01$); *I focus on what needs to be changed in me, not on what needs to be changed in others* ($r(233) = .137, p < .05$); *In difficult times, I am still grateful* ($r(233) = .206, p < .01$); and *I examine my actions to see if they reflect my values* ($r(233) = .154, p < .05$) were

positively correlated to the dependent variable (IF1) *My nonclassroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes*. This suggests that when the sample population exhibits spirituality aspects of *I set aside time for meditation and/or self-reflection; I find serenity by accepting things as they are; When I help others, I expect nothing in return; I focus on what needs to be changed in me, not on what needs to be changed in others; In difficult times, I am still grateful; or I examine my actions to see if they reflect my values* there is a positive correlation to students' feelings that their nonclassroom interactions with faculty have a positive influence on their personal growth, values, and attitudes.

A significant negative correlation was found between the dependent variable (IF1) *My nonclassroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes* and one independent variable of spirituality. The independent variable *Prayers do not really change what happens* ($r(233) = -.136, p < .05$) was negatively correlated to the dependent variable (IF1) *My nonclassroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes*. This suggests that when the sample population exhibits spirituality aspects of *Prayers do not really change what happens* there is a negative correlation to students' feeling that their nonclassroom interactions with faculty have had a positive influence on their personal growth, values, and attitudes.

Table 15

Pearson Correlations for Spirituality and Interactions With Faculty

SIBS-R Spirituality Scale	ASIS Interactions with Faculty Scale				
	IF1	IF2	IF3	IF4	IF5
I set aside time for meditation and/or self-reflection.	.173**	.203**	.142*	.151*	
I can find meaning in times of hardship.		.159*	.221**		
A person can be fulfilled without pursuing an active spiritual life.				-.157*	
I find serenity by accepting things as they are.	.239**	.239**	.189**	.220**	.213**
Prayers do not really change what happens.	-.136*			-.132*	
When I help others, I expect nothing in return.	.210**	.160*			.236**
I focus on what needs to be changed in me, not on what needs to be changed in others.	.137*			.164*	.157*
In difficult times, I am still grateful.	.206**		.215**	.151*	.166*
I examine my actions to see if they reflect my values.	.154*		.136*	.131*	.133*

Notes. IF1 = My nonclassroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes.

IF2 = My nonclassroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas.

IF3 = My nonclassroom interactions with faculty have had a positive influence on my career goals and aspirations.

IF4 = Since coming to this university I have developed a close, personal relationship with at least one faculty member.

IF5 = I am satisfied with the opportunities to meet and interact informally with faculty members.

** p < .01 level

* p < .05 level

A significant positive correlation was found between the dependent variable (IF2) *My nonclassroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas* and four independent variables of spirituality. The independent variables of *I set aside time for meditation and/or self-reflection* ($r(233) = .203, p < .01$); *I can find meaning in times of hardship* ($r(233) = .159, p < .05$); *I find serenity by accepting things as they are* ($r(233) = .239, p < .01$); and *When I help others, I expect nothing in return* ($r(233) = .160, p < .05$) were positively correlated to the dependent variable (IF2) *My nonclassroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes*. This suggests that when the sample population exhibits spirituality aspects of *I set aside time for meditation and/or self-reflection*; *I can find meaning in times of hardship*; *I find serenity by accepting things as they are*; or *When I help others, I expect nothing in return* there is a positive correlation to students' feelings that their nonclassroom interactions with faculty have had a positive influence on their intellectual growth and interest in ideas.

A significant positive correlation was found between the dependent variable (IF3) *My nonclassroom interactions with faculty have had a positive influence on my career goals and aspirations* and five independent variables of spirituality. The independent variables of *I set aside time for meditation and/or self-reflection* ($r(233) = .142, p < .05$); *I can find meaning in times of hardship* ($r(233) = .221, p < .01$); *I find serenity by accepting things as they are* ($r(233) = .189, p < .01$); *In difficult times, I am still grateful* ($r(233) = .215, p < .01$); and *I examine my actions to see if they reflect my values* ($r(233) = .136, p < .05$) were positively correlated to the dependent variable (IF3) *My nonclassroom interactions with faculty have had a positive influence on my career goals and aspirations*. This suggests that when the sample population exhibits spirituality aspects of *I set aside time for meditation and/or self-reflection*; *I can find*

meaning in times of hardship; I find serenity by accepting things as they are; In difficult times, I am still grateful; or I examine my actions to see if they reflect my values there is a positive correlation to students' feelings that their nonclassroom interactions with faculty have had a positive influence on their career goals and aspirations.

A significant positive correlation was found between the dependent variable (IF4) *Since coming to this university I have developed a close, personal relationship with at least one faculty member* and five independent variables of spirituality. The independent variables of *I set aside time for meditation and/or self-reflection* ($r(233) = .151, p < .05$); *I find serenity by accepting things as they are* ($r(233) = .220, p < .01$); *I focus on what needs to be changed in me, not on what needs to be changed in others* ($r(233) = .164, p < .05$); *In difficult times, I am still grateful* ($r(233) = .151, p < .05$); and *I examine my actions to see if they reflect my values* ($r(233) = .131, p < .05$) were positively correlated with the dependent variable (IF4) *Since coming to this university I have developed a close, personal relationship with at least one faculty member*. This suggests that when the sample population exhibits spirituality aspects of *I set aside time for meditation and/or self-reflection; I find serenity by accepting things as they are; I focus on what needs to be changed in me, not on what needs to be changed in others; In difficult times, I am still grateful; or I examine my actions to see if they reflect my values* there is a positive correlation to students' feelings that since attending their university they have developed a close personal relationship with at least one faculty member.

A significant negative correlation was found between the dependent variable (IF4) *Since coming to this university I have developed a close, personal relationship with at least one faculty member* and two independent variables of spirituality. The independent variables of *A person can be fulfilled without pursuing an active spiritual life* ($r(233) = -.157, p < .05$) and *Prayers do*

not really change what happens ($r(233) = -.132, p < .05$) were negatively correlated with the dependent variable (IF4) *Since coming to this university I have developed a close, personal relationship with at least one faculty member*. This suggests that when the sample population exhibits spirituality aspects of *A person can be fulfilled without pursuing an active spiritual life* or *Prayers do not really change what happens*, there is a negative correlation to students' feelings that since attending their university they have developed a close personal relationship with at least one faculty member.

A significant positive correlation was found between the dependent variable (IF5) *I am satisfied with the opportunities to meet and interact informally with faculty members* and five independent variables of spirituality. The independent variables of *I find serenity by accepting things as they are* ($r(233) = .213, p < .01$); *When I help others, I expect nothing in return* ($r(233) = .236, p < .01$); *I focus on what needs to be changed in me, not on what needs to be changed in others* ($r(233) = .157, p < .05$); *In difficult times, I am still grateful* ($r(233) = .166, p < .05$); and *I examine my actions to see if they reflect my values* ($r(233) = .133, p < .05$) were positively correlated with the dependent variable (IF5) *I am satisfied with the opportunities to meet and interact informally with faculty member*. This suggests that when the sample population exhibits spirituality aspects of *I find serenity by accepting things as they are*; *When I help others, I expect nothing in return*; *I focus on what needs to be changed in me, not on what needs to be changed in others*; *In difficult times, I am still grateful*; or *I examine my actions to see if they reflect my values* there is a positive correlation to students' feeling that they are satisfied with the opportunities to meet and interact informally with faculty members.

Hierarchical Regression Models for Spirituality and Interactions With Faculty

Table 16 presents the results of the linear regression models of the dependent variable IF1 (*My nonclassroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes*) and the independent variables *I find serenity by accepting things as they are* and *When I help others, I expect nothing in return*. The models display the R^2 and the change (Δ) in R^2 at the bottom. The significance level was set at $p < .05$.

Table 16

<i>Hierarchical Multiple Regression Models for Interactions With Faculty and Spirituality: IF1</i>						
<u>ASIS Interactions with Faculty Scale: IF1</u>						
SIBS-R Spirituality Scale	Model 1			Model 2		
	β	t	Sig	β	t	Sig
I find serenity by accepting things as they are.	.149	3.741	.000**	.126	3.111	.002**
When I help others, I expect nothing in return.				.111	2.534	.012*
R^2	.057			.083		
Δ in R^2				.026		

Notes. IF1 = My nonclassroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes.

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 5.7 percent of the variance in the dependent variable of IF1. The predictive independent variable in this model is *I find serenity by accepting things as they are* ($\beta = .149$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable IF1.

Model 2 indicates that the independent variables are predictive at 8.3 percent of the variance when the combined predictive independent variables are *I find serenity by accepting things as they are* ($\beta = .126$) and *When I help others, I expect nothing in return* ($\beta = .111$). In this model, both independent variables have a positive β , indicating a positive effect on the

dependent variable IF1. When both of these independent variables are combined, the predictability improves by 2.6 percent, and although a 8.3 percent R^2 indicates a low level of predictability, the model does display a positive predictive effect on the dependent variable IF1, *My nonclassroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes.*

Table 17 presents the results of the linear regression models of the dependent variable IF2 (*My nonclassroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas*) and the independent variables *I find serenity by accepting things as they are* and *I set aside time for meditation and/or self-reflection*. The models display the R^2 and the change (Δ) in R^2 at the bottom. The significance level has been set at $p < .05$.

Table 17

SIBS-R Spirituality Scale	<u>ASIS Interactions with Faculty Scale: IF2</u>					
	Model 1			Model 2		
	β	t	Sig	β	t	Sig
I find serenity by accepting things as they are.	.142	3.748	.000**	.116	2.934	.004**
I set aside time for meditation and/or self-reflection.				.070	2.139	.033*
R^2	.057			.076		
Δ in R^2				.019		

Notes. IF2 = *My nonclassroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas.*

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 5.7 percent of the variance in the dependent variable of IF2. The predictive independent variable in this model is *I find serenity by accepting things as they are* ($\beta = .142$). Within this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable IF2.

Model 2 indicates that the independent variables are predictive at 7.6 percent of the variance when the combined predictive independent variables are *I find serenity by accepting things as they are* ($\beta = .116$) and *I set aside time for meditation and/or self-reflection* ($\beta = .070$). Within this model, both independent variables have a positive β , indicating a positive effect on the dependent variable IF2. When both of these independent variables are combined, the predictability improves by 1.9 percent. Although a 7.6 percent R^2 indicates a low level of predictability, the model does display a positive predictive effect on the dependent variable IF2, *My nonclassroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas.*

Table 18 presents the results of the linear regression models of the dependent variable IF3 (*My nonclassroom interactions with faculty have had a positive influence on my career goals and aspirations*) and the independent variables *I can find meaning in times of hardship* and *I find serenity by accepting things as they are*. The models display the R^2 and the change (Δ) in R^2 at the bottom. The significance level was set at $p < .05$.

Table 18

Hierarchical Multiple Regression Models for Interactions With Faculty and Spirituality: IF3

SIBS-R Spirituality Scale	ASIS Interactions with Faculty Scale: IF3					
	Model 1			Model 2		
	β	t	Sig	β	t	Sig
I can find meaning in times of hardship.	.136	3.439	.001**	.112	2.734	.007**
I find serenity by accepting things as they are.				.083	2.068	.040*
R^2	.049			.066		
Δ in R^2				.017		

Notes. IF3 = *My nonclassroom interactions with faculty have had a positive influence on my career goals and aspirations.*

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 4.9 percent of the variance in the dependent variable of IF3. The predictive independent variable in this model is *I can find meaning in times of hardship* ($\beta = .136$). Within this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable IF3.

Model 2 indicates that the independent variables are predictive at 6.6 percent of the variance when the combined predictive independent variables are *I can find meaning in times of hardship* ($\beta = .112$) and *I find serenity by accepting things as they are* ($\beta = .083$). In this model, both independent variables have a positive β , indicating a positive effect on the dependent variable IF3. When both of these independent variables are combined, the predictability improves by 1.7 percent, and although a 6.6 percent R^2 indicates a low level of predictability, the model does display a positive predictive effect on the dependent variable IF2, *My nonclassroom interactions with faculty have had a positive influence on my career goals and aspirations*.

Table 19 presents the results of the linear regression model of the dependent variable PG1 (*Since coming to this university I have developed a close, personal relationship with at least one faculty member*) and the independent variable *I find serenity by accepting things as they are*. The model displays the R^2 at the bottom. The significance level was set at $p < .05$.

Table 19

<u>Hierarchical Multiple Regression Model for Interactions With Faculty and Spirituality: IF4</u>			
<u>ASIS Interactions with Faculty Scale: IF4</u>			
<u>SIBS-R Spirituality Scale</u>	<u>Model 1</u>		
	β	t	Sig
In find serenity by accepting things as they are.	.175	3.423	.001**
R^2	.048		
Δ in R^2	-		

Notes. IF4 = Since coming to this university I have developed a close, personal relationship with at least one faculty member.

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 4.8 percent of the variance in the dependent variable of IF4. The predictive independent variable in this model is *I find serenity by accepting things as they are* ($\beta = .175$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable IF4. Although a 4.8 percent R^2 indicates a low level of predictability, the model does display a positive predictive effect on the dependent variable IF4, *Since coming to this university I have developed a close, personal relationship with at least one faculty member.*

Table 20 presents the results of the linear regression models of the dependent variable IF5 (*I am satisfied with the opportunities to meet and interact informally with faculty members*) and the independent variables *When I help others, I expect nothing in return* and *I find serenity by accepting things as they are*. The models display the R^2 and the change (Δ) in R^2 at the bottom. The significance level was set at $p < .05$.

Table 20

SIBS-R Spirituality Scale	<u>ASIS Interactions with Faculty Scale: IF5</u>					
	Model 1			Model 2		
	β	t	Sig	β	t	Sig
When I help others, I expect nothing in return.	.152	3.693	.000**	.128	3.052	.003**
I find serenity by accepting things as they are.				.101	2.593	.010**
R^2	.056			.083		
Δ in R^2				.027		

Notes. IF5 = I am satisfied with the opportunities to meet and interact informally with faculty members.

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 5.6 percent of the variance in the dependent variable of IF5. The predictive independent variable in this model is *When I help others, I expect nothing in return* ($\beta = .152$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable IF5.

Model 2 indicates that the independent variables are predictive at 8.3 percent of the variance when the combined predictive independent variables are *When I help others, I expect nothing in return* ($\beta = .128$) and *I find serenity by accepting things as they are* ($\beta = .101$). In this model, both independent variables have a positive β , indicating a positive effect on the dependent variable IF5. When both of these independent variables are combined, the predictability improves by 2.7 percent, and although an 8.3 percent R^2 indicates a low level of predictability, the model does display a positive predictive effect on the dependent variable IF2, *I am satisfied with the opportunities to meet and interact informally with faculty members*.

Findings for Spirituality and Faculty Concern for Student

Data were collected comparing scores related to spirituality and faculty concern for students. The data collected within these two sets of items addresses the research question: Is there a relationship between *spirituality* and *faculty concern for student* for student-athletes?

The dependent variables of Faculty Concern for Student include:

1. Few of the faculty members I have had contact with are generally interested in students (referred to as FC1).
2. Few of the faculty members I have had contact with are generally outstanding or superior teachers (referred to as FC2).
3. Few of the faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance with students (referred to as FC3).

4. Most of the faculty I have had contact with are interested in helping students grow in more than just academic areas (referred to as FC4).
5. Most faculty members I have had contact with are genuinely interested in teaching (referred to as FC5).

Comparing the scores of the 22-items of the SIBS-R spirituality scale to the scores of the five items of Faculty Concern for Student of the ASIS scale, there are seven significant positive correlations at the $p < .05$ level and 14 significant positive correlations at the $p < .01$ level found using a Pearson-r, 2-tailed test.

Pearson Correlation for Spirituality and Faculty Concern for Student

Table 21 outlines the Pearson Correlation coefficients between spirituality and faculty concern for student.

A significant positive correlation was found between the dependent variable (FC1) *Few of the faculty members I have had contact with are generally interested in students* and two independent variables of spirituality. The independent variables of *In times of despair, I can find little reason to hope* ($r(233) = .329, p < .01$) and *I don't take time to appreciate nature* ($r(233) = .280, p < .01$) were positively correlated with the dependent variable (FC1) *Few of the faculty members I have had contact with are generally interested in students*. This suggests that when the sample population exhibits spirituality aspects of *In times of despair, I can find little reason to hope* or *I don't take time to appreciate nature*, there is a positive correlation to students' feelings that few of the faculty members they have had contact with are generally interested in students.

