Motivational Factors of Student Nurse Athletes Attributing to Academic Success

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Submitted to the Faculty of the Graduate School of Carlow University
in partial fulfillment of the requirements for the degree of
Doctor of Nursing Practice

April 10, 2015

Approval Page

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Title of Scholarly Inquiry: Motivational Factors of Student Nurse Athletes Attributing to Academic Success

Carlow University IRB Approval Date: 7/21/2014

Saint Francis University Approval Date: 8/14/2014

Location of Scholarly Inquiry Implementation:
Carlow University
Saint Francis University

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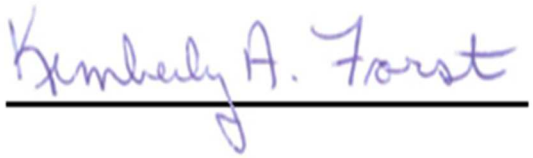

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Acknowledgements

I would like to express my heartfelt appreciation to Dr. Mildred Jones for her expert advice, support, and ongoing encouragement throughout this scholarly project. I would also like to thank Dr. Renee Ingel and Dr. Camille Wendekier for their excellence in reviewing and critiquing this research study. Sincere gratitude is extended to my statistician, Mr. Thomas Simunich for all of his expertise, guidance and support throughout this project. A special thank you goes out to my sister Debbie, and my mom who were always there for me no matter what I needed. Last, but not least, I would like to express my sincere love and gratitude to my wonderful husband Scott, and amazing children Jordan and Gabe, who have stood by me throughout this journey. The support that I have received from them has been unwavering.

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Abstract

Student nurse athletes may experience difficulties effectively obtaining academic success in nursing programs. Many athletes need extra support and assistance to complete a nursing degree. Some institutions provide general academic courses to enhance the athlete's academic skills and knowledge. There is limited literature addressing success of student athletes in Bachelor of Science in Nursing programs. The purpose of this study was to identify facilitators, barriers, and motivators of student nurse athletes that attribute to academic success. A quantitative descriptive comparative study was conducted from September 8, 2014 to October 3, 2014**.** Data were obtained on sixty-one participants that included athlete and non-athlete nursing students. All participants completed the Demographic-Socio-Economic Questionnaire and the Facilitators/ Barriers Questionnaire. In addition, the athletes (n=18) also completed the Motivational Questionnaire. Results indicated that both groups ranked academics as requiring the highest demand of time. In second rank were athletics (athletes) and family (non-athletes). Both groups ranked time management as first and prioritization second as being critical to academic success. Student athletes identified facilitators as support with time management and prioritization. Barriers were schedule conflicts between classes and clinical days. Motivators were the needs to successfully complete academic and athletic related tasks. This study reinforced the importance of academic support services for student nurse athletes to assist in their academic success. These services can provide time management and prioritization skills which are facilitators needed to assist the student in managing the unique characteristics of being a successful student nurse athlete.

Chapter 1

Introduction

Background of Problem

Student nurse athletes encounter considerably more obstacles than their non-athlete peers as they strive toward academic achievement. Some of these additional obstacles demands include required physical training; demands placed upon them by their coaches and institutions, and time requirements for training, travel, and games (Smith & Herman, 1996). Many, but not all, institutions provide general academic counseling services to their recruited student athletes. The current nursing shortage, declining enrollment in nursing programs, demand for academic support services for student nurse athletes, and the challenges faced by student nurse athletes evidence the need to identify factors that contribute to their academic success.

Student athletes may be discouraged from entering nursing programs because of numerous time management challenges incurred from a demanding curriculum, conditioning, training, and event schedules. For example, these students must successfully manage the rigorous academic, physical, and emotional demands of their athletic sport while successfully completing their nursing education, clinical rotations, and passing arduous nursing courses. To accomplish this, it is necessary for the student to effectively manage time between sports and study.

In order to improve the success of student nurse athletes, factors need to be identified that are facilitators, barriers and motivators for academic performance. Pope and Miller (1996) suggest there are three areas where a student-athlete deals with individual challenges: personal, academic, and athletic. In order to address these issues, there are some athletic departments that have incorporated systems emphasizing academic development of athletes. Athletes were carefully monitored as they progressed through general academic advising, tutoring, and a

structured study time. These programs were effective at assisting with academic success. Additional circumstances required special counseling when needed to meet complex personal challenges.