Table 21

Pearson Correlations for Spirituality and Faculty Concern for Student

SIBS-R Spirituality Scale	<u>ASIS Faculty Concern for Student Scale</u>				
	FC1	FC2	FC3	FC4	FC5
I set aside time for meditation and/or self-reflection.					.132*
I can find meaning in times of hardship.				.142*	.166*
I find serenity by accepting things as they are.					.136*
I have a relationship with someone I can turn to for spiritual guidance.					.206**
In times of despair, I can find little reason to hope.	.329**	.295**	.315**		
When I help others, I expect nothing in return.				.165*	.208**
I don't take time to appreciate nature.	.280**	.173**	.203**		
I have joy in my life because of my spirituality.					.150*
My spiritual understanding continues to grow.					.151*
I focus on what needs to be changed in me, not on what needs to be changed in others.				.174**	.173**
In difficult times, I am still grateful.				.273**	.262**
I examine my actions to see if they reflect my values.				.210**	.196**

Notes. FC1 = Few faculty members are generally interested in students.

FC2 = Few faculty members are generally outstanding or superior in teaching.

FC3 = Few faculty members are willing to spend time outside of class to discuss issues.

FC4 = Most faculty are interested in helping students grow in more than just academic areas.

FC5 = Most faculty members are genuinely interested in teaching.

** p < .01

* p < .05

A significant positive correlation was found between the dependent variable (FC2) *Few of the faculty members I have had contact with are generally outstanding or superior teachers* and two independent variables of spirituality. The independent variables of *In times of despair, I can find little reason to hope* ($r(233) = .295, p < .01$) and *I don't take time to appreciate nature* ($r(233) = .173, p < .01$) were positively correlated with the dependent variable (FC2) *Few of the faculty members I have had contact with are generally outstanding or superior teachers*. This suggests that when the sample population exhibits spirituality aspects of *In times of despair, I can find little reason to hope*, or *I don't take time to appreciate nature* there is a positive correlation to students' feelings that few of the faculty members they have had contact with are generally outstanding or superior teachers.

A significant positive correlation was found between the dependent variable (FC3) *Few of the faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance with students* and two independent variables of spirituality. The independent variables *In times of despair, I can find little reason to hope* ($r(233) = .315, p < .01$) and *I don't take time to appreciate nature* ($r(233) = .203, p < .01$) were positively correlated with the dependent variable (FC3) *Few of the faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance with students*. This suggests that when the sample population exhibits spirituality aspects of *In times of despair, I can find little reason to hope*, or *I don't take time to appreciate nature* there is a positive correlation to students' feelings that few of the faculty members they have had contact with are willing to spend time outside of class to discuss issues of interest and importance with students.

A significant positive correlation was found between the dependent variable (FC4) *Most of the faculty I have had contact with are interested in helping students grow in more than just academic areas* and five independent variables of spirituality. The independent variables of *I can find meaning in times of hardship* ($r(233) = .142, p < .05$); *When I help others, I expect nothing in return* ($r(233) = .165, p < .05$); *I focus on what needs to be changed in me, not on what needs to be changed in others* ($r(233) = .174, p < .01$); *In difficult times, I am still grateful* ($r(233) = .273, p < .01$); and *I examine my actions to see if they reflect my values* ($r(233) = .210, p < .01$) were positively correlated with the dependent variable (FC4) *Most of the faculty I have had contact with are interested in helping students grow in more than just academic areas*. This suggests that when the sample population exhibits spirituality aspects of *I can find meaning in times of hardship; When I help others, I expect nothing in return; I focus on what needs to be changed in me, not on what needs to be changed in others; In difficult times, I am still grateful; or I examine my actions to see if they reflect my values* there is a positive correlation to students' feeling that most of the faculty they have had contact with are interested in helping students grow in more than just academic areas.

A significant positive correlation was found between the dependent variable (FC6) *Most faculty members I have had contact with are genuinely interested in teaching* and ten independent variables of spirituality. The independent variables of *I set aside time for meditation and/or self-reflection* ($r(233) = .132, p < .05$); *I can find meaning in times of hardship* ($r(233) = .166, p < .05$); *I find serenity by accepting things as they are* ($r(233) = .136, p < .05$); *I have a relationship with someone I can turn to for spiritual guidance* ($r(233) = .206, p < .01$); *When I help others, I expect nothing in return* ($r(233) = .208, p < .01$); *I have joy in my life because of my spirituality* ($r(233) = .150, p < .05$); *My spiritual understanding continues to grow*

($r(233) = .151, p < .05$); *I focus on what needs to be changed in me, not on what needs to be changed in others* ($r(233) = .173, p < .01$); *In difficult times, I am still grateful* ($r(233) = .262, p < .01$); and *I examine my actions to see if they reflect my values* ($r(233) = .196, p < .01$) were positively correlated with the dependent variable (FC6) *Most faculty members I have had contact with are genuinely interested in teaching*. This suggests that when the sample population exhibits spirituality aspects of *I set aside time for meditation and/or self-reflection; I can find meaning in times of hardship, I find serenity by accepting things as they are; I have a relationship with someone I can turn to for spiritual guidance; My spiritual understanding continues to grow; I focus on what needs to be changed in me, not on what needs to be changed in others;*, *In difficult times, I am still grateful;* or *I examine my actions to see if they reflect my values* there is a positive correlation to students' feelings that most faculty members that they have had contact with are genuinely interested in teaching.

Hierarchal Regression Models for Spirituality and Faculty Concern for Student

Table 22 presents the results of the linear regression models of the dependent variable FC1 (*Few of the faculty members I have had contact with are generally interested in students*) and the independent variables *In times of despair, I can find little reason to hope* and *I don't take time to appreciate nature*. The models display the R^2 and the change (Δ) in R^2 at the bottom. The significance level was set at $p < .05$.

Table 22

*Hierarchical Multiple Regression Models for Faculty Concern for Student and Spirituality:
FC1*

SIBS-R Spirituality Scale	ASIS Faculty Concern for Student Scale: FC1					
	Model 1			Model 2		
	β	t	Sig	β	t	Sig
In times of despair, I can find little reason to hope.	.227	5.290	.000**	.185	4.182	.000**
I don't take time to appreciate nature.				.154	3.097	.002**
R ²	.108			.144		
Δ in R ²				.036		

Notes. FC1 = Few of the faculty members I have had contact with are generally interested in students.

** p < .01

* p < .05

Model 1 indicates that the independent variable is predictive at 10.8 percent of the variance in the dependent variable of FC1. The predictive independent variable in this model is *In times of despair, I can find little reason to hope* ($\beta = .227$). Within this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable FC1.

Model 2 indicates that the independent variables are predictive at 14.4 percent of the variance when the combined predictive independent variables are *In times of despair, I can find little reason to hope* ($\beta = .185$) and *I don't take time to appreciate nature* ($\beta = .185$). In this model, both independent variables have a positive β , indicating a positive effect on the dependent variable FC1. When e both of these independent variables are combined, the predictability improves by 3.6 percent, and although a 14.4 percent R^2 indicates a low level of predictability, the model does display a positive predictive effect on the dependent variable FC1, *Few of the faculty members I have had contact with are generally interested in students*.

Table 23 presents the results of the linear regression model of the dependent variable FC2 (*Few of the faculty members I have had contact with are generally outstanding or superior*

teachers) and the independent variable *In times of despair, I can find little reason to hope*. The model displays the R^2 at the bottom. The significance level was set at $p < .05$.

Table 23

Hierarchical Multiple Regression Model for Faculty Concern for Student and Spirituality: FC2

SIBS-R Spirituality Scale	ASIS Faculty Concern for Student Scale: FC2		
	Model 1		
	β	t	Sig
In times of despair, I can find little reason to hope.	.197	4.696	.000**
R^2	.087		
Δ in R^2	-		

Notes. FC2 = Few of the faculty members I have had contact with are generally outstanding or superior teachers.

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 8.7 percent of the variance in the dependent variable of FC2. The predictive independent variable in this model is *In times of despair, I can find little reason to hope* ($\beta = .197$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable FC2. Although a 8.7 percent R^2 indicates a low level of predictability, the model does display a positive predictive effect on the dependent variable FC2, *Few of the faculty members I have had contact with are generally outstanding or superior teachers*.

Table 24 presents the results of the linear regression model of the dependent variable FC3 (*Few of the faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance with students*) and the independent variable *In times of despair, I can find little reason to hope*. The model displays the R^2 at the bottom. The significance level was set at $p < .05$.

Table 24

Hierarchical Multiple Regression Model for Faculty Concern for Student and Spirituality: FC3

SIBS-R Spirituality Scale	ASIS Faculty Concern for Student Scale: FC3		
	Model 1		
	β	t	Sig
In times of despair, I can find little reason to hope.	.232	5.051	.000**
R ²	.099		
Δ in R ²	-		

Notes. FC3 = Few of the faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance with students.

** p < .01

* p < .05

Model 1 indicates that the independent variable is predictive at 9.9 percent of the variance in the dependent variable of FC3. The predictive independent variable in this model is *In times of despair, I can find little reason to hope* ($\beta = .232$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable FC3. Although a 9.9 percent R^2 indicates a low level of predictability, the model does display a positive predictive effect on the dependent variable FC3, *Few of the faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance with students.*

Table 25 presents the results of the linear regression model of the dependent variable FC4 (*Most of the faculty I have had contact with are interested in helping students grow in more than just academic areas*) and the independent variable *In difficult times, I am still grateful*. The model displays the R^2 at the bottom. The significance level was set at $p < .05$.

Table 25

Hierarchical Multiple Regression Model for Faculty Concern for Student and Spirituality: FC4

SIBS-R Spirituality Scale	ASIS Faculty Concern for Student Scale: FC4		
	Model 1		
	β	t	Sig
In difficult times, I am still grateful.	.219	4.306	.000**
R ²	.074		
Δ in R ²	-		

Notes. FC4 = Most of the faculty I have had contact with are interested in helping students grow in more than just academic areas.

** p < .01

* p < .05

Model 1 indicates that the independent variable is predictive at 7.4 percent of the variance in the dependent variable of FC4. The predictive independent variable in this model is *In difficult times, I am still grateful* ($\beta = .219$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable FC4. Although a 7.4 percent R^2 is a low level of predictability, the model does display a positive predictive effect on the dependent variable FC4, *Most of the faculty I have had contact with are interested in helping students grow in more than just academic areas*.

Table 26 presents the results of the linear regression model of the dependent variable FC5 (*Most of the faculty members I have had contact with are genuinely interested in teaching*) and the independent variable *In difficult times, I am still grateful*. The model displays the R^2 at the bottom. The significance level was set at $p < .05$.

Table 26

Hierarchical Multiple Regression Model for Faculty Concern for Student and Spirituality: FC5

SIBS-R Spirituality Scale	ASIS Faculty Concern for Student Scale: FC5		
	Model 1		
	β	t	Sig
In difficult times, I am still grateful.	.191	4.118	.000**
R ²	.068		
Δ in R ²	-		

Notes. FC5 = Most of the faculty members I have had contact with are genuinely interested in teaching.

** p < .01

* p < .05

Model 1 indicates that the independent variable is predictive at 6.8 percent of the variance in the dependent variable of FC5. The predictive independent variable in this model is *In difficult times, I am still grateful* ($\beta = .191$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable FC5. Although a 6.8 percent R^2 is a low level of predictability, the model does display a positive predictive effect on the dependent variable FC5, *Most of the faculty members I have had contact with are genuinely interested in teaching*.

Findings for Spirituality and Academic and Intellectual Development

Data were collected from the survey to compare scores related to spirituality and academic and intellectual development. The data collected within these two sets of items addresses the following research question: Is there a relationship between *spirituality* and *academic and intellectual development* for student-athletes?

The dependent variables of Academic and Intellectual Development include:

1. I am satisfied with the extent of my intellectual development since enrolling in this university (referred to as AI1).

2. My academic experience has had a positive influence on my intellectual growth and interest in ideas (referred to as AI2).
3. I am satisfied with my academic experience at this university (referred to as AI3).
4. Few of my courses this year have been intellectually stimulating (referred to as AI4).
5. My interest in ideas and intellectual matters has increased since coming to this university (referred to as AI5).
6. I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now than I was before coming to this university (referred to as AI6).
7. I have performed academically as well as I anticipated I would (referred to as AI7).

Comparing the scores of the 22 items of the SIBS-R spirituality scale to the scores of the seven items of Academic and Intellectual Development of the ASIS scale, there are 16 significant positive correlations at the $p < .05$ level, 40 significant positive correlations at the $p < .01$ level, and only one significant negative correlation at the $p < .05$ level found using a Pearson- r , 2-tailed test.

Pearson Correlation for Spirituality and Academic and Intellectual Development

Table 27 outlines the Pearson Correlation coefficients between spirituality and academic and intellectual development.

Table 27

Pearson Correlations for Spirituality and Academic and Intellectual Development

SIBS-R Spirituality Scale	ASIS Academic and Intellectual Development Scale						
	AI1	AI2	AI3	AI4	AI5	AI6	AI7
I set aside time for meditation and/or self-reflection.	.156*						.194**
I can find meaning in times of hardship.	.251**	.212**	.194**		.169**	.143*	.134*
I find serenity by accepting things as they are.	.283**	.269**	.230**		.176**		.172**
I have a relationship with someone I can turn to for spiritual guidance.	.224**	.222**	.157*				
In times of despair, I can find little reason to hope.				.283**		-.146*	
I have a personal relationship with a power greater than myself.		.150*					
I have had a spiritual experience that greatly changed my life.	.183**	.197**			.134*		
When I help others, I expect nothing in return.	.275**	.259**	.216**		.230**		
I don't take time to appreciate nature.				.197**			
I have joy in my life because of my spirituality.	.137*	.142*					
My relationship with a higher power helps me love others more completely.	.149*	.154*	.133*				
I have experienced healing after prayer.	.154*						
My spiritual understanding continues to grow.	.184**	.175**	.186**		.135*		
I focus on what needs to be changed in me, not on what needs to be changed in others.	.210**	.256**	.144*		.191**		
In difficult times, I am still grateful.	.323**	.331**	.292**		.345**	.177**	.277**
I have been through a time of suffering that led to spiritual growth.	.216**	.190**	.147*		.152*		
I examine my actions to see if they reflect my values.	.277**	.263**	.264**		.307**	.211**	.284**

Notes. AI1 = I am satisfied with the extent of my intellectual development since enrolling in this university.

AI2 = My academic experience has had a positive influence on my intellectual growth and interest in ideas.

AI3 = I am satisfied with my academic experience at this university.

AI4 = Few of my courses this year have been intellectually stimulating.

AI5 = My interest in ideas and intellectual matters has increased since coming to this university.

AI6 = I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now than I was before coming to this university.

AI7 = I have performed academically as well as I anticipated I would., ** $p < .01$, * $p < .05$

A significant positive correlation was found between the dependent variable (AI1) *I am satisfied with the extent of my intellectual development since enrolling in this university* and 14 independent variables of spirituality. The independent variables of *I set aside time for meditation and/or self-reflection* ($r(233) = .156, p < .05$); *I can find meaning in times of hardship* ($r(233) = .251, p < .01$); *I find serenity by accepting things as they are* ($r(233) = .283, p < .01$); *I have a relationship with someone I can turn to for spiritual guidance* ($r(233) = .224, p < .01$); *I have had a spiritual experience that greatly changed my life* ($r(233) = .183, p < .01$); *When I help others, I expect nothing in return* ($r(233) = .275, p < .01$); *I have joy in my life because of my spirituality* ($r(233) = .137, p < .05$); *My relationship with a higher power helps me love others more completely* ($r(233) = .149, p < .05$); *I have experienced healing after prayer* ($r(233) = .154, p < .05$); *My spiritual understanding continues to grow* ($r(233) = .184, p < .01$); *I focus on what needs to be changed in me, not on what needs to be changed in others* ($r(233) = .210, p < .01$); *In difficult times, I am still grateful* ($r(233) = .323, p < .01$); *I have been through a time of suffering that led to spiritual growth* ($r(233) = .216, p < .01$); and *I examine my actions to see if they reflect my values* ($r(233) = .277, p < .01$) were positively correlated with the dependent variable (AI1) *I am satisfied with the extent of my intellectual development since enrolling in this university*. This suggests that when the sample population exhibits spirituality aspects of *I set aside time for meditation and/or self-reflection; I can find meaning in times of hardship; I find serenity by accepting things as they are; I have a relationship with someone I can turn to for spiritual guidance; I have had a spiritual experience that greatly changed my life; When I help others, I expect nothing in return; I have joy in my life because of my spirituality; My relationship with a higher power helps me love others more completely; I have experienced healing after prayer; My spiritual understanding continues to grow; I focus on what needs to be*

changed in me, not on what needs to be changed in others; In difficult times, I am still grateful; I have been through a time of suffering that led to spiritual growth; or I examine my actions to see if they reflect my values there is a positive correlation to students' feeling that they are satisfied with the extent of their intellectual development since enrolling at their university.

A significant positive correlation was found between the dependent variable (AI2) *My academic experience has had a positive influence on my intellectual growth and interest in ideas* and 13 independent variables of spirituality. The independent variables of *I can find meaning in times of hardship* ($r(233) = .212, p < .01$); *I find serenity by accepting things as they are* ($r(233) = .269, p < .01$); *I have a relationship with someone I can turn to for spiritual guidance* ($r(233) = .222, p < .01$); *I have a personal relationship with a power greater than myself* ($r(233) = .150, p < .05$); *I have had a spiritual experience that greatly changed my life* ($r(233) = .197, p < .01$); *When I help others, I expect nothing in return* ($r(233) = .259, p < .01$); *I have joy in my life because of my spirituality* ($r(233) = .142, p < .05$); *My relationship with a higher power helps me love others more completely* ($r(233) = .154, p < .05$); *My spiritual understanding continues to grow* ($r(233) = .175, p < .01$); *I focus on what needs to be changed in me, not on what needs to be changed in others* ($r(233) = .256, p < .01$); *In difficult times, I am still grateful* ($r(233) = .331, p < .01$); *I have been through a time of suffering that led to spiritual growth* ($r(233) = .190, p < .01$); and *I examine my actions to see if they reflect my values* ($r(233) = .263, p < .01$) were positively correlated with the dependent variable (AI2) *My academic experience has had a positive influence on my intellectual growth and interest in ideas*. This suggests that when the sample population exhibits spirituality aspects of *I can find meaning in times of hardship; I find serenity by accepting things as they are; I have a relationship with someone I can turn to for spiritual guidance; I have a personal relationship with a power greater than myself; I have had a*

spiritual experience that greatly changed my life; When I help others, I expect nothing in return; I have joy in my life because of my spirituality; My relationship with a higher power helps me love others more completely; My spiritual understanding continues to grow; I focus on what needs to be changed in me, not on what needs to be changed in others; In difficult times, I am still grateful; I have been through a time of suffering that led to spiritual growth; or I examine my actions to see if they reflect my values there is a positive correlation to students' feelings that their academic experience has had a positive influence on their intellectual growth and interest in ideas.

A significant positive correlation was found between the dependent variable (AI3) *I am satisfied with my academic experience at this university* and 10 independent variables of spirituality. The independent variables of *I can find meaning in times of hardship* ($r(233) = .194$, $p < .01$); *I find serenity by accepting things as they are* ($r(233) = .230$, $p < .01$); *I have a relationship with someone I can turn to for spiritual guidance* ($r(233) = .157$, $p < .05$); *When I help others, I expect nothing in return* ($r(233) = .216$, $p < .01$); *My relationship with a higher power helps me love others more completely* ($r(233) = .133$, $p < .05$); *My spiritual understanding continues to grow* ($r(233) = .186$, $p < .01$); *I focus on what needs to be changed in me, not on what needs to be changed in others* ($r(233) = .144$, $p < .05$); *In difficult times, I am still grateful* ($r(233) = .292$, $p < .01$); *I have been through a time of suffering that led to spiritual growth* ($r(233) = .147$, $p < .05$); and *I examine my actions to see if they reflect my values* ($r(233) = .264$, $p < .01$) were positively correlated with the dependent variable (AI3) *I am satisfied with my academic experience at this university*. This suggests that when the sample population exhibits spirituality aspects of *I can find meaning in times of hardship; I have a relationship with someone I can turn to for spiritual guidance; When I help others, I expect nothing in return; My*

relationship with a higher power helps me love others more completely; My spiritual understanding continues to grow; I focus on what needs to be changed in me, not on what needs to be changed in others; In difficult times, I am still grateful; I have been through a time of suffering that led to spiritual growth; or I examine my actions to see if they reflect my values there is a positive correlation to students' feelings that they are satisfied with their academic experience at their university.

A significant positive correlation was found between the independent variable (AI4) *Few of my courses this year have been intellectually stimulating* and two independent variables of spirituality. The independent variables of *In times of despair, I can find little reason to hope* ($r(233) = .283, p < .01$) and *I don't take time to appreciate nature* ($r(233) = .197, p < .01$) were positively correlated with the dependent variable (AI4) *Few of my courses this year have been intellectually stimulating*. This suggests that when the sample population exhibits spirituality aspects of *In times of despair, I can find little reason to hope*, or *I don't take time to appreciate nature* there is a positive correlation to students' feelings that few of the courses they have taken this year have been intellectually stimulating.

A significant positive correlation was found between the dependent variable (AI5) *My interest in ideas and intellectual matters has increased since coming to this university* and nine independent variables of spirituality. The independent variables of *I can find meaning in times of hardship* ($r(233) = .169, p < .01$); *I find serenity by accepting things as they are* ($r(233) = .176, p < .01$); *I have had a spiritual experience that greatly changed my life* ($r(233) = .134, p < .05$); *When I help others, I expect nothing in return* ($r(233) = .230, p < .01$); *My spiritual understanding continues to grow* ($r(233) = .135, p < .05$); *I focus on what needs to be changed in me, not on what needs to be changed in others* ($r(233) = .191, p < .01$); *In difficult times, I am*

still grateful ($r(233) = .345, p < .01$); *I have been through a time of suffering that led to spiritual growth* ($r(233) = .152, p < .05$); and *I examine my actions to see if they reflect my values* ($r(233) = .307, p < .01$) were positively correlated with the dependent variable (AI5) *My interest in ideas and intellectual matters has increased since coming to this university*. This suggests that when the sample population exhibits spirituality aspects of *I can find meaning in times of hardship; I find serenity by accepting things as they are; I have had a spiritual experience that greatly changed my life; When I help others, I expect nothing in return; My spiritual understanding continues to grow; I focus on what needs to be changed in me, not on what needs to be changed in others; In difficult times, I am still grateful; I have been through a time of suffering that led to spiritual growth*; or *I examine my actions to see if they reflect my values* there is a positive correlation to students' feelings that their interest in ideas and intellectual matters has increased since enrolling in their university.

A significant positive correlation was found between the dependent variable (AI6) *I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now than I was before coming to this university* and three independent variables of spirituality. The independent variables of *I can find meaning in times of hardship* ($r(233) = .143, p < .05$); *In difficult times, I am still grateful* ($r(233) = .177, p < .01$); and *I examine my actions to see if they reflect my values* ($r(233) = .211, p < .01$) were positively correlated with dependent variable (AI6) *I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now than I was before coming to this university*. This suggests that when the sample population exhibits spirituality aspects of *I can find meaning in times of hardship; In difficult times, I am still grateful*; or *I examine my actions to see if they reflect my values* there is a positive

correlation to students' feelings that they are more likely to attend a cultural event (for example, a concert, lecture, or art show) now than they were before enrolling in their university.

A significant negative correlation was found between the dependent variable (AI6) *I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now than I was before coming to this university* and one independent variable of spirituality. The independent variable *In times of despair, I can find little reason to hope* ($r(233) = -.146, p < .05$) was negatively correlated with the dependent variable (AI6) *I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now than I was before coming to this university*. This suggests that when the sample population exhibits spirituality aspects *In times of despair, I can find little reason to hope* there is a negative correlation to students' feeling that they are more likely to attend a cultural event (for example, a concert, lecture, or art show) now than they were before enrolling in their university.

A significant positive correlation was found between the dependent variable (AI7) *I have performed academically as well as I anticipated I would* and five independent variables of spirituality. The independent variables of *I set aside time for meditation and/or self-reflection* ($r(233) = .194, p < .01$); *I can find meaning in times of hardship* ($r(233) = .134, p < .05$); *I find serenity by accepting things as they are* ($r(233) = .172, p < .01$); *In difficult times, I am still grateful* ($r(233) = .277, p < .01$); and *I examine my actions to see if they reflect my values* ($r(233) = .284, p < .01$) were positively correlated with the dependent variable (AI7) *I have performed academically as well as I anticipated I would*. This suggests that when the sample population exhibits spirituality aspects *I set aside time for meditation and/or self-reflection, I can find meaning in times of hardship; I find serenity by accepting things as they are; In difficult times, I am still grateful; or I examine my actions to see if they reflect my values* there is a positive

correlation to students' feelings that they have performed academically as well as they anticipated they would.

Hierarchical Regression Models for Spirituality and Academic and Intellectual Development

Table 28 presents the results of the linear regression models of the dependent variable AI1 (*I am satisfied with the extent of my intellectual development since enrolling in this university*) and the independent variables *In difficult times, I am still grateful; I find serenity by accepting things as they are; and When I help others, I expect nothing in return*. The models display the R^2 and the change (Δ) in R^2 at the bottom. The significance level was set at $p < .05$.

Table 28

Hierarchical Multiple Regression Models for Academic and Intellectual Development and Spirituality: AI1

SIBS-R Spirituality Scale	ASIS Academic and Intellectual Development Scale: AI1								
	Model 1			Model 2			Model 3		
	β	t	Sig	β	t	Sig	β	t	Sig
In difficult times, I am still grateful.	.213	5.185	.000**	.169	3.945	.000**	.131	2.877	.004**
I find serenity by accepting things as they are.				.102	3.025	.003**	.095	2.804	.005**
When I help others, I expect nothing in return.							.085	2.266	.024*
R^2	.104			.139			.157		
Δ in R^2				.035			.018		

Notes. FC1 = Few of the faculty members I have had contact with are generally interested in students.

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 10.4 percent of the variance in the dependent variable of AI1. The predictive independent variable in this model is *In difficult times, I am still grateful* ($\beta = .213$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable AI1.

Model 2 indicates that the independent variables are predictive at 13.9 percent of the variance when the combined predictive independent variables are *In difficult times, I am still grateful* ($\beta = .169$) and *I find serenity by accepting things as they are* ($\beta = .102$). In this model, both independent variables have a positive β , indicating a positive effect on the dependent variable AI1. When both of these independent variables are combined, the predictability improves by 3.5 percent, and although a 13.9 percent R^2 indicates a low level of predictability, the model does display a positive predictive effect on the dependent variable AI1, *I am satisfied with the extent of my intellectual development since enrolling in this university*.

Model 3 indicates that the independent variables are predictive at 15.7 percent of the variance when the combined predictive independent variables are *In difficult times, I am still grateful* ($\beta = .131$); *I find serenity by accepting things as they are* ($\beta = .095$); and *When I help others, I expect nothing in return* ($\beta = .085$). In this model, all three independent variables have a positive β , indicating a positive effect on the dependent variable AI1. When all three of these independent variables are combined, the predictability improves by 1.8 percent and although a 15.7 percent R^2 indicates a low level of predictability, the model does display a positive predictive effect on the dependent variable AI1, *I am satisfied with the extent of my intellectual development since enrolling in this university*.

Table 29 presents the results of the linear regression models of the dependent variable AI2 (*My academic experience has had a positive influence on my intellectual growth and interest in ideas*) and the independent variables *In difficult times, I am still grateful* and *I find serenity by accepting things as they are*. The models display the R^2 and the change (Δ) in R^2 at the bottom. The significance level was set at $p < .05$.

Table 29

Hierarchical Multiple Regression Models for Academic and Intellectual Development and Spirituality: AI2

SIBS-R Spirituality Scale	ASIS Academic and Intellectual Development Scale: AI2					
	Model 1			Model 2		
	β	t	Sig	β	t	Sig
In difficult times, I am still grateful.	.217	5.333	.000**	.178	4.168	.000**
I find serenity by accepting things as they are.				.092	2.729	.007**
R ²	.110			.138		
Δ in R ²				.028		

Notes. AI2 = My academic experience has had a positive influence on my intellectual growth and interest in ideas.

** p < .01

* p < .05

Model 1 indicates that the independent variable is predictive at 11.0 percent of the variance in the dependent variable of AI2. The predictive independent variable in this model is *In difficult times, I am still grateful* ($\beta = .217$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable AI2.

Model 2 indicates that the independent variables are predictive at 13.8 percent of the variance when the combined predictive independent variables are *In difficult times, I am still grateful* ($\beta = .178$) and *I find serenity by accepting things as they are* ($\beta = .092$). In this model, both independent variables have a positive β , indicating a positive effect on the dependent variable AI2. When both of these independent variables are combined, the predictability improves by 2.8 percent, and although a 13.8 percent R^2 indicates a low level of predictability, the model does display a positive predictive effect on the dependent variable AI2, *My academic experience has had a positive influence on my intellectual growth and interest in ideas*.

Table 30 presents the results of the linear regression models of the dependent variable AI3 (*I am satisfied with my academic experience at this university*) and the independent variables

In difficult times, I am still grateful and *I find serenity by accepting things as they are*. The models display the R^2 and the change (Δ) in R^2 at the bottom. The significance level was set at $p < .05$.

Table 30

Hierarchical Multiple Regression Models for Academic and Intellectual Development and Spirituality: AI3

SIBS-R Spirituality Scale	ASIS Academic and Intellectual Development Scale: AI3					
	Model 1			Model 2		
	β	t	Sig	β	t	Sig
In difficult times, I am still grateful.	.216	4.635	.000**	.179	3.643	.000**
I find serenity by accepting things as they are.				.087	2.245	.026*
R^2	.085			.105		
Δ in R^2				.020		

Notes. AI3 = I am satisfied with my academic experience at this university.

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 8.5 percent of the variance in the dependent variable of AI3. The predictive independent variable in this model is *In difficult times, I am still grateful* ($\beta = .216$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable AI3.

Model 2 indicates that the independent variables are predictive at 10.5 percent of the variance when the combined predictive independent variables are *In difficult times, I am still grateful* ($\beta = .179$) and *I find serenity by accepting things as they are* ($\beta = .087$). In this model, both independent variables have a positive β , indicating a positive effect on the dependent variable AI3. When both of these independent variables are combined, the predictability improves by 2.0 percent, and although a 10.5 percent R^2 indicates a low level of predictability,

the model does display a positive predictive effect on the dependent variable AI3, *I am satisfied with my academic experience at this university*.

Table 31 presents the results of the linear regression model of the dependent variable AI4 (*Few of my courses this year have been intellectually stimulating*) and the independent variable *In times of despair, I can find little reason to hope*. The model displays the R^2 at the bottom. The significance level was set at $p < .05$.

Table 31

Hierarchical Multiple Regression Model for Academic and Intellectual Development and Spirituality: AI4

SIBS-R Spirituality Scale	ASIS Academic and Intellectual Development Scale: AI4		
		Model 1	
	β	t	Sig
In times of despair, I can find little reason to hope.	.194	4.491	.000**
R^2	.080		
Δ in R^2	-		

Notes. AI4 = Few of my courses this year have been intellectually stimulating.

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 8.0 percent of the variance in the dependent variable of AI4. The predictive independent variable in this model is *In times of despair, I can find little reason to hope* ($\beta = .194$). Within this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable FC4. Although a 8.0 percent R^2 is a low level of predictability, the model does display a positive predictive effect on the dependent variable AI4, *Few of my courses this year have been intellectually stimulating*.

Table 32 presents the results of the linear regression models of the dependent variable AI6 (*I am more likely to attend a cultural event (for example, a concert, lecture, or art show)*)

now than I was before coming to this university) and the independent variables *I examine my actions to see if they reflect my values* and *In times of despair, I can find little reason to hope*.

The models display the R^2 and the change (Δ) in R^2 at the bottom. The significance level was set at $p < .05$.

Table 32

Hierarchical Multiple Regression Models for Academic and Intellectual Development and Spirituality: AI6

SIBS-R Spirituality Scale	ASIS Academic and Intellectual Development Scale: AI6					
	Model 1			Model 2		
	β	t	Sig	β	t	Sig
I examine my actions to see if they reflect my values.	.183	3.276	.001**	.191	3.443	.001**
In times of despair, I can find little reason to hope.				-.095	-2.480	.014*
R^2	.044			.069		
Δ in R^2				.025		

Notes. AI6 = I am more likely to attend a cultural event (for example, a concert, a lecture, or art show) now than I was before coming to this university.