For the student athletes to complete the rigorous academic requirements and athletic responsibilities, the student attempts to find a direct connection to their collegiate institution through the academic support programs. Connection comes from the athlete having a sense of "community" developed from ongoing, out of class contact with students, faculty, and advisors/mentors (Smith & Herman, 1996). Student-athletes who had frequent contact with support programs were more likely to remain in school. The critical issue relied on the relationship between student-athlete academic support programs and the academic success of the student athlete and there was a strong correlation between these two.

Purpose/Statement of Problem

The purpose of this quantitative, cross-sectional, descriptive pilot study was to identify the facilitators, barriers, and motivators of junior and senior student nurse athletes currently enrolled in two separate BSN nursing programs. Data was collected from junior and senior student nurse athletes and non-athletes regarding demographic and socio-economical characteristics that may have influenced facilitators, barriers and motivational factors, and for academic success.

Specific Aims.

1. To identify the demographic and socio-economic factors of student nurse athletes and non-athletes in two Bachelor of Science in Nursing schools.
2. To identify facilitators of student nurse athletes and non-athletes in two Bachelor of Science in Nursing schools.
3. To identify barriers of student nurse athletes and non-athletes in two Bachelor of Science in Nursing schools.
4. To describe motivational factors that influence the student nurse athletes self-reported level of academic success in two Bachelor of Science in Nursing schools.

Research Questions

The research questions answered by this study include:

1. What are the demographic and socio-economic characteristics of student nurse athletes and non-athletes?
2. What are the facilitators of student nurse athletes and non-athletes?
3. What are the barriers of student nurse athletes and non-athletes?
4. What motivational factors of student nurse athletes contribute to maintaining their self-reported level of academic success?