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 4.4 percent of the variance in the dependent variable of AI6. The predictive independent variable in this model is *I examine my actions to see if they reflect my values* ($\beta = .183$). Within this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable AI6.

Model 2 indicates that the independent variables are predictive at 6.9 percent of the variance when the combined predictive independent variables are *I examine my actions to see if they reflect my values* ($\beta = .183$) and *In times of despair, I can find little reason to hope* ($\beta = -.095$). In this model, one independent variable has a positive β , indicating a positive effect on the dependent variable AI6, whereas the other independent variable has a negative β , indicating a

negative effect on the dependent variable AI6. When both of these independent variables are combined, the predictability improves by 2.5 percent, and although a 6.9 percent R^2 indicates a low level of predictability, the model does display a predictive effect on the dependent variable AI6, *I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now than I was before coming to this university.*

Table 33 presents the results of the linear regression models of the dependent variable AI7 (*I have performed academically as well as I anticipated I would*) and the independent variables *I examine my actions to see if they reflect my values* and *In difficult times, I am still grateful*. The models display the R^2 and the change (Δ) in R^2 at the bottom. The significance level was set at $p < .05$.

Table 33

Hierarchical Multiple Regression Models for Academic and Intellectual Development and Spirituality: AI7

SIBS-R Spirituality Scale	ASIS Academic and Intellectual Development Scale: AI7					
	Model 1			Model 2		
	β	t	Sig	β	t	Sig
I examine my actions to see if they reflect my values.	.212	4.501	.000**	.144	2.639	.009**
In difficult times, I am still grateful.				.146	2.452	.015*
R^2	.081			.104		
Δ in R^2				.023		

Notes. AI7 = I have performed academically as well as I anticipated I would.

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 8.1 percent of the variance in the dependent variable of AI7. The predictive independent variable in this model is *I examine my actions to see if they reflect my values* ($\beta = .212$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable AI7.

Model 2 indicates that the independent variables are predictive at 10.4 percent of the variance when the combined predictive independent variables are *I examine my actions to see if they reflect my values* ($\beta = .144$) and *In difficult times, I am still grateful* ($\beta = .146$). In this model, both independent variables have a positive β , indicating a positive effect on the dependent variable AI7. When both of these independent variables are combined, the predictability improves by 2.3 percent, and although a 10.4 percent R^2 is a low level of predictability, the model does display a positive predictive effect on the dependent variable AI7, *I have performed academically as well as I anticipated I would*.

Findings for Spirituality and Institutional and Goal Commitment

Data were collected from the survey to compare scores related to spirituality and institutional and goal commitment. The data collected within these two sets of items addresses the following research question: Is there a relationship between *spirituality* and *institutional and goal commitment* for student-athletes?

The dependent variables of Institutional and Goal Commitment include:

1. It is important for me to graduate from college (referred to as IG1).
2. I am confident that I made the right decision in choosing to attend this university (referred to as IG2).
3. It is likely that I will register at this university next fall (referred to as IG3).
4. It is not important for me to graduate from this university (referred to as IG4).
5. I have no idea at all what I want to major in (referred to as IG5).
6. Getting good grades is not important to me (referred to as IG6).

Comparing the scores of the 22-items of the SIBS-R spirituality scale to the scores of the six items of Institutional and Goal Commitment of the ASIS scale, there are 11 significant

positive correlations at the $p > .05$ level, 11 significant positive correlations at the $p > .01$ level, and only two significant negative correlations at the $p > .05$ level found using a Pearson-r, 2-tailed test.

Pearson Correlation for Spirituality and Institutional and Goal Commitments

Table 34 outlines the Pearson Correlation coefficients between spirituality and institutional and goal commitments.

There was no significant correlation found between the dependent variable (IG1) *It is important for me to graduate from college* and any of the independent variables of spirituality.

A significant positive correlation was found between the dependent variable (IG2) *I am confident that I made the right decision in choosing to attend this university* and 11 independent variables of spirituality. The independent variables of *I find serenity by accepting things as they are* ($r(233) = .340, p < .01$); *I have a relationship with someone I can turn to for spiritual guidance* ($r(233) = .195, p < .01$); *I have a personal relationship with a power greater than myself* ($r(233) = .138, p < .05$); *I have had a spiritual experience that greatly changed my life* ($r(233) = .156, p < .05$); *When I help others, I expect nothing in return* ($r(233) = .141, p < .05$); *I have joy in my life because of my spirituality* ($r(233) = .146, p < .05$); *My relationship with a higher power helps me love others more completely* ($r(233) = .206, p < .01$); *Spiritual writings enrich my life* ($r(233) = .162, p < .05$); *My spiritual understanding continues to grow* ($r(233) = .173, p < .01$); *In difficult times, I am still grateful* ($r(233) = .278, p < .01$); and *I examine my actions to see if they reflect my values* ($r(233) = .172, p < .01$) were positively correlated with the dependent variable (IG1) *I am confident that I made the right decision in choosing to attend this university*. This suggests that when the sample population exhibits spirituality aspects *I find serenity by accepting things as they are*; *I have a relationship with someone I can turn to for*

spiritual guidance; I have a personal relationship with a power greater than myself; I have had a spiritual experience that greatly changed my life; When I help others, I expect nothing in return; I have joy in my life because of my spirituality; My relationship with a higher power helps me love others more completely; Spiritual writings enrich my life; My spiritual understanding continues to grow; In difficult times, I am still grateful; or I examine my actions to see if they reflect my values there is a positive correlation to students' feelings that they are confident they made the right decision in choosing to attend their university.

A significant negative correlation was found between the dependent variable (IG2) *I am confident that I made the right decision in choosing to attend this university* and one independent variable of spirituality. The independent variable of *How spiritual do you consider yourself?* ($r(233) = .155, p < .05$) was negatively correlated with the dependent variable (IG1) *I am confident that I made the right decision in choosing to attend this university*. This suggests that when the sample population exhibits spirituality aspects *How spiritual do you consider yourself?* there is a negative correlation to students' feelings that they are confident they made the right decision in choosing to attend their university.

A significant positive correlation was found between the dependent variable (IG3) *It is likely that I will register at this university next fall* and three independent variables of spirituality. The independent variables of *I can find meaning in times of hardship* ($r(233) = .135, p < .05$); *In difficult times, I am still grateful* ($r(233) = .200, p < .01$); and *I examine my actions to see if they reflect my values* ($r(233) = .165, p < .05$) were positively correlated with the dependent variable (IG3) *It is likely that I will register at this university next fall*. This suggests that when the sample population exhibits spirituality aspects *I can find meaning in times of hardship; In difficult times, I am still grateful; or I examine my actions to see if they reflect my values* there is

a positive correlation to students' feelings that they will register at the same university in the next fall.

A significant positive correlation was found between the dependent variable (IG4) *It is not important for me to graduate from this university* and one independent variable of spirituality. The independent variable of *In times of despair, I can find little reason to hope* ($r(233) = .188, p < .01$) was positively correlated with the dependent variable (IG4) *It is not important for me to graduate from this university*. This suggests that when the sample population exhibits spirituality aspects *In times of despair, I can find little reason to hope* there is a positive correlation to students' feelings that it is not important for them to graduate from their university.

A significant negative correlation was found between the dependent variable (IG4) *It is not important for me to graduate from this university* and one independent variable of spirituality. The independent variable of *I have experienced healing after prayer* ($r(233) = -.147, p < .05$) was negatively correlated with the dependent variable (IG4) *It is not important for me to graduate from this university*. This suggests that when the sample population exhibits spirituality aspects *I have experienced healing after prayer* there is a negative correlation to students' feelings that it is not important for them to graduate from their university.

Table 34

Pearson Correlations for Spirituality and Institutional and Goal Commitment

SIBS-R Spirituality Scale	ASIS Institutional and Goal Commitment				
	IG2	IG3	IG4	IG5	IG6
I can find meaning in times of hardship.		.135*			
I find serenity by accepting things as they are.	.340**				
I have a relationship with someone I can turn to for spiritual guidance.	.195**				
Prayers do not really change what happens.					.182**
In times of despair, I can find little reason to hope.			.188*	.151*	.160*
I have a personal relationship with a power greater than myself.	.138*				
I have had a spiritual experience that greatly changed my life.	.156*				
When I help others, I expect nothing in return.	.141*			.169**	
I don't take time to appreciate nature.				.248**	
I have joy in my life because of my spirituality.	.146*				
My relationship with a higher power helps me love others more completely.	.206**				
Spiritual writings enrich my life.	.162*				
I have experienced healing after prayer.			-.147*		
My spiritual understanding continues to grow.	.173**				
In difficult times, I am still grateful.	.278**	.200**			.130*
I examine my actions to see if they reflect my values.	.172**	.165*			
How spiritual do you consider yourself?	-.155*				

Notes. IG2 = I am confident that I made the right decision in choosing to attend this university.

IG3 = It is likely that I will register at this university next fall.

IG4 = It is not important for me to graduate from this university.

IG5 = I have no idea at all what I want to major in.

IG6 = Getting good grades is not important to me.

** $p < .01$

* $p < .05$

A significant positive correlation was found between the dependent variable (IG5) *I have no idea at all what I want to major in* and three independent variables of spirituality. The independent variables of *In times of despair, I can find little reason to hope* ($r(233) = .151, p < .05$); *When I help others, I expect nothing in return* ($r(233) = .169, p < .01$); and *I don't take time to appreciate nature* ($r(233) = .248, p < .01$) were positively correlated with the dependent variable (IG5) *I have no idea at all what I want to major in*. This suggests that when the sample population exhibits spirituality aspects *In times of despair, I can find little reason to hope; When I help others, I expect nothing in return; or I don't take time to appreciate nature* there is a positive correlation to students' feeling that they have no idea at all what they want to major in.

A significant positive correlation was found between the dependent variable (IG6) *Getting good grades is not important to me* and three independent variables of spirituality. The independent variables of *Prayers do not really change what happens* ($r(233) = .182, p < .01$); *In times of despair, I can find little reason to hope* ($r(233) = .160, p < .05$); and *In difficult times, I am still grateful* ($r(233) = .130, p < .05$) were positively correlated with the dependent variable (IG6) *Getting good grades is not important to me*. This suggests that when the sample population exhibits spirituality aspects *Prayers do not really change what happens; In times of despair, I can find little reason to hope; or In difficult times, I am still grateful* there is a positive correlation to students' feeling that getting good grades is not important to them.

Hierarchal Regression Models for Spirituality and Institutional and Goal Commitment

Table 35 presents the results of the linear regression models of the dependent variable IG2 (*I am confident that I made the right decision in choosing to attend this university*) and the independent variables *I find serenity by accepting things as they are* and *In difficult times, I am*

still grateful. The models display the R^2 and the change (Δ) in R^2 at the bottom. The significance level was set at $p < .05$.

Table 35

Hierarchical Multiple Regression Models for Institutional and Goal Commitment and Spirituality: IG2

SIBS-R Spirituality Scale	ASIS Institutional and Goal Commitment Scale: IG2					
	Model 1			Model 2		
	β	t	Sig	β	t	Sig
I find serenity by accepting things as they are.	.217	5.493	.000**	.177	4.290	.000**
In difficult times, I am still grateful.				.149	2.841	.005**
R^2	.116			.145		
Δ in R^2				.029		

Notes. IG2 = I am confident that I made the right decision in choosing to attend this university.

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 11.6 percent of the variance in the dependent variable of IG2. The predictive independent variable in this model is *I find serenity by accepting things as they are* ($\beta = .217$). Within this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable IG2.

Model 2 indicates that the independent variables are predictive at 14.5 percent of the variance when the combined predictive independent variables are *I find serenity by accepting things as they are* ($\beta = .177$) and *In difficult times, I am still grateful* ($\beta = .149$). In this model, both independent variables have a positive β , indicating a positive effect on the dependent variable IG2. When both of these independent variables are combined, the predictability improves by 2.9 percent, and although a 14.5 percent R^2 indicates a low level of predictability, the model does display a positive predictive effect on the dependent variable IG2, *I am confident I made the right decision in choosing to attend this university*.

Table 36 presents the results of the linear regression model of the dependent variable IG3 (*It is likely that I will register at this university next fall*) and the independent variable *In difficult times, I am still grateful*. The model displays the R^2 at the bottom. The significance level was set at $p < .05$.

Table 36

Hierarchical Multiple Regression Model for Institutional and Goal Commitment and Spirituality: IG3

SIBS-R Spirituality Scale	ASIS Institutional and Goal Commitment Scale: IG3		
	Model 1		
	β	t	Sig
<i>In difficult times, I am still grateful.</i>	.186	3.105	.000**
R^2	.040		
Δ in R^2	-		

Notes. IG3 = *It is likely that I will register at this university next fall.*

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 4.0% of the variance in the dependent variable of IG3. The predictive independent variable in this model is *In difficult times, I am still grateful* ($\beta = .186$). Within this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable IG3. Although a 4.0% R^2 is a low level of predictability, the model does display a positive predictive effect on the dependent variable IG3, *It is likely that I will register at this university next fall.*

Table 37 presents the results of the linear regression models of the dependent variable IG4 (*It is not important for me to graduate from this university*) and the independent variables *In times of despair, I can find little reason to hope* and *I have experienced healing after prayer*. The models display the R^2 and the change (Δ) in R^2 at the bottom. The significance level was set at $p < .05$.

Table 37

Hierarchical Multiple Regression Models for Institutional and Goal Commitment and Spirituality: IG4

SIBS-R Spirituality Scale	ASIS Institutional and Goal Commitment Scale: IG4					
	Model 1			Model 2		
	β	t	Sig	β	t	Sig
In times of despair, I can find little reason to hope.	.123	2.905	.004**	.120	2.862	.005**
I have experienced healing after prayer.				-.090	-2.202	.029*
R ²	.035			.055		
Δ in R ²				.020		

Notes. IG4 = It is not important for me to graduate from this university.

** p < .01

* p < .05

Model 1 indicates that the independent variable is predictive at 3.5 percent of the variance in the dependent variable of IG4. The predictive independent variable in this model is *In times of despair, I can find little reason to hope* ($\beta = .123$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable IG4.

Model 2 indicates that the independent variables are predictive at 5.5 percent of the variance when the combined predictive independent variables are *In times of despair, I can find little reason to hope* ($\beta = .120$) and *I have experienced healing after prayer* ($\beta = -.090$). In this model, one independent variable has a positive β , indicating a positive effect on the dependent variable IG4, whereas the other independent variable has a negative β , indicating a negative effect on the dependent variable IG4. When both of these independent variables are combined, the predictability improves by 2.0 percent, and although a 5.5 percent R^2 indicates a low level of predictability, the model does display a predictive effect on the dependent variable IG4, *It is not important for me to graduate from this university*.

Table 38 presents the results of the linear regression models of the dependent variable IG5 (*I have no idea at all what I want major in*) and the independent variables *I don't take time to appreciate nature* and *When I help others, I expect nothing in return*. The models display the R^2 and the change (Δ) in R^2 at the bottom. The significance level was set at $p < .05$.

Table 38

Hierarchical Multiple Regression Models for Institutional and Goal Commitment and Spirituality: IG5

SIBS-R Spirituality Scale	ASIS Institutional and Goal Commitment Scale: IG5					
	Model 1			Model 2		
	β	t	Sig	β	t	Sig
<i>I don't take time to appreciate nature.</i>	.143	3.898	.000**	.134	3.641	.000**
<i>When I help others, I expect nothing in return.</i>				.098	2.234	.026*
R^2	.062			.082		
Δ in R^2				.020		

Notes. IG5 = I have no idea at all what I want to major in.

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 6.2 percent of the variance in the dependent variable of IG5. The predictive independent variable in this model is *I don't take time to appreciate nature* ($\beta = .143$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable IG5.

Model 2 indicates that the independent variables are predictive at 8.2 percent of the variance when the combined predictive independent variables are *I don't take time to appreciate nature* ($\beta = .134$) and *When I help others, I expect nothing in return* ($\beta = .098$). In this model, both independent variables have a positive β , indicating a positive effect on the dependent variable IG5. When both of these independent variables are combined, the predictability improves by 2.0 percent, and although a 8.2 percent R^2 indicates a low level of predictability, the

model does display a positive predictive effect on the dependent variable IG5, *I have no idea at all what I want to major in.*

Table 39 presents the results of the linear regression model of the dependent variable IG6 (*Getting good grades is not important to me*) and the independent variable *Prayers do not really change what happens*. The model displays the R^2 at the bottom. The significance level was set at $p < .05$.