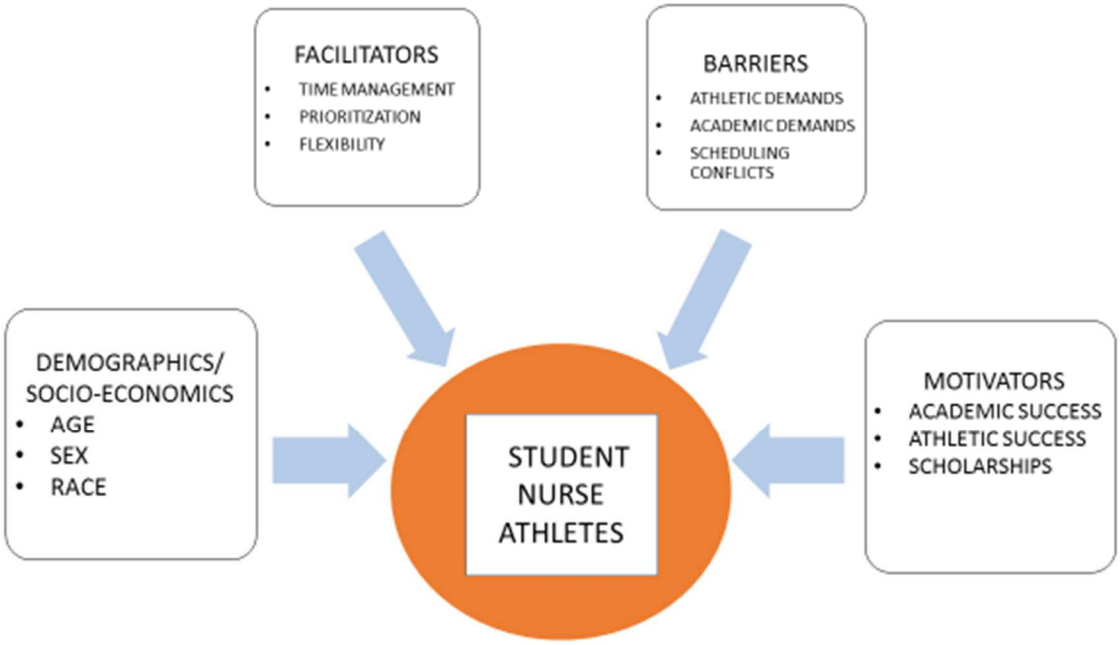
Theoretical Framework

Behaviorist B.F. Skinner first derived the Reinforcement Theory, one of the oldest theories of motivation, as a way to explain behavior and why people do what they do (Redmond, 2010). The theory was originally known as behaviorism but is now termed "operant conditioning" which is commonly taught in current psychology. This theory states that an individual's behavior is a function of its consequences (Skinner, 1953). He believed that if the consequences were bad, there was a high chance that the action would not be repeated, however if the consequences were good, the actions that lead to it would be reinforced.

Operant conditioning is the term used by Skinner to describe the effects of the consequences of a particular behavior on the future occurrence of that behavior. There are four types of operant conditioning. The first is positive reinforcement. This strengthens a behavior and is the process of getting a reward or praise as a consequence of a behavior. An example of this would be a student nurse athlete getting a good grade on an exam that he or she studied for. The next form of operant conditioning is negative reinforcement. This is the process of having a stressor removed or avoidance of an aversive event as a consequence of a behavior which ultimately strengthens the behavior. An example of this is a student nurse athlete avoiding going to a party so that he or she can study for the exam the next day. The next term used in operant conditioning is extinction which is the process of getting no reward when doing a behavior. This weakens a behavior. When the student avoids the party but does not do well on the test he or she stops the behavior and goes to the party before the next exam. The last part of operant conditioning is punishment which is the process of getting punished as a consequence of a behavior. This also weakens a behavior. An example of this would be telling a student that he or she could not continue nursing school because of the non-passing grade on the exam (McLeod, 2007). Therefore, reinforcement is a central concept in Skinner's behaviorism and is seen as a central mechanism in the shaping and controlling of specific behaviors. Both positive and negative reinforcement strengthen behavior and increase the probability of the behavior reoccurring.

Skinner tried to bring students' behavior under the control of the environment by reinforcing it only when particular stimuli were present. Skinner was convinced that a student had to take action for his or her own learning. He stated, "To acquire behavior, the student must engage in behavior" (Holland & Skinner, 1961, p. 389).

Figure 1. Skinner's Motivation Model for Student



B.F. Skinner's Motivational model served as a guide for student nurse athlete's success. Their success can be determined by the understanding of demographic and socio-economic characteristics, facilitators and barriers and motivational factors to their success. This model identifies motivation as intrinsic and extrinsic factors. Intrinsic relates to personal goals such as the desire to participate in activities such as sports. Extrinsic involves cultivating qualities of learning by teaching students skills through prioritization and time management. This motivation leads to success and retention which is progression of the student nurse athletes in the program. Students are more likely to stay in school if a motivational environment is cultivated. Nursing student athlete's success in the program facilitates recruitment process as they provide a positive model of nurse athletic students. Colleges and universities need to utilize this motivational theory to facilitate success and retention of student nurse athletes in the nursing program which may ultimately effect the recruitment of student nurse athletes. When reading into Skinner's theory,

one could interpret that if the learner manifested the motivation to learn, the ultimate goal of success would be obtained.

Definition of Terms

Student nurse athletes:	students in a BSN program who participate in an organized competitive sport sponsored by the educational institution.
Student nurse non-athletes:	students in a BSN program who do not participate in an organized competitive sport sponsored by the educational institution.
Facilitators:	people, skills, or programs that help a person or a group of people understand their common objectives and assists them to plan how to achieve these objectives.
Barriers:	challenges or stressors that hinder a person or group of people from achieving these objectives.
Motivation:	the reasons for people's actions, desires, and needs. The direction to behavior or what causes a person to want to repeat a behavior.
Intrinsic motivation:	the self-desire to seek out new things and new challenges, to analyze one's capacity, to observe and to gain knowledge.
Extrinsic motivation:	the performance of an activity in order to attain a desired outcome.
Academic motivation:	the degree to which nursing student athletes devote energy toward their academic tasks and roles. It is measured by the score on the Academic Motivation scale of the SAMSAQ.
Athletic motivation:	the degree to which nursing student athletes devote energy toward attending to their athletic tasks and roles. It is measured by the score on the Student Athletic Motivation scale of the SAMSAQ.
Academic success:	the outcome of education to which the student has achieved their educational goals.