Table 39

Hierarchical Multiple Regression Models for Institutional and Goal Commitment and Spirituality: IG6

SIBS-R Spirituality Scale	ASIS Institutional and Goal Commitment Scale: IG6		
		Model 1	
	β	t	Sig
Prayers do not really change what happens.	.082	2.810	.005**
R^2	.033		
Δ in R^2	-		

Notes. IG6 = Getting good grades is not important to me.

** $p < .01$

* $p < .05$

Model 1 indicates that the independent variable is predictive at 3.3 percent of the variance in the dependent variable of IG6. The predictive independent variable in this model is *Prayers do not really change what happens* ($\beta = .082$). In this model the independent variable has a positive β , indicating a positive predictive effect on the dependent variable IG6. Although a 3.3 percent R^2 is a low level of predictability, the model does display a positive predictive effect on the dependent variable IG6, *Getting good grades is not important to me.*

Summary of Findings

Throughout this chapter the researcher has provided an analysis of the data retrieved from the sample population when tested for traits of spirituality using the SIBS-R scale of spirituality

(Hatch et al., 1998) and the ASIS scale of academic and social integration (Pascarella and Terenzini, 1980). The research population included approximately 2,400 varsity-level intercollegiate student-athletes from the Northeast Conference (NEC) competing in the NCAA Division I tier. The study participants consisted of 233 student-athletes from six of the NEC member-institutions. When comparing results of the 22-item SIBS-R instrument to the 30-item ASIS instrument, there is a significant frequency of correlations among the independent variables of spirituality and the dependent variables of academic and social integration.

In comparing the five correlation tables and the 29 regression model tables, it is interesting to consider the combination of spirituality traits that indicate a successful or unsuccessful student when compared to the attributes provided by the academic and social integration scales. Table 40 provides a summary of those correlations where the independent variables of spirituality return a significant correlation (either positive or negative) with dependent variables of academic and social integration. Based on the total number of significant correlations found with each spirituality trait to academic and social integration attribute, the spirituality traits that returned the highest number of significant correlations include (in descending order):

1. In difficult times, I am still grateful. = 19 significant correlations
2. When I help others, I expect nothing in return. = 15 significant correlations
3. I examine my actions to see if they reflect my values. = 15 significant correlations (1 correlation is negative)
4. I find serenity by accepting things as they are. = 14 significant correlations
5. In times of despair, I can find little reason to hope. = 12 significant correlations (1 correlation is negative)

6. I can find meaning in times of hardship. = 11 significant correlations

Despite the frequency of correlations that were returned by the study, it is important to distinguish among the positive and negative correlations. This section will examine each spirituality trait listed above that returned a high frequency of correlations to various traits of academic and social integration. Tables 40 through 45 compare each of the aforementioned spirituality traits to the returned significant correlations. Additionally, it is important to understand the significance and meaning of each correlation by observing the polarity (positive or negative) between the spirituality trait (independent variable) and the academic and social integration traits (dependent variables). The far-right column of each table, titled Polarity, distinguishes each correlation as positive or negative based upon the outcome of the Pearson r correlational testing. A positive correlation, or polarity, would describe the relationship between the two variables as moving in the same direction – an increase in one is correlated to an increase in the other. Conversely, a negative correlation, or polarity, would describe the relationship between the two variables as moving in opposite directions – in other words, an increase in one is correlated to a decrease in the other.

Table 40

Summary of Significant Correlations

SIBS-R Spirituality Scale	ASIS Academic and Social Integration Scales					
	PG	IF	FC	AI	IG	TOT
I set aside time for meditation and/or self-reflection	1-	4	1	2		7, 1-
I can find meaning in times of hardship.		2	2	6	1	11
A person can be fulfilled without pursuing an active spiritual life.	1-	1-				2-
I find serenity by accepting things as they are.	2	5	1	5	1	14
I have a relationship with someone I can turn to for spiritual guidance.			1	3	1	5
Prayers do not really change what happens.	2	2-			1	3, 2-
In times of despair, I can find little reason to hope.	4		3	1, 1-	3	11, 1-
I have a personal relationship with a power greater than myself.				1	1	2
I have had a spiritual experience that greatly changed my life.				3	1	4
When I help others, I expect nothing in return.	4	3	2	4	2	15
I don't take time to appreciate nature.	1		3	1	1	6
I have joy in my life because of my spirituality.			1	2	1	4
My relationship with a higher power helps me love others more completely.				3	1	4
Spiritual writings enrich my life.					1	1
I have experienced healing after prayer					1-	1-
My spiritual understanding continues to grow.			1	4	1	6
I focus on what needs to be changed in me, not on what needs to be changed in others.		3	2	4		9
In difficult times, I am still grateful.	4	4	2	6	3	19
I solve my problems without using spiritual resources.	1-					1-
I have been through a time of suffering that led to spiritual growth.				4		4
I examine my actions to see if they reflect my values.	1-	4	2	6	2	14, 1-
How spiritual do you consider yourself?					1-	1-
TOTAL Correlations by ASIS Scale	17,4-	25,3-	21	55,1-	21,2-	139,10-

Notes. PG = Peer-Group Interactions Scale (7 items), IF = Interactions with Faculty Scale (5 items)

FC = Faculty Concern for Student Scale (5 items), AI = Academic and Intellectual Development Scale (7 items)

IG = Institutional and Goal Commitment Scale (6 items), TOT = Total number of significant correlations per spirituality item

Table 41 provides a summary of those significant correlations returned for the spirituality trait of *In difficult times, I am still grateful*. As displayed by the polarity column, all correlations are positively associated between the variables. Table 42 provides a summary of those significant correlations returned for the spirituality trait of *When I help others, I expect nothing in return*. As displayed by the polarity column, all correlations are positively associated between the variables. Table 43 provides a summary of those significant correlations returned for the spirituality trait of *I examine my actions to see if they reflect my values*. As displayed by the polarity column, all correlations are positively associated between the variables with the exception of the dependent variable of *Most students at this university have values and attitudes different from my own*. This suggests that as the sample population examines their actions to see if they reflect their values they are finding that either most students at their university have values and attitudes that are similar to their own, or that only few other students at their university have values and attitudes that are different from their own. Table 44 provides a summary of those significant correlations returned for the spirituality trait of *I find serenity by accepting things as they are*. As displayed by the polarity column, all correlations are positively associated between the variables. Table 45 provides a summary of those significant correlations returned for the spirituality trait of *In times of despair, I can find little reason to hope*. As displayed by the polarity column, all correlations are positively associated between the variables with the exception of the dependent variable *I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now than I was before coming to this university*. This suggests that as the sample population increases in their feelings that in times of despair, they can find little reason to hope, they are finding themselves less likely to attend a cultural event (for example, a concert, lecture, or art show) now than they were before attending their

university. Table 46 provides a summary of those significant correlations returned for the spirituality trait of *I can find meaning in times of hardship*. As displayed by the polarity column, all correlations are positively associated between the variables.

Table 47 provides a summary of regression models for which the independent variables of spirituality return a predictive factor with three or more dependent variables of academic and social integration. Based on the total number of predictive factors found with each spirituality trait to academic and social integration attribute, the spirituality traits that returned the highest number of predictive factors includes (in descending order):

1. In difficult times, I am still grateful. = predicted 11 dependent variables
2. In times of despair, I can find little reason to hope. = predicted 10 dependent variables (1 predictive value is negative)
 - a. Although 9 dependent variables were positively predicted by the independent variable, 8 of those 9 dependent variables were negatively associated with academic and social integration. In other words, the independent variable of *In times of despair, I can find little reason to hope* negatively predicted 1 positive attribute of academic and social integration and predicted 8 negative attributes of academic and social integration. Only 1 positive attribute of academic and social integration was positively predicted by the independent variable.
3. I find serenity by accepting things as they are. = predicted 9 dependent variables
4. When I help others, I expect nothing in return. = predicted 5 dependent variables

Considering that all four of the spirituality items with the highest frequency of predictability also returned a high number of significant correlations, we can then consider constructing a model of spirituality traits that are more likely to predict student success within academic and

social integration. This model will compare the four most predictive spirituality traits with their corresponding academic and social integration attributes.

In reviewing the results of the study in relation to the five research questions, it is clear that there is indeed a significant correlational relationship between spirituality and all five scales of academic and social integration. In reviewing Tables 40 and 47 in particular, as summaries of both frequency of correlation and frequency of returned predictive values between traits of spirituality and academic and social integration, educators can begin to develop a profile of persisters. Persisters, who by definition indicate attributes of academic and social integration – as observed in Pascarella and Terenzini’s model (1980), appear to show many traits of spirituality within this study, particularly the traits of acceptance of life circumstances, hopefulness, gratitude, and altruism. It is critical to note the importance of the positive or negative phrasing of items found on both scales to accurately interpret the correlations and regressions.

Based on the results of this study a successful, persisting student, as defined by the behaviors and attitudes identified in the Academic and Social Integration Scales (ASIS), would possess the spirituality traits of acceptance of life circumstances, hopefulness, gratitude, and altruism. Conversely, it is observed that an unsuccessful, non-persisting student, as defined by the behaviors and attitudes identified in the Academic and Social Integration Scales (ASIS), would lack the spirituality traits of acceptance of life circumstances, hopefulness, gratitude, and altruism.

Table 41

Pearson Correlations for Spirituality Trait: In difficult times, I am still grateful

ASIS Academic and Social Integration Scale Items	Correlation	Polarity
Since coming to this university, I have developed close personal relationships with other students. (PG)	.183**	+
The student friendships I have developed at this university have been personally satisfying. (PG)	.154*	+
My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values. (PG)	.263**	+
My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest in ideas. (PG)	.237**	+
My nonclassroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes. (IF)	.206**	+
My nonclassroom interactions with faculty have had a positive influence on my career goals and aspirations. (IF)	.215**	+
Since coming to this university I have developed a close, personal relationship with at least one faculty member. (IF)	.151*	+
I am satisfied with the opportunities to meet and interact formally with faculty members. (IF)	.166*	+
Most faculty are interested in helping students grow in more than just academic areas. (FC)	.273**	+
Most faculty members are genuinely interested in teaching. (FC)	.262**	+
I am satisfied with the extent of my intellectual development since enrolling in this university. (AI)	.323**	+
My academic experience has had a positive influence on my intellectual growth and interest in ideas. (AI)	.331**	+
I am satisfied with my academic experience at this university. (AI)	.292**	+
My interest in ideas an intellectual matters has increased since coming to this university. (AI)	.345**	+
I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now than I was before coming to this university. (AI)	.177**	+
I have performed academically as well as I anticipated I would. (AI)	.277**	+
I am confident that I made the right decision in choosing to attend this university. (IG)	.278**	+
It is likely that I will register at this university next fall. (IG)	.200**	+
Getting good grades is not important to me. (IG)	.130*	+

Notes. PG = ASIS Peer-Group Interactions Scale (7 items), IF = ASIS Interactions with Faculty Scale (5 items)
 FC = ASIS Faculty Concern for Student Scale (5 items), AI = ASIS Academic and Intellectual Development Scale (7 items)
 IG = ASIS Institutional and Goal Commitment Scale (6 items), **p < 0.01 level, *p < 0.05 level

Table 42

Pearson Correlations for Spirituality Trait: When I help others, I expect nothing in return.

ASIS Academic and Social Integration Scale Items	Correlation	Polarity
Since coming to this university, I have developed close personal relationships with other students. (PG)	.143*	+
The student friendships I have developed at this university have been personally satisfying. (PG)	.184**	+
My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values. (PG)	.204**	+
My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest in ideas. (PG)	.178**	+
My nonclassroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes. (IF)	.210**	+
My nonclassroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas. (IF)	.160*	+
I am satisfied with the opportunities to meet and interact informally with faculty members. (IF)	.236**	+
Most faculty are interested in helping students grow in more than just academic areas. (FC)	.165*	+
Most faculty members are genuinely interested in teaching. (FC)	.208**	+
I am satisfied with the extent of my intellectual development since enrolling in this university. (AI)	.275**	+
My academic experience has had a positive influence on my intellectual growth and interest in ideas. (AI)	.259**	+
I am satisfied with my academic experience at this university. (AI)	.216**	+
My interest in ideas and intellectual matters has increased since coming to this university. (AI)	.230**	+
I am confident that I made the right decision in choosing to attend this university. (IG)	.141*	+
I have no idea at all what I want to major in. (IG)	.169**	+

Notes. PG = ASIS Peer-Group Interactions Scale (7 items)

IF = ASIS Interactions with Faculty Scale (5 items)

FC = ASIS Faculty Concern for Student Scale (5 items)

AI = ASIS Academic and Intellectual Development Scale (7 items)

IG = ASIS Institutional and Goal Commitment Scale (6 items)

**p < 0.01 level

*p < 0.05 level

Table 43

Pearson Correlations for Spirituality Trait: I examine my actions to see if they reflect my values.

ASIS Academic and Social Integration Scale Items	Correlation	Polarity
Most students at this university have values and attitudes different from my own. (PG)	-.160*	-
My nonclassroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes. (IF)	.154*	+
My nonclassroom interactions with faculty have had a positive influence on my career goals and aspirations. (IF)	.136*	+
Since coming to this university, I have developed a close, personal relationship with at least one faculty member. (IF)	.131*	+
I am satisfied with the opportunities to meet and interact informally with faculty members. (IF)	.133*	+
Most faculty are interested in helping students grow in more than just academic areas. (FC)	.210**	+
Most faculty members are genuinely interested in teaching. (FC)	.196**	+
I am satisfied with the extent of my intellectual development since enrolling in this university. (AI)	.277**	+
My academic experience has had a positive influence on my intellectual growth and interest in ideas. (AI)	.263**	+
I am satisfied with my academic experience at this university. (AI)	.264**	+
My interest in ideas and intellectual matters has increased since coming to this university. (AI)	.307**	+
I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now that I was before coming to this university. (AI)	.211**	+
I have performed academically as well as I anticipated I would. (AI)	.284**	+
I am confident that I made the right decision in choosing to attend this university. (IG)	.172**	+
It is likely that I will register at this university next fall. (IG)	.165*	+

Notes. PG = ASIS Peer-Group Interactions Scale (7 items)

IF = ASIS Interactions with Faculty Scale (5 items)

FC = ASIS Faculty Concern for Student Scale (5 items)

AI = ASIS Academic and Intellectual Development Scale (7 items)

IG = ASIS Institutional and Goal Commitment Scale (6 items)

**p < 0.01 level

*p < 0.05 level

Table 44

Pearson Correlations for Spirituality Trait: I find serenity by accepting things as they are.

ASIS Academic and Social Integration Scale Items	Correlation	Polarity
My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values. (PG)	.210**	+
My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest in ideas. (PG)	.192**	+
My nonclassroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes. (IF)	.239**	+
My nonclassroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas. (IF)	.239**	+
My nonclassroom interactions with faculty have had a positive influence on my career goals and aspirations. (IF)	.189**	+
Since coming to this university I have developed a close, personal relationship with at least one faculty member. (IF)	.220**	+
I am satisfied with the opportunities to meet and interact informally with faculty members. (IF)	.213**	+
Most faculty members are genuinely interested in teaching. (FC)	.136*	+
I am satisfied with the extent of my intellectual development since enrolling at this university. (AI)	.283**	+
My academic experience has had a positive influence on my intellectual growth and interest in ideas. (AI)	.269**	+
I am satisfied with my academic experience at this university. (AI)	.230**	+
My interest in ideas and intellectual matters has increased since coming to this university. (AI)	.176**	+
I have performed academically as well as I anticipated I would. (AI)	.172**	+
I am confident that I made the right decision in choosing to attend this university. (IG)	.340**	+

Notes. PG = ASIS Peer-Group Interactions Scale (7 items)

IF = ASIS Interactions with Faculty Scale (5 items)

FC = ASIS Faculty Concern for Student Scale (5 items)

AI = ASIS Academic and Intellectual Development Scale (7 items)

IG = ASIS Institutional and Goal Commitment Scale (6 items)

**p < 0.01 level

*p < 0.05 level

Table 45

Pearson Correlations for Spirituality Trait: In times of despair, I can find little reason to hope.