Chapter 2

Review of the Literature

Critique and Synthesis of Previous Research

Literature specifically addressing success of student athletes in a BSN program was sparse. There was a plethora of literature regarding success of athletes in colleges and universities and the type of academic programs in which they were enrolled.

Student athletes constitute a specialized campus population who confront unique challenges when adjusting to the demands of college or university life (Engstrom & Sedlacek, 1991). The student athlete experiences a lot of emotional pressure to succeed academically and athletically. The pressure of this is compounded by time-management problems and absences from campus because of athletic travel demands (Wolverton, 2006). These students have many academic and athletic demands and concerns over how to adjust to their busy schedule. There are many factors that play an important role in the student athlete's success in a BSN program. The literature supports some of these factors including persistence and motivation. Much of the literature shows that student athletes who are highly motivated succeed academically, display higher self-worth, exhibited better meta-cognitive study strategies, demonstrated higher academic performance, and had fewer reading and study problems than did the student athletes who were less highly motivated (Watt & Moore, 2001).

Facilitators.

Efforts to increase enrollment in nursing programs are currently in place in many colleges and universities. According to Beck (2000), effective recruitment strategies should be based on the reasons students choose nursing in the first place. A study done by Hemsley-Brown and Foskett (1999) found that most young people based their decision on interest and enjoyment or

having a desire to help people. In addition to increase the enrollment in nursing programs, there must be a commitment to provide flexible educational opportunities for the students. One author (Janiszewski Goodin, 2003) discusses adaptable scheduling, such as evening and weekend classes and providing accelerated programs. Because of the rigorous practice and game schedule that is required of them, this type of approach could attract student athletes.

A student's satisfaction with the college experience is influenced by the student's involvement in the college community (Bean & Metzner, 1985). There is considerable evidence that for four-year institutions, students' social integration is positively related to persistence and motivation (Pascarella & Terenzini, 1980). Involvement in sports activities contributes to a student's enjoyment in college and is expected to increase the probability that a student will continue college and pursue their degrees. The students who participate in athletics may be more likely to find the college experience more appealing.

Many people have the opinion that student athletes have privileges in college and are catered to in various ways (Kudlacek, 1996; Umbach, Palmer, Kuh, & Hannah, 2006). Services are available many times to student athletes that the general student population is not offered, such as early registration, academic advisors specializing in athletic issues, and private computer labs (Ferris, Finster, & McDonald, 2004; Kudlacek, 1996; Rishe, 2003). However, even with these privileges, it remains difficult for the student athletes to be successful in their academics due to the demands and stresses related to being in a competitive sport (Bell, 2005; Broughton & Neyer, 2001; Carodine, Almond, & Gratto, 2001; Watt & Moore, 2001).

There are many ways that team or academic department advisors can provide athletes with the services necessary for holistic success. These services may include assisting in the scheduling of classes, providing information on tutoring, study groups, academic programs and

providing information on personal and career counseling. These academic advisors can help student athletes increase their level of academic motivation. Motivated students are willing to put forth the time and effort to be successful in a given task domain. Encouraging student athletes to become engaged in academic related tasks and out-of-class learning experiences will increase the amount of time and energy that student athletes spend on academic related tasks, thus stimulating the creation of a balance between academics and athletics (Gaston-Gayles, 2005).

The concept of time management is generally defined in terms of clusters of behavior that are deemed to facilitate productivity and alleviate stress (Lay & Schouwenburg, 1993). Effective time management strategies increase academic performance (Campbell & Svenson, 1992) and are frequently suggested by academic advisors as services to enhance achievement for college students. Productive study methods are characterized by "time management" and "strategic studying" (Entwistle & Ramsden, 1983; Kirschenbaum & Perri, 1982). Although programs emphasize starting large tasks well before due dates, breaking down large tasks into small ones, and doing small tasks on a regular schedule, students regularly ignore these techniques and find themselves in great distress before exams (Brown, 1991). By focusing on specific strategies such as time management, prioritization, and flexibility the student's academic performance may be enhanced.

One aspect of competing athletically is the effect on the student's educational characteristics. Most academics agree that participation in intercollegiate athletics has a positive impact on students and contributes to learning and moral development (Bonfiglio, 2011). Participation in intercollegiate athletics is also presumed to contribute to the development of leadership skills (Bonfiglio, 2011). According to Rudd and Stoll (2004) coaches, parents, and the media continually infer that sports build characters and that student athlete's display character

development. From the literature, newspapers, media, and according to coaches, parents, and the general population, many individuals define character from a social perspective rather than a moral perspective. Many define character in terms of social values such as teamwork, loyalty, self-sacrifice, work ethic, and perseverance. This study suggests that sports may build these types of social character traits.

Educators need to place their focus on the positive social values and skills or characteristics that will serve nursing students well in life and help them succeed. Colleges and universities should promote the development of student's moral and social reasoning and recruit nursing student athletes in an effort to benefit the student and the institution that they attend.

Barriers.

In general student athletes, like their non-athlete peers, face many obstacles in their transition into college life. They have to adjust to new living environments, deal with the increased autonomy that comes along with attending college, refine and develop their own identity, and learn to deal with adversity just like all other students (Parham, 1993). Unlike non-athletic students, the athletes have the added stress of having to commit a significant amount of time to their athletics even though their academic schedule may be filled with difficult courses. The demands of practices and games, homework assignments, time spent in team compliance and academic meetings, and visiting the training room to rehabilitate injuries, can be very time-consuming not allowing sufficient time for their academic demands. It may be difficult to concentrate on preparing for classes when physically depleted, especially with painful injuries. The physical demands of athletic participation cannot be ignored when considering how student athletes perform in the classroom (Cogan & Petrie, 1996; Broughton & Neyer, 2001; Clark & Parette, 2002; Hollis, 1998; Jacobson, 2002; Luzzo, 2000).

Student nurse athletes also have to deal with the stress of competing both on and off the field. The pressures of performing at their best for the team, as well as passing nursing courses can weigh heavily on their minds (Carodine, Almond, & Gratto, 2001: Wattt & Moore, 2001). These stresses can cause barriers for the student nurse athlete from developing socially healthy relationships since the athlete often misses opportunities to mix with other classmates due to games and other team obligations (Carodine, Almond, & Gratto, 2001).

Student nurse athletes may also encounter academic conflicts on a daily basis. Scheduling conflicts can occur for student nurse athletes and therefore they may not be able to take certain classes due to conflicts with their sport (Hollis, 1998; Kulics, 2006; Watt & Moore, 2001). Often the classes that are required for their course of study are only available during certain times of the day and sometimes only in certain semesters. Such scheduling conflicts can also deter a student nurse athlete from their desired career path (Carodine, Almond, & Gratto, 2001).

The negative effects of academic performance of athletics are also noted in a study conducted by Karen Leppel (2006) who examined the impact of sport and non-sport activities on college persistence of freshmen in Division I and Division III universities. According to this study, the athletic demands may be extremely time consuming and may result in students missing 15 to 20% of their classes during a semester. This loss of class time can cause students to fall behind in their coursework and negatively influence their academic performance. These same issues are encountered by student nurse athletes. The study consisted of three categories of persistence behavior. These categories were if the student continued at the same institution, if they changed institutions, or if they dropped out of college completely. Separate sets of equations were estimated for men and women (Leppel, 2006). The results indicated that for men and women, the greater the probability of participating in sports activities, the greater the odds of

choosing to continue at the same institution over dropping out of college completely. These findings held for both men and women, but the effect was 35% larger for men (Leppel, 2006). The study also suggested that the demands on student athletes' time and the visibility on campus may be greater for students at Division I schools than for those at Division III schools (Leppel, 2006).

Motivation.

Sports research scholars have outlined two types of athlete motivation. They are intrinsic motivation and extrinsic motivation (Medic, Mack, Wilson, & Starks, 2007).). Norris (2010) states that processes operate along a continuum that range from highly intrinsic to highly extrinsic.