ASIS Academic and Social Integration Scale Items	Correlation	Polarity
The student friendships I have developed at this university have been personally satisfying. (PG)	.136*	+
It has been difficult to meet and make friends with other students. (PG)	.233**	+
Most students at this university have values and attitudes different from my own. (PG)	.225**	+
Few of the students I know would be willing to listen to me and help me if I had a personal problem. (PG)	.192**	+
Few faculty members are generally interested in students. (FC)	.329**	+
Few faculty members are generally outstanding or superior in teaching. (FC)	.295**	+
Few faculty members are willing to spend time outside of class to discuss issues. (FC)	.315**	+
Few of my courses this year have been intellectually stimulating. (AI)	.283**	+
I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now than I was before coming to this university. (AI)	-.146*	-
It is not important for me to graduate from this university. (IG)	.188*	+
I have no idea at all what I want to major in. (IG)	.151*	+
Getting good grades is not important to me. (IG)	.160*	+

Notes. PG = ASIS Peer-Group Interactions Scale (7 items)

IF = ASIS Interactions with Faculty Scale (5 items)

FC = ASIS Faculty Concern for Student Scale (5 items)

AI = ASIS Academic and Intellectual Development Scale (7 items)

IG = ASIS Institutional and Goal Commitment Scale (6 items)

**p < 0.01 level

*p < 0.05 level

Table 46

Pearson Correlations for Spirituality Trait: I can find meaning in times of hardship.

ASIS Academic and Social Integration Scale Items	Correlation	Polarity
My nonclassroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas. (IF)	.159*	+
My nonclassroom interactions with faculty have had a positive influence on my career goals and aspirations. (IF)	.221**	+
Most faculty are interested in helping students grow in more than just academic areas. (FC)	.142*	+
Most faculty members are genuinely interested in teaching. (FC)	.166*	+
I am satisfied with the extent of my intellectual development since enrolling in this university. (AI)	.251**	+
My academic experience has had a positive influence on my intellectual growth and interest in ideas. (AI)	.212**	+
I am satisfied with my academic experience at this university. (AI)	.194**	+
My interest in ideas and intellectual matters has increased since coming to this university. (AI)	.169**	+
I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now than I was before coming to this university. (AI)	.143*	+
I have performed academically as well as I anticipated I would. (AI)	.134*	+
It is likely that I will register at this university next fall. (IG)	.135*	+

Notes. PG = ASIS Peer-Group Interactions Scale (7 items)

IF = ASIS Interactions with Faculty Scale (5 items)

FC = ASIS Faculty Concern for Student Scale (5 items)

AI = ASIS Academic and Intellectual Development Scale (7 items)

IG = ASIS Institutional and Goal Commitment Scale (6 items)

**p < 0.01 level

*p < 0.05 level

Table 47

Summary of Multiple Predictive Factors

SIBS-R Spirituality Scale	ASIS Academic and Social Integration Scale					
	PG	IF	FC	AI	IG	TOT
I find serenity by accepting things as they are.		5		3	1	9
In times of despair, I can find little reason to hope.	4		3	1,1-	1	9,1-
When I help others, I expect nothing in return.	1	2		1	1	5
In difficult times, I am still grateful.	3		2	4	2	11

Notes. PG = Peer-Group Interactions Scale (7 items)

IF = Interactions with Faculty Scale (5 items)

FC = Faculty Concern for Student Scale (5 items)

AI = Academic and Intellectual Development Scale (7 items)

IG = Institutional and Goal Commitment Scale (6 items)

TOT = Total number of predictive factors per spirituality item

Summary

In this chapter we reviewed the data analysis from 233 responses provided by NEC student-athletes comparing traits of spirituality to factors of persistence in academic and social integration. Considering the outcomes of the correlational tests and regression models, it is clear that spirituality does indeed have a relationship with academic and social integration and could even provide predictability towards student success. In the final chapter of this dissertation, we will review the findings of this study in conjunction with available research, will identify several limitations of the study, and consider implications for leaders in higher education and recommendations for further research.

CHAPTER 5

SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of this study was to explore the relationship between aspects of spirituality and their relationship to factors of persistence, specifically academic and social integration, for varsity-level student-athletes competing in the Northeast Conference of the NCAA's Division I tier. For the purposes of this study, spirituality traits were derived from the Spiritual Involvement and Beliefs Scale (SIBS) developed by Robert Hatch et al. (1998) and later revised (SIBS-R) in 2001. Additionally, academic and social integration traits were derived from the Academic and Social Integration Scales (ASIS) developed by Ernie Pascarella and Patrick Terenzini (1980). The revised spirituality instrument, referred to as SIBS-R, included 22 items measuring individuals' spiritual involvement and existential beliefs from an unbiased and universally ecumenical perspective. The ASIS instrument included 30 items grouped into five categories and was designed to test the predictability of college students' decisions to continue their enrollment (more commonly referred to as *persistence*). The five categories of the ASIS instrument included Peer-Group Interactions, Interactions with Faculty, Faculty Concern for Students, Academic and Intellectual Development, and Institutional and Goal Commitment.

Student persistence is a significant measure of success for any higher education institution. It may be helpful to explore the role of spirituality in students' decisions to persist. It is especially important to understand the relationship between spirituality and persistence among student-athletes, given the non-normative experiences of varsity-level student athletes and propensity for higher levels of stress and pressures to perform over their non-athletic peers.

This study used a quantitative design with the two survey instruments described above in order to examine the relationship between spirituality and academic and social integration among

full-time undergraduate student-athletes competing in the Northeast Conference, an intercollegiate athletics conference comprised of 10 member-institutions competing in the NCAA at the Division I level.

This study relied on theoretical frameworks provided by several researchers related to both spiritual and intellectual development among college students, or emerging adults, as described in Chapter 1. Astin et al. (2011) brought to light the extraordinarily high levels of spiritual struggle and identity-development among today's college students, which supports Parks' (2000) assertion that emerging adults are intrinsically motivated to seek existential purpose through spiritual struggle. Just two decades earlier, Fowler (1981) had introduced his theory of the stages of faith development, arguing that the human experience can often lead from spiritual struggle toward progress in accepting life's paradoxical nature and result in eventual personal authority over one's spirituality/religiosity.

Theories related to intellectual and identity development in higher education follow a very similar construct. Baxter-Magolda (2009) offers extensive research on *self-authorship* as a process of intellectual and identity development among college students through similar struggles and personal crises. The process of self-authorship parallels Mezirow's (2007) theory of *transformative learning* as a process by which emerging adults engage in the simultaneous development of intellectual and personal development through finding meaning and insights related to their life experiences and individual struggles.

These theorists in spiritual, intellectual, and identity development all pose similar constructs that inform the research related to spirituality and factors of persistence. Chapter 2 discussed the existing literature on factors of persistence, the student-athlete experience, and an expanded review on spirituality and its role in higher education. A detailed explanation of data

sources and research methodology for this study was outlined in Chapter 3. Chapter 4 displayed the results and analysis of the collected data, which included outputs of Pearson Correlations and Hierarchical Multiple Regression Models. Chapter 5 summarizes the findings from the quantitative data and analysis. This chapter also provides implications for educational leadership and offers recommendations for future research.

Summary of Findings for Research Questions

This study addresses five research questions. These questions were derived by pairing the independent variables of spirituality, as measured by the 22-item SIBS-R instrument, to each of the five categories of the 30-item ASIS instrument, identified as the dependent variables. All data were collected between April and June 2017. The population for this study included approximately 2,400 student-athletes from six institutions in the Northeast Conference, yielding a sample population of 233 participants. The following represents the study's findings for the sample population.

Is There a Relationship Between Spirituality and Peer-Group Interactions Among Student-Athletes?

The results of the study indicate that 10 of the 22 spirituality traits demonstrated significant correlation to one or more experiences related to peer-group interactions. More specifically, four spirituality traits were negatively correlated, while six were positively correlated. Most notably, the spirituality traits of *hopefulness*, *altruism*, and *gratitude* during difficult times produced the most significant positive correlations to peer-group interaction traits related to relationships having positive influence on students' personal growth, attitudes, and values; their intellectual growth and interest in ideas; and their ability to meet and make friends who share similar values and attitudes. When tested for predictability, the traits of *hopefulness*,

gratitude, and altruism did return low-levels of predictability, as R^2 was consistently less than 7 percent. The null hypothesis states that there is no relationship between spirituality and peer-group interactions among student-athletes. The abundant presence of significant correlation and low-level predictability values suggests that the null hypothesis is to be rejected and that there does appear to be a relationship between spirituality and peer-group interactions for this sample of student-athletes.

This particular finding supports, in part, the findings of a national study from the Higher Education Research Institute at UCLA, which found that students who are engaged in religious and/or spiritual practices commonly report greater satisfaction with their social experiences in college and also report more positive interactions with other students (HERI, 2005). The sphere of social integration has been consistently validated as one of the strongest predictors in the persistence formula (Burks & Barrett, 2009; Hartley, 2011; Lahtennoja & Pirtilla-Backman, 2005; Spradlin et al., 2010; Tinto, 1975; Tinto, 1982; Tinto, 2000; Woosley & Miller, 2009). “Though classes matter, students’ concern regarding academic involvement appears to be played out against a broader backdrop of social issues and concerns they have over social membership” (Tinto, 1975, p. 618).

Is There a Relationship Between Spirituality and Interactions With Faculty Among Student-Athletes?

Results indicated that nine of the 22 spirituality traits demonstrated significant correlation to one or more experiences related to interactions with faculty. More specifically, two spirituality traits were negatively correlated, while seven were positively correlated. Most notably, the spirituality traits related to *meditation/self-reflection, acceptance of life’s circumstances, and gratitude* produced the most significant positive correlations to students

finding that their nonclassroom interactions with faculty positively influenced their personal growth, values, and attitudes; their intellectual growth and interest in ideas; and their career goals and aspirations. Additionally, students displaying those same spirituality traits were more likely to have developed close personal relationships with faculty and were more likely to indicate an overall satisfaction with opportunities to interact informally with faculty. When tested for predictability, the traits of *acceptance of life circumstances* and *altruism* did return low-levels of predictability, as R^2 was consistently less than 10 percent. The null hypothesis states that there is no relationship between spirituality and interactions with faculty among student-athletes. The abundant presence of significant positive correlation and low-level predictability values suggest that the null hypothesis is to be rejected and that there does appear to be a relationship between spirituality and interactions with faculty among the sample of student-athletes.

The case for highly engaged faculty has been thoroughly researched and has consistently shown to greatly impact student learning and interaction in both the social and academic spheres, thereby affecting persistence (Braxton et al., 2008; Brock, 2010; Kuh et al., 2008; Kuh, 2011; Pascarella, Seifert, & Whitt, 2008; Tinto, 1997; Tinto, 2000). “The significant predictors of [...] persistence proved to be student involvement in learning activities, students’ views of the quality of teaching, advising, and course work, and their contact with faculty” (Tinto, 1975, p. 618). Further research on the incorporation of spirituality in the classroom suggests that learning becomes deeply enriched and transformative when faculty invoke reflection and personal meaning as pedagogical strategies (Jacobsen & Jacobsen, 2008; Shahjahan, 2005; Shahjahan, 2009; Tolliver & Tisdell, 2006). Transformative learning has been linked to periods of crisis or struggle when students encounter new thoughts and intellectual challenges as well as personal, existential, and cultural challenges (Astin, 2004; Astin et al., 2007; Astin et al., 2011; Baxter

Magolda, 2009; Hodge, Baxter Magolda, & Haynes, 2009; Kuh & Gonyea, 2006; Mezirow, 1997; Mezirow, 1998; Parks, 2000).

Is There a Relationship Between Spirituality and Faculty Concern for Student Among Student-Athletes?

The results of the study indicated that 12 of the 22 spirituality traits demonstrated significant positive correlation to one or more experiences related to faculty concern for students. Most notably, spirituality traits related to *hopefulness* and *appreciation of nature* produced the most significant positive correlations to students finding that their faculty generally show interest in their students, are outstanding or superior teachers, are willing to spend time outside of class to discuss issues, are interested in helping students grow in more than just academic areas, and are genuinely interested in teaching. When tested for predictability, the traits of *gratitude*, *hopefulness*, and *appreciation for nature* did return low-levels of predictability, as R^2 was consistently less than 15 percent. The null hypothesis states that there is no relationship between spirituality and faculty concern for student among student-athletes. The abundant presence of significant positive correlation and low-level predictability values suggests that the null hypothesis is to be rejected and that there does appear to be a relationship between spirituality and faculty concern for students among the sample of student-athletes.

Similar to what was presented in the above analysis from the interactions with faculty scale, the research has been consistent on the positive effect on learning from engaged faculty who do more than just provide instruction. Research has shown that beyond student interactions with peers, engagement with faculty has greater impact on student behaviors in both the social and academic spheres of integration (Braxton et al., 2008; Brock, 2010; Kuh et al., 2008; Kuh, 2011, Pascarella, Seifert, & Whitt, 2008; Tinto, 1997; Tinto, 2000). Two major factors within

the spheres of academic and social integration include culture and personal identity (Cabrera, 1999; Hausmann, 2009; Jones, 2010; Mamiseishvili, 2012; Murphy, 2006). Braxton et al., (2008) posit that the more that faculty acknowledge and support individual student welfare and personal growth and development, the more likely students' perceptions lead to positive social and academic integration behaviors. Given what we know about the abundant spiritual seeking and meaning making that college students are experiencing (Astin, 2004; Astin et al., 2007; Astin et al., 2011; Baxter Magolda, 2009; Hodge, Baxter Magolda, & Haynes, 2009; Kuh & Gonyea, 2006; Mezirow, 1997; Mezirow, 1998; Parks, 2000), acknowledging and incorporating the very personal and developmental process of spiritual seeking (Erikson, 1968; Fowler, 1981; Parks, 2000) may be a beneficial pedagogical strategy.

Is There a Relationship Between Spirituality and Academic and Intellectual Development Among Student-Athletes?

The results of the study indicated that 17 of the 22 spirituality traits demonstrated significant correlation to one or more experiences related to academic and intellectual development. More specifically, 16 spirituality traits were positively correlated, while one trait returned both a positive and negative correlation. Most notably, the spirituality traits related to *self-reflection, meaning in times of hardship, acceptance of life's circumstances, altruism, growth in spiritual understanding, focus on personal growth, spiritual growth from times of suffering, and gratitude* produced the most significant positive correlations to students finding that they are satisfied with their intellectual development and academic experiences, that their academic experience has had a positive influence on their intellectual growth and interest in ideas, and that they are satisfied with their academic performance. When tested for predictability, the traits of *acceptance of life's circumstances, gratitude, altruism, and hopefulness* did return

low-levels of predictability, as R^2 was consistently less than 16 percent. The null hypothesis states that there is no relationship between spirituality and academic and intellectual development among student-athletes. The abundant presence of significant positive correlation and low-level predictability values suggests that the null hypothesis is to be rejected and that there does appear to be a relationship between spirituality and academic and intellectual development among the sample of student-athletes.

It is in this particular scale of integration where we find the highest frequency of both correlations and predictive values between the independent variables associated with spirituality and the dependent variables associated with academic and social integration. Herein lies the argument that when students are engaged in academic and intellectual exchanges both inside and outside of the classroom, they are more likely to experience academic satisfaction and transformative learning (Burks & Barrett, 2009; Mezirow, 1997; Spradlin et al, 2010; Hartley, 2011; Tinto, 1975; Tinto, 2000; Woosely & Miller, 2009). Further, there is evidence to suggest that when spirituality and meaning making is included in pedagogical strategy, learning is deepened and enriched – particularly related to learning historical, sociological, and anthropological contexts (Astin et al., 2011; Gilley, 2005; Gutierrez, 2005; Jacobsen & Jacobsen, 2008; Tolliver & Tisdell, 2006).

Is There a Relationship Between Spirituality and Institutional and Goal Commitment Among Student-Athletes?

The results of the study indicated that 17 of the 22 spirituality traits demonstrated significant correlation to one or more experiences related to institutional and goal commitment. More specifically, two spirituality traits were negatively correlated while 15 were positively correlated. Most notably, the spirituality traits related to *gratefulness* produced the most

significant positive correlations to students finding that they are confident that they made the right decision in choosing to attend their institution. When tested for predictability, the traits of *hopefulness* and *gratitude* did return low-levels of predictability, as R^2 was consistently less than 15 percent. The null hypothesis states that there is no relationship between spirituality and institutional and goal commitment among student-athletes. The abundant presence of positive significant correlation and low-level predictability values suggest that the null hypothesis is to be rejected and that there does appear to be a relationship between spirituality and institutional and goal commitment for the sample of student-athletes.

An extensive research base finds institutional and goal commitment are significant factors in students' decision to persist and that both academic and social integration develop institutional and goal commitment (Braxton et al., 2008; Burks & Barrett, 2009; Davidson, Beck, & Milligan, 2009; Lahteenoja & Pirttila-Backman, 2005; Pascarella & Terenzini, 1980; Spradlin, 2010; Strauss & Volkwein, 2004; Tinto, 1975; Tinto, 1982; Tinto, 1997; Tinto, 2000; Woosley & Miller, 2009). In this particular correlational analysis, 12 spirituality traits were correlated with students' confidence with their choice of institution. Although this speaks to the sample population's sense of institutional commitment, there does not appear to be much evidence of correlation to goal commitment related to the remaining items of this particular scale, including registering for the subsequent semester, graduating from their institution, confidence in choosing a major, or getting good grades.

Implications for Educational Practice

As this study has shown, student-athletes who display traits of spirituality are more likely to experience positive interactions in their academic and social environments, which has shown to be predictive of attitudes and behaviors of persistence. The challenge for educators, therefore,

would be to identify the presence or lack spirituality traits within their students and/or student-athletes and then explore pedagogical strategies that essentially invoke spiritual struggle into the academic and social experiences of their student-athletes.

Tables 40 and 47, in particular, provide summaries related to the frequency of correlations and returned predictive values that may assist educators in identifying students with or without traits of spirituality. Table 40 shows that all 22 items of the SIBS-R instrument returned significant correlations among various items of the ASIS instrument. Given the presence of negatively phrased items on both scales, it is important to consider the accurate interpretations of the correlations and regressions. For example, the independent variable of *In times of despair, I can find little reason to hope* is positively correlated with the dependent variable of *Few faculty members are generally interested in students*. This particular correlation suggests that as students respond that they can find little reason to hope amidst times of despair they are more likely to also respond that they find few of their faculty are generally interested in students. An example of interpreting a regression would be where the same independent variable of *In times of despair, I can find little reason to hope* returned a negative beta coefficient for the dependent variable of *I am more likely to attend a cultural event (for example, a concert, a lecture, or art show) now than I was before coming to this university*. This regression suggests that as students respond that they can find little reason to hope amidst times of despair, they are predicted to be less likely to attend a cultural event now than before they had enrolled at their university. The accurate interpretation of both positive and negative correlations and regressions will help educators identify the opportunities to engage their students and/or student-athletes in matters of spirituality in an effort to increase academic and social integration on campus. Further, it may prove advantageous for some educators (where permissible) to employ a similar

instrument to the SIBS-R to identify those students and/or student-athletes who are more likely to integrate into the academic and social environments.

When considering those specific spirituality traits that return the most frequent significant correlations and predictability of attitudes and behaviors related to social and academic integration, the results conclude that *gratitude*, *hopefulness*, *acceptance of life circumstances*, and *altruism* are revealed as primary foci for educators. Although these traits are subjective to individual students and very likely fall outside of the parameters of the particular academic course or co-curricular activity, educators can seek opportunities to engage in activities and dialogue that develop a more personal understanding of their students. This level of expressed concern would also affect the academic and social integration scale of faculty concern for students, in which students identify how their interactions with faculty have influenced their personal growth, values, and attitudes; their intellectual growth and interest in ideas; and their career goals and aspirations.

Educators can use similar pedagogical strategies to invoke the spirituality traits of *gratitude* and *hopefulness*. For example, educators may consider inviting students to share aspects of their lives that give them joy or for which they are grateful, as well as aspects of their lives for which they are hopeful, or to share instances from their lives in which hope had prevailed and provided a source of strength. The accounting for their joy or gratitude and hopefulness will provide the students an opportunity to share with educators and simultaneously allow educators to further understand students' lives – which may aid in future interactions. Understanding that some students may register more accounts of gratitude in their personal lives than other students, it may be helpful for educators to engage in activities that explore historical, geographical, geopolitical, and anthropological comparisons among societies. Such activities

may assist some students with identifying aspects of their personal lives for which they are grateful that they may have not otherwise considered. Similarly, understanding that some students may register more accounts of hopefulness in their personal lives than what other students may, it may be helpful for educators to engage in activities that explore historical or personal references where individuals had expressed hopefulness as a source of strength during times of despair. Some examples may include accounts of hopefulness from survivors of life-threatening illnesses and injuries, geopolitical or cultural oppression, natural disasters, etc. These activities and conversations can take place during individual advising/mentoring sessions or even during class or team activities to potentially affect both the social and academic environments.

Additionally, it could be mutually beneficial for educators to share his or her own aspects of joy, gratitude, and expressions of hopefulness. This offering by the educator can serve as a connection to students as well as provide encouragement for any students who may be reluctant to share. It will be important to identify those students who are still reluctant to share or who identify as having no source of joy, gratitude, or hopefulness in their lives. These students may require additional mentoring or support from the campus' counseling professionals.

To invoke the spirituality trait of *acceptance of life's circumstances*, educators can look back to exercises of expressing hopefulness to help students to accept their current circumstances but also to look ahead to future possibilities. It seems logical that someone who is experiencing difficulty in accepting current life circumstances may also have difficulty identifying any possible positive outcomes for their future. Perhaps, then, acceptance of life's circumstances may be a prerequisite for hopefulness, or perhaps the two are somehow symbiotic. Again, it is here that the concern of the educator for the welfare of the learner is most effective when

expressed through either personal dialogue or group activity. It is again important to identify those students who are experiencing the most difficulty in accepting the circumstances of their lives and to seek opportunities to assist them in understanding how they may have come to a particular point in their lives.

In an effort to invoke the spirituality trait of *altruism*, educators are encouraged to incorporate service learning or community engaged learning into coursework and/or group or team activities. By identifying a population or community in need of assistance, students may experience reciprocal benefits from providing service. Providing service to others, without any expectation of returned service, may assist students in clarifying their own personal values, beliefs, and sense of meaning making as they are challenged to acknowledge the fundamental needs of others as well as themselves.

From the results of this study, educators are made aware of the relationship that spirituality traits share with attitudes and behaviors related to social and academic integration, particularly those traits of gratefulness, hopefulness, acceptance of life's circumstances, and helpfulness/altruism. Educators who desire to positively affect the social and academic experiences of students and student-athletes can incorporate pedagogical strategies to invoke spiritual struggle and meaning making. Engaging students in the above-mentioned activities and discussions may serve to enhance their social and academic experiences, thereby influencing attitudes and behaviors related to persistence.

Recommendations for Further Research

Students who appear to display higher levels of gratitude, hopefulness, acceptance of life's circumstances, and altruism are more likely to display positive attributes of academic and social integration. Conversely, those students who appear to display lower levels of these same

spirituality traits are then likely to display less positive, or even negative, attributes of academic and social integration. Herein lies a dichotomy between 1) students who are spiritual, then integrate themselves more fully into their academic and social environments, and therefore are more successful, and 2) students who are less spiritual, then are unlikely to integrate themselves into their academic and social environments, and are therefore less successful.

Considering the research in psychological and emotional health among college students, the spirituality traits of gratitude, hopefulness, acceptance of life's circumstances, and altruism can be identified as possible factors in student success and achievement. In a 2016 study of college student emotional health, Renshaw, Eklund, Bolognino, and Adodo describe emotional wellbeing "as a latent variable indicated by gratitude, engagement, and optimism – as a distinguishing predictor of college student outcomes" (p. 691). Jones, You, and Furlong (2013), in exploring *covitality* as integrated well-being among college students, provide scholarly context behind the concepts of acceptance of life's circumstances, or optimism, hopefulness, and gratitude. The researchers suggest that optimism may be likened to acceptance of life's circumstances, which is described as one's sense of expecting positive outcomes for the future and is therefore generally considered a positive factor for degree attainment. Susan Antaramian's 2017 results support this position in that students with reported high levels of life satisfaction were at a significant advantage over other students in both academic and social environments. Jones, You, and Furlong (2013) describe hope, or hopefulness, as a form of self-efficacy in the sense that one is generally successful at planning for and meeting goals, which is a positive factor in academic achievement. The researchers also describe gratitude as a recognition and emotional responsiveness towards charitable generosity shown by others and is generally associated with positive psychosocial behavior.

In a recent study of the relationship between spirituality and gratitude, Olson, Carney, & Hicks (2018) conclude that self-assessed spirituality and spiritual behaviors positively affect the development of attitudes of gratitude among students. Wilson (2016) concludes that where educators allow students to reflect on gratitude toward learning, there is a positive association with generalized gratitude, mental focus in academics, and academic resiliency. McCullough et al. (2002) posit that a disposition of gratitude among students correlated with such traits as positive emotionality, well-being, vitality, happiness, satisfaction with life, hope, and optimism. Further, they found that gratitude also correlated with a lack of depression and feelings of anxiousness.

A 2014 mixed-methods study of generosity (interchanged here with helpfulness/altruism) and psychological well-being among college students describes generosity as either material or non-material acts that stem from a sense of well-being and general life-satisfaction (Wang et al., 2014). Further, generosity was qualitatively explained in three forms of generosity: towards self, loved-ones, and the larger community. Interestingly enough, the researchers posit that “Spirituality, volunteering, and helping strangers in need encompassed the generous acts toward the larger community” (p. 326). They concluded that generosity was a learned behavior and requires practice.

Given the significance of these specific spirituality traits (gratefulness, hopefulness, acceptance of life’s circumstances, and helpfulness/altruism) in the results of this particular study, it may be necessary to further explore the relationship these traits share with what is generally defined as spirituality. Can spirituality be more closely observed through a combination of traits related to psychological well-being and life satisfaction? How do psychological well-being and life satisfaction influence spirituality? Researchers may consider

further exploring these questions in an attempt to more accurately depict the role that spirituality plays in the lives of students and how it may or may not be attributed to overall success in the academy.

Despite the significance of the Astin, Astin, and Lindholm (2011) study of nearly 14,000 students, the research team found that just 5 percent of participants identified as being *religious but not spiritual* (Astin, 2016). Although this unique sub-group of students represented a very small minority of responses, their perspective requires additional investigation as to how students may be religiously active but spiritually dormant. Do students who claim to be religious but not spiritual display behaviors associated with religious participation and still lack a deeper, more personal experience or connection? Does religious participation provide any level of meaning-making or spiritual struggle for these students? Researchers may consider further exploring these questions in an attempt to identify what value/benefit do these students receive from religious participation if they do not experience personal or interpersonal development from the participation.

Limitations of Study

In this study, the researcher attempted to provide insight to research surrounding the developmental needs of student-athletes through a lens of spirituality and for the purposes of affecting both human development and learning as well as attitudes and behaviors of persistence. This study was coordinated solely through quantitative measures of responses among NCAA Division I student-athletes from six of 10 member-institutions of the Northeast Conference (NEC).

Despite the thorough review of literature and analysis of the data, there are still many questions related to the empirical relationship of spirituality and persistence among student-

athletes and/or non-athletic students. The limitations of the sample tested do not represent the entirety of the student-athlete population of the NEC, the NCAA, or all institutions within the U.S. The researcher also acknowledges that the size of the sample may not be generalizable to all populations of students or student-athletes. It is therefore recommended that researchers consider further exploration of these variables with other populations to provide greater insight as to how spirituality may or may not affect the persistence of students and student-athletes. Additionally, considering that this study focused only on quantitative measures of spirituality and academic and social integration, there is still much to be understood about the possible relationships that exist between those phenomena. It would be beneficial to the community of scholarship that qualitative inquiry accompany this and other studies to seek more personal and experiential descriptions of how students' spiritual lives may or may not influence their academic and social lives.

As this study focused specifically on the five research questions associated with the exploration of a possible statistical relationship between spirituality and academic and social integration, there are still other inquiries that can be made with this particular sample. Additional analysis of the demographic information could explain how descriptors such as gender, year in school, primary sport, and institution may present additional insights to the unique experiences of this particular population of student-athletes. Considering the institutional types (religious or secular) involved within this study, or whose student-body make-up largely come from religiously active regions, the participants of this study may have inherently maintained a particular religious or spiritual inclination or perhaps even a position void of any spiritual and religious precepts. Further research of a similar type aimed at collecting more data

from other regions may help researchers better delineate the relationship between spirituality and academic and social integration among student-athletes.

Additional limitations include the design of the study itself. Cook and Campbell (1979) provide fair warning to researchers using self-reporting designs as they may have unintended results whereas respondents may either report based upon what they believe the researcher is expecting or what they, the respondents, believe will reflect their abilities or opinions more favorably. Further, the disparity among gender and survey participation in this study (female respondents = 69.96 percent, male respondents = 27.03 percent) is supported by Jackson et al. (2001) who posit that the genders approach internet usage for different purposes whereby men use the internet to seek information, women use it to communicate and exchange ideas. “Responding to an email by accessing an online survey, completing it, and returning it, is more a process of online information-exchange than it is a process of online information-seeking” (Smith, 2008, pp. 13-14).

Finally, a limitation can be considered through the researcher’s selected instrumentation on spirituality. Although the SIBS-R (Hatch et al., 2001) has been used in a number of studies returning strong reliability coefficients, the broader, contextual understanding of spirituality is still limited. As the review of literature suggests, spirituality is a highly personal and individual expression, the patterns and constructs associated with spiritual-struggle and meaning-making, however, have been well established (Erikson, 1968; Fowler, 1981; Parks, 2000). Given the combinations of questions included on the SIBS-R there is significant parallels between what the instrument is asking of participants and what the research has included as spiritually related concepts and inquiries.

Conclusion

The primary aim of this study was to explore the potential relationship that spirituality may share with two of the most significant factors of persistence, academic and social integration, among college student-athletes. The responses of 233 varsity-level student-athletes competing in the Northeast Conference of the NCAA Division I tier were recorded using a combined instrumentation of the Spiritual Involvement and Beliefs Scale – Revised, or SIBS-R, and the Academic and Social Integration Scales, or ASIS. The findings support the hypothesis that positive behaviors and attitudes of academic and social integration are influenced by spirituality. Specifically, the spirituality traits of gratitude, hopefulness, acceptance of life’s circumstances, and altruism returned the most positive significant correlations and predictive values towards attitudes and behaviors of social and academic integration among the sample population. This is to say that as student-athletes increase spirituality traits of gratitude, hopefulness, acceptance of life’s circumstances, and altruism, they are then more likely to display positive attitudes and behaviors related to academic and social integration. Conversely, as student-athletes decrease in spirituality traits of gratitude, hopefulness, acceptance of life’s circumstances, and altruism, they are then more likely to display negative attitudes and behaviors related to academic and social integration.

Educators are encouraged to explore pedagogical strategies in both curricular and co-curricular experiences that invoke such spirituality traits as gratefulness, hopefulness, acceptances of life’s circumstances, and helpfulness/altruism. This can be accomplished through a variety of group/team activities as well as open discussions with students in groups or in individual advising/mentoring sessions. It is through these combinations of activities and discussions that students will encounter the spiritual struggles and challenges of meaning-making

that are critical to their personal and intellectual growth and development, resulting in more transformative learning experiences through both academic and social integration, ultimately leading to higher levels of persistence.