Intrinsic motivation involves doing an activity for pleasure and enjoyment rather than doing the activity for a specific and separate outcome (Ryan & Deci, 2000). Intrinsic motivation signifies a self-determined personality trait. This athlete needs to know, which compels them to take part in an activity for the pleasure that they receive from learning. This type of person also wants to accomplish something, which pushes them to strive for a task or specific goal because it brings them pleasure. The last trait for intrinsic motivation is to experience, which happens when a person takes part in an activity because of the satisfying feelings that the act produces (Vallerand & Rousseau, 2001).

Many student athletes find pleasure in their athletic success. This success requires an individual to work hard, be self-disciplined, exhibit perseverance and determination, and be able to concentrate. These intrinsic motivators, if transferred to the academic domain, would seem to be important for academic success (Simons, Rheenen, Covington, 1999). There is much variation among student athletes in their willingness and success in making this transfer. This lack of

motivation is often reflected in a general disidentification with reduced academic performance (Snyder 1996; Snyder & Spreitzer, 1992). The personal satisfaction that accompanies a highly intrinsic motivated student not only appears on the athletic arena but on the academic arena for personal satisfaction and higher GPA's.

Extrinsic motivation involves completing a task in order to achieve a goal from the activity, such as avoiding punishment or receiving a tangible reward (Medic et al., 2007). Athletes that are extrinsically motivated may be motivated by an outside source or by feelings such as fear or guilt. Athletes may also be extrinsically motivated because they must meet a requirement or want a reward such as a scholarship. Another possibility may be to boost their self-concept (Deci & Ryan, 2002).

When predicting success, a reward such as a scholarship would possibly affect the athlete's persistence in achievement. The perceived motivational changes resulting from the hypothetical manipulation of a reward was studied (Medic, Mack, Wilson, & Starks, 2007). "Present" and "perceived future" motivation was assessed in a sample of 70 non-scholarship and 46 scholarship basketball players from four Canadian and seven American Division I universities. The athletes completed a set of demographic questions and questions from the Sport Motivation Scale (SMS; Pelletier, Fortier, Vallerand, Tuson, Briere, & Blais, 1995) which assessed their present motivation. The athletes also completed the SMS to evaluate their perceived future motivation by giving them a hypothetical manipulation of their scholarship status. Male scholarship athletes reported higher levels of introjected regulation than female non-scholarship athletes, and higher levels of external regulation compared to female scholarship athletes and all non-scholarship athletes. This suggests the male scholarship athlete's behavior was reinforced through extrinsic factors and internal pressures such as guilt or anxiety coercing

their participation. For non-scholarship athletes, the future possibility of obtaining full athletic scholarships resulted in increased extrinsic motivation, decreased intrinsic motivation to experience stimulation, and decreased intrinsic motivation to accomplish things. For scholarship athletes, the possibility of removing full athletic scholarships resulted in decreased intrinsic motivation to experience stimulation and decreased intrinsic motivation to accomplish things (Medic, Mack, Wilson, & Starks, 2007). Overall, the study showed that extrinsic motivation increased with the introduction of a scholarship and intrinsic motivation decreased.

Combining the intrinsic and extrinsic motivational traits in an athlete shows that most student athletes are motivated by internal and external factors. An athlete's motivation is something that can be influenced, but can also affect the quality of their overall experience (Norris, 2010).

In order for motivation to be considered an operative approach to student athletes, they must have intrinsic traits and/or receive extrinsic rewards as well as persistence to continue their education. The student athlete must have the persistence and desire to continue their education and the motivation to succeed, not only athletically, but academically. The demands of a nursing education can be very challenging. Freshman student nurses that are involved in athletics are more likely than their non-athletic peers to experience academic difficulty in getting the grades and adjusting to college life in general; therefore, it is important that their motivation, whether intrinsic or extrinsic, be identified to help them be successful.

Measurement of Motivation with SAMSAQ.

Gaston-Gayles (2002) identified academic motivation as “the degree to which a student athlete is energized toward excelling in academic tasks” (p. 11), and used motivation theories including expectancy-value theory, self-efficacy theory, and attributional theory. They

demonstrated that expectancy-value theory could be useful in evaluating the levels of academic and athletic achievement in student athletes through their development and implementation of the Student-Athletes' Motivation toward Sports and Academics Questionnaire (SAMSAQ). This scale was used to measure academic motivation in student athletes.

The investigator (Gaston-Gayles, 2004), conducted a study to assess academic motivation as a predictor of academic performance for college athletes. Prior to their study motivation had not been measured in other studies as a predictor of success. Other studies assessed high school grade point average (GPA) and rank, standardized test scores, and parental education as predictors for success. The researcher collected data from 236 student athletes from eight different varsity sports. The students completed the SAMSAQ during their sport team meetings. The results of the study indicated that ACT scores, ethnicity, and academic motivation were influential in predicting academic performance. Based on Gaston-Gayles' work, it was determined that academic motivation was a predictor of academic performance for college athletes. When the student values their education, he/she will have more incentive to put forth the effort needed to attain their desired level of success in the classroom. Therefore, use of the SAMSAQ instrument is a valuable tool for assessing motivational factors in these student nurse athletes.

Rationale for Study

Student athletes constitute a specialized campus population who confront unique challenges when adjusting to the demands of college or university life (Engstrom & Sedlacek, 1991). The athletic student experiences emotional pressure to succeed academically and athletically. This emotional pressure may be compounded by time-management problems and absence from campus because of athletic travel demands (Wolverton, 2006). These students have

many academic and athletic demands and concerns over how to adjust to their busy schedule. Many factors play an important role in the student athlete's academic success. The literature supports some of the factors investigated in this study and additionally includes persistence and motivation. Much of the literature has shown student athletes to be highly motivated to succeed academically, display higher self-worth, exhibited better meta-cognitive study strategies, demonstrated higher academic performance, and had fewer reading and study problems than did the student athletes who were less highly motivated (Watt & Moore, 2001). Although the existing body of literature regarding success of student athletes in colleges and universities (regardless of academic course of study) is reasonably deep, literature specifically addressing success of student athletes in a BSN program is rare; therefore, this study explored those factors relevant to these student types.

Some of the articles discussed characteristics or traits that athletes need to succeed in a college or university such as intrinsic and extrinsic motivation, persistence and satisfaction. Students need motivation skills to acquire the knowledge for their education as well as succeed in their athletic endeavors. If the student does not have the drive to learn, they lack self-discipline and many times self-confidence. Particularly, the student nurse athlete’s motivational skills should be assessed throughout their education. What is learned initially must be assessed and evaluated to determine that it has been incorporated in their field of practice. Generating research in this area may provide the evidence for nursing programs to utilize to support nurse athletes.

Chapter 3

Methods

Design

A descriptive, non-experimental, cross-sectional, quantitative design was used in this pilot study. The Demographic Questionnaire (Appendix A), The Facilitators/Barriers Questionnaire (Appendix B) and The Student Athletes' Motivation toward Sports and Academics Questionnaire (SAMSAQ) (Appendix C) were used to collect data from student nurse athletes and non-athletes currently enrolled in their junior and senior year of a BSN nursing program.

Population

The study included a convenience sample from two separate Catholic BSN nursing programs located in western and west central Pennsylvania. The sample consisted of student nurse athletes and non-athletes in the junior and senior years of their nursing program. The subjects were expected to graduate in fall 2014, spring 2015, fall 2015, or spring 2016, respectively. It included 61 subjects who consented and met the entry criteria. Most of the subjects were female, Caucasian, single students. They were primarily campus residents. The only inclusion criterion was formal admission to the baccalaureate degree nursing programs. The convenience sample was used to allow maximum voluntary recruitment of students for the study.

Procedures

The Protection of Human Rights was instituted after securing written approval from the Carlow (Appendix D) and Saint Francis Universities Institutional Review Boards (IRB's) (Appendix E). Additional permission was obtained from Dr. Joy Gaston-Gayles (Appendix F), author of the SAMSAQ Instrument. The nursing department chairs of each university were

notified about the study and asked permission for the investigator to recruit students to participate in the study. Participation in the study was voluntary. Choosing not to participate did not have any adverse consequences for the students.