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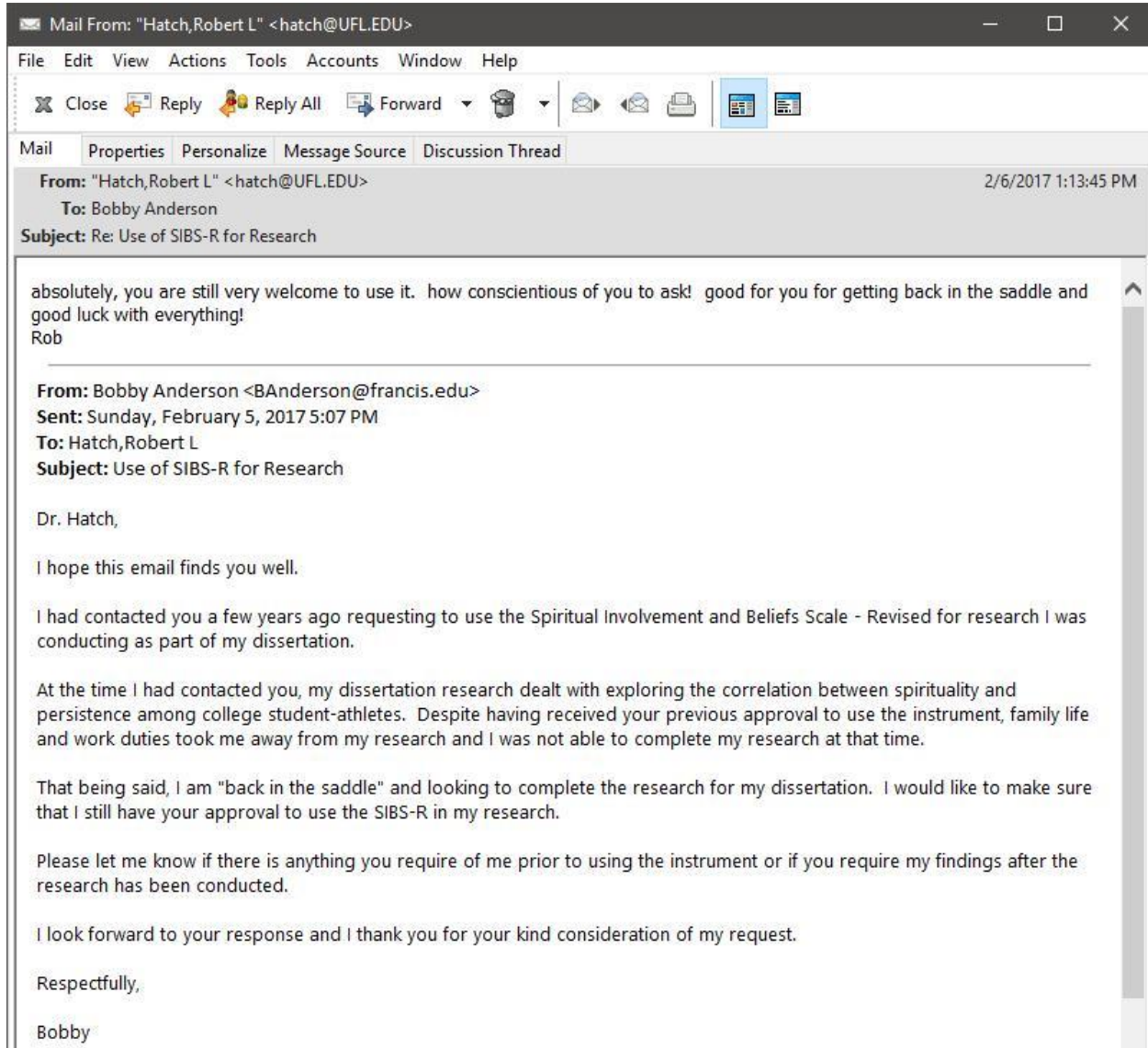
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Appendix A

Permission to Use SIBS-R Instrumentation

Email received from Robert L. Hatch on use of Spiritual Involvement and Beliefs Scale - Revised (SIBS-R).

Received February 6, 2017.

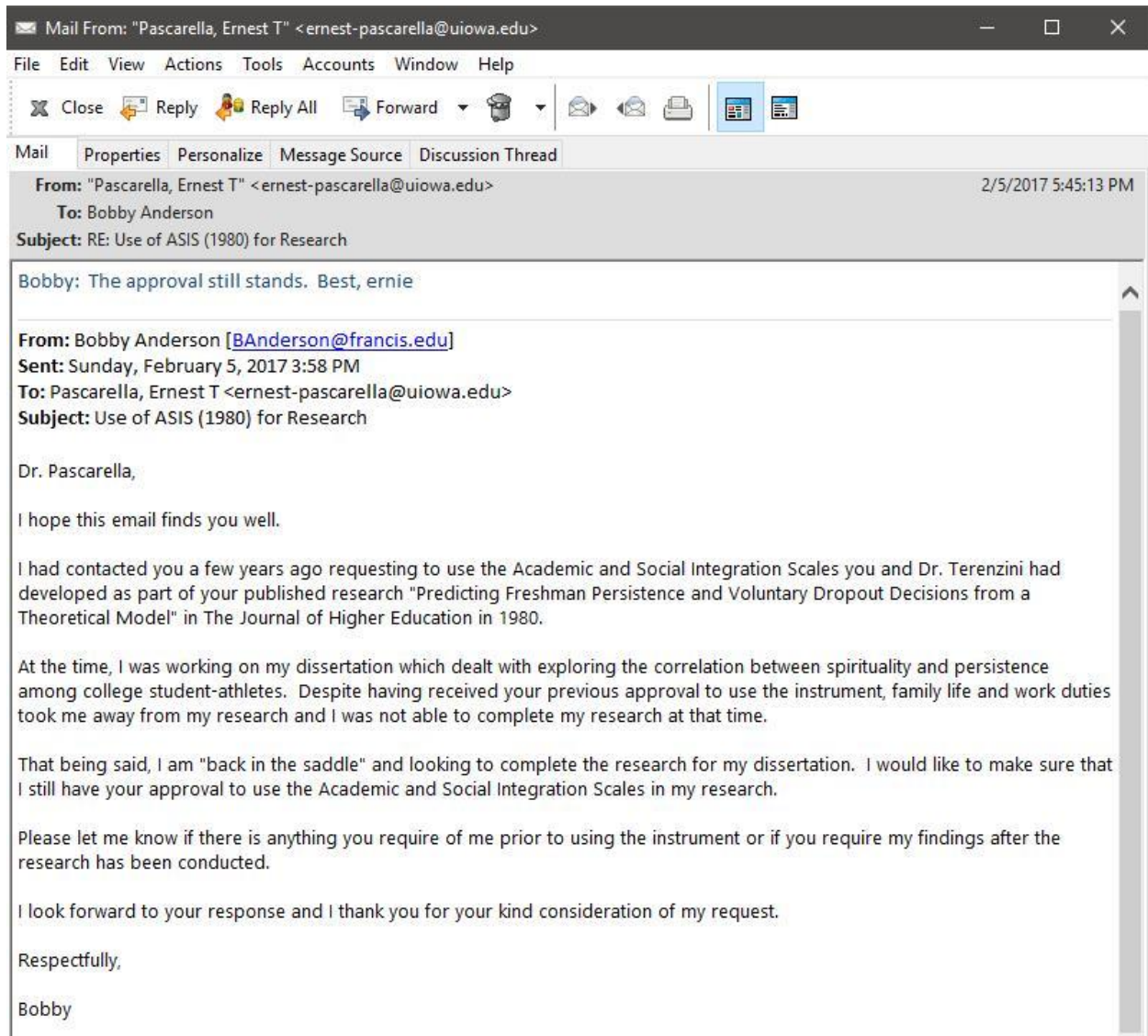


Appendix B

Permission to Use ASIS Instrumentation

Email received from Ernest Pascarella on use of Academic and Social Integration Scales (ASIS).

Received February 5, 2017.



Appendix C

Spiritual Involvement and Beliefs Scale – Revised (SIBS-R)

Spiritual Involvement and Beliefs Scale – Revised (SIBS-R) (Hatch et al., 2001)

Please answer the following questions by checking your response.

1. I set aside time for meditation and/or self-reflection.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

2. I can find meaning in times of hardship.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

3. A person can be fulfilled without pursuing an active spiritual life.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

4. I find serenity by accepting things as they are.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

5. I have a relationship with someone I can turn to for spiritual guidance.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

6. Prayers do not really change what happens.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

7. In times of despair, I can find little reason to hope.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

8. I have a personal relationship with a power greater than myself.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

9. I have had a spiritual experience that greatly changed my life.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

10. When I help others, I expect nothing in return.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

11. I don't take time to appreciate nature.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

12. I have joy in my life because of my spirituality.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

13. My relationship with a higher power helps me love others more completely.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

14. Spiritual writings enrich my life.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

15. I have experienced healing after prayer.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

16. My spiritual understanding continues to grow.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

17. I focus on what needs to be changed in me, not on what needs to be changed in others.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

18. In difficult times, I am still grateful.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

19. I have been through a time of suffering that led to spiritual growth.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

20. I solve my problems without using spiritual resources.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

21. I examine my actions to see if they reflect my values.

Strongly Agree / Agree / Mildly Agree / Neutral / Mildly Disagree/ Disagree / Strongly Disagree

22. How spiritual a person do you consider yourself (with “7” being the most spiritual)?

SCORING: Reverse score all negatively worded items (3,6,7,11,20), i.e. Strongly Agree = 1, Agree = 2, ... Strongly Disagree = 7.

Appendix D

Academic and Social Integration Scales (ASIS)

Academic and Social Integration Scales (ASIS) (Pascarella and Terenzini, 1980)

Scale I: Peer-Group Interactions

1. Since coming to this university I have developed close personal relationships with other students.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

2. The student friendships I have developed at this university have been personally satisfying.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

3. My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

4. My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest in ideas.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

5. It has been difficult for me to meet and make friends with other students.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

6. Few of the students I know would be willing to listen to me and help me if I had a personal problem.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

7. Most students at this university have values and attitudes different from my own.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

Scale II: Interactions with Faculty

8. My nonclassroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

9. My nonclassroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas.
Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree
10. My nonclassroom interactions with faculty have had a positive influence on my career goals and aspirations.
Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree
11. Since coming to this university I have developed a close, personal relationship with at least one faculty member.
Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree
12. I am satisfied with the opportunities to meet and interact informally with faculty members.
Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

Scale III: Faculty Concern for Student

13. Few of the faculty members I have had contact with are generally interested in students.
Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree
14. Few of the faculty members I have had contact with are generally outstanding or superior teachers.
Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree
15. Few of the faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students.
Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree
16. Most of the faculty I have had contact with are interested in helping students grow in more than just academic areas.
Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree
17. Most faculty members I have had contact with are genuinely interested in teaching.
Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

Scale IV: Academic and Intellectual Development

18. I am satisfied with the extent of my intellectual development since enrolling in this university.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

19. My academic experience has had a positive influence on my intellectual growth and interest in ideas.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

20. I am satisfied with my academic experience at this university.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

21. Few of my courses this year have been intellectually stimulating.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

22. My interest in ideas and intellectual matters has increased since coming to this university.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

23. I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now that I was before coming to this university.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

24. I have performed academically as well as I anticipated I would.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

Scale V: Institutional and Goal Commitments

25. It is important for me to graduate from college.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

26. I am confident that I made the right decision in choosing to attend this university.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

27. It is likely that I will register at this university next Fall.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

28. It is not important for me to graduate from this university.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

29. I have no idea at all what I want to major in.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

30. Getting good grades is not important to me.

Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree

SCORING: Items scored 5 = strongly agree to 1 = strongly disagree, in computing factor scores items with negative loadings were recoded 1 = strongly agree to 5 = strongly disagree.

Appendix E

Modified Survey Instrument

Item No.	Survey Question	Scoring
1	(Letter of Consent to Participate)	True/False
Spirituality Involvement and Beliefs Scale - Revised		
2	I set aside time for meditation and/or self-reflection.	7-pt Likert (positive)
3	I can find meaning in times of hardship.	7-pt Likert (positive)
4	A person can be fulfilled without pursuing an active spiritual life.	7-pt Likert (negative)
5	I find serenity by accepting things as they are.	7-pt Likert (positive)
6	I have a relationship with someone I can turn to for spiritual guidance.	7-pt Likert (positive)
7	Prayers do not really change what happens.	7-pt Likert (negative)
8	In times of despair, I can find little reason to hope.	7-pt Likert (negative)
9	I have a personal relationship with a power greater than myself.	7-pt Likert (positive)
10	I have had a spiritual experience that greatly changed my life.	7-pt Likert (positive)
11	When I help others, I expect nothing in return.	7-pt Likert (positive)
12	I don't take time to appreciate nature.	7-pt Likert (negative)
13	I have joy in my life because of my spirituality.	7-pt Likert (positive)
14	My relationship with a higher power helps me love others more completely.	7-pt Likert (positive)
15	Spiritual writings enrich my life.	7-pt Likert (positive)
16	I have experienced healing after prayer.	7-pt Likert (positive)
17	My spiritual understanding continues to grow.	7-pt Likert (positive)
18	I focus on what needs to be changed in me, not on what needs to be changed in others.	7-pt Likert (positive)
19	In difficult times, I am still grateful.	7-pt Likert (positive)
20	I have been through a time of suffering that led to spiritual growth.	7-pt Likert (positive)

- 21 I solve my problems without using spiritual resources. 7-pt Likert (negative)
- 22 I examine my actions to see if they reflect my values. 7-pt Likert (positive)
- 23 How spiritual a person do you consider yourself? 7-pt Likert (positive)

ASIS: Peer-Group Interactions

- 24 Since coming to this university I have developed close personal relationships with other students. 5-pt Likert (positive)
- 25 The student friendships I have developed at this university have been personally satisfying. 5-pt Likert (positive)
- 26 My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values. 5-pt Likert (positive)
- 27 My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest in ideas. 5-pt Likert (positive)
- 28 It has been difficult for me to meet and make friends with other students. 5-pt Likert (negative)
- 29 Few of the students I know would be willing to listen to me and help me if I had a personal problem. 5-pt Likert (negative)
- 30 Most students at this university have values and attitudes different from my own. 5-pt Likert (negative)

ASIS: Interactions with Faculty

- 31 My nonclassroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes. 5-pt Likert (positive)
- 32 My nonclassroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas. 5-pt Likert (positive)
- 33 My nonclassroom interactions with faculty have had a positive influence on my career goals and aspirations. 5-pt Likert (positive)
- 34 Since coming to this university I have developed a close, personal relationship with at least one faculty member. 5-pt Likert (positive)
- 35 I am satisfied with the opportunities to meet and interact informally with faculty members. 5-pt Likert (positive)

ASIS: Faculty Concern for Student

- 36 Few of the faculty members I have had contact with are generally interested in students. 5-pt Likert (negative)
- 37 Few of the faculty members I have had contact with are generally outstanding or superior teachers. 5-pt Likert (negative)
- 38 Few of the faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students. 5-pt Likert (negative)
- 39 Most of the faculty I have had contact with are interested in helping students grow in more than just academic areas. 5-pt Likert (positive)

40	Most faculty members I have had contact with are genuinely interested in teaching.	5-pt Likert (positive)
ASIS: Academic and Intellectual Development		
41	I am satisfied with the extent of my intellectual development since enrolling in this university.	5-pt Likert (positive)
42	My academic experience has had a positive influence on my intellectual growth and interest in ideas.	5-pt Likert (positive)
43	I am satisfied with my academic experience at this university.	5-pt Likert (positive)
44	Few of my courses this year have been intellectually stimulating.	5-pt Likert (negative)
45	My interest in ideas and intellectual matters has increased since coming to this university.	5-pt Likert (positive)
46	I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now that I was before coming to this university.	5-pt Likert (positive)
47	I have performed academically as well as I anticipated I would.	5-pt Likert (positive)
ASIS: Institutional and Goal Commitments		
48	It is important for me to graduate from college.	5-pt Likert (positive)
49	I am confident that I made the right decision in choosing to attend this university.	5-pt Likert (positive)
50	It is likely that I will register at this university next Fall.	5-pt Likert (positive)
51	It is not important for me to graduate from this university.	5-pt Likert (negative)
52	I have no idea at all what I want to major in.	5-pt Likert (negative)
53	Getting good grades is not important to me.	5-pt Likert (negative)
Demographic		
54	Please select your institution: a. Institution 1 b. Institution 2 c. Institution 3 d. Institution 4	Demographic Demographic
55	e. Institution 5	Demographic
56	f. Institution 6 g. Institution 7 h. Institution 8	Demographic

i. Institution 9

j. Institution 10

Please provide your month and year of birth:

a. mmyyyy

Please select your year in college (select the option that is most applicable to you):

a. First-Year/Freshman

b. Second-Year/Sophomore

c. Third-Year/Junior

d. Fourth-Year or Fifth-Year/Senior

57 Please select your primary sport of competition (based on sports sponsored by the Northeast Conference): Demographic

a. Baseball

b. Men's Basketball

c. Women's Basketball

d. Women's Bowling

e. Men's Cross Country

f. Women's Cross Country

g. Men's Golf

h. Women's Golf

i. Football

j. Men's Lacrosse

k. Women's Lacrosse

l. Men's Soccer

m. Women's Soccer

n. Softball

o. Women's Swimming

p. Men's Tennis

q. Women's Tennis

r. Men's Indoor Track

s. Women's Indoor Track

t. Men's Outdoor Track

u. Women's Outdoor Track

v. Women's Volleyball

w. Other

58 If you selected "Other," please provide your primary sport of competition. Demographic