The primary investigator (PI) prepared a cover letter (Appendix G) that contained an overview about the study. Two types of numerically coded packets were also prepared by the PI according to school and student status of athlete or non-athlete and placed in envelopes. Both groups (athletes and non-athletes received the cover letter explaining the survey, an Informed Consent Letter (Appendix H), the Demographic Questionnaire, and the Facilitators/barriers Questionnaire. The student nurse athletes received an additional questionnaire, the SAMSAQ, in their packets. To reduce student burden, the cover letters were presented to the junior and senior nursing students at each university by two nursing faculty members during their regularly scheduled nursing classes including Medical Surgical, and Critical Care Nursing. These faculty members explained the study and requested student participation in the study. Potential participants were advised that the survey would take approximately 30 minutes to complete.

The students that volunteered for the study obtained one of the appropriate packets from the secretary at each university. The packet contained a letter that introduced the researcher, explained the purpose of the study, and instructions for completing the paper and pencil surveys. Upon completion of the questionnaires, the subjects were instructed to place the questionnaires in the coded envelope and not to place identifying marks on the questionnaires. The students then sealed the envelope, and returned the packet to the secretaries. Upon return of the packet, the students were given a $5.00 gift card in appreciation for completing the questionnaires.

To assure confidentiality, students were not identified by name or other student identifiers. The individual responses from the questionnaires were kept confidential and

anonymous. All of the completed surveys were stored in a locked cabinet with potential identifying participant information kept secure. The researcher allowed a total of eight weeks for data collection.

Instruments

A three part survey was used in this study that included: The Demographic/Socio-Economic Questionnaire, The Facilitators/Barriers Questionnaire, and The Student Athletes' Motivation toward Sports and Academics Questionnaire (SAMSAQ).

Demographic/Socio-Economic Questionnaire.

The Demographic/Socio-Economic Questionnaire was an instrument developed by the primary investigator to assess student nurse's background information (see Appendix A). Prior for use in this study, the Demographic/Socio-Economic Questionnaire was reviewed by several experts in the field of nursing, athletics, and academics who verified that the survey included all of the possible characteristics relevant to the student nurse athlete and non-athlete population. The questionnaire consisted of 12 items measuring the following variables: gender, age, race, marital status, current academic status, residential status, current employment, current sport involvement, and scholarships.

Facilitators/Barriers Questionnaire.

The Facilitators/Barriers Questionnaire was an instrument developed by the researcher to assess student nurses attitudes regarding what assists or hinders them in their nursing education (see Appendix B). Prior to use in this study, the Facilitators/Barriers Questionnaire was reviewed by several experts in the field of nursing, athletics, and academics who verified that the survey included all of the possible information, skills, and characteristics relevant to the student nurse athlete and non-athlete population.

The questionnaire included two components. The first component included 20 questions that measured the importance of time management, prioritization, flexibility, use of tutors, and nursing class or clinical conflicts with their academic and/or athletic schedule. Another item measured how often the student felt anxious about being away from home and if the student felt overwhelmed by difficulties in his or her life. The student was instructed to report how often each of these occurred. The questionnaire also assessed if the student nurse would encourage other students, athletic or non-athletic to pursue a degree in nursing. The last item was an open-ended question related to what the student felt would aid him or her toward academic success that he or she has no control over.

The second component of this tool was the College Student Stress Scale. This instrument was developed by R.C. Feldt, (2008) to measure perceived stress in college students. The scale contained 11 items that required students to rate their stress or anxiety within the last academic year. The student athletes answered the questions as to how they felt while their sport was in season. Responses on the five-point Likert scale ranged from "1" being "never" to "5" being "very often". Seven items included the frequency with which the student has felt anxious or distressed about personal relationships (Item 1), family matters (Item 2), financial matters (Item 3), academic matters (Item 4), housing matters (Item 5), being away from home (Item 6), and events not going as planned (Item 9). Two items included questioning one's ability "to handle difficulties in your life" (Item 7) and "to attain your goals" (Item 8). Two items pertained to control and feeling overwhelmed: "felt as though you were no longer in control of your life" (Item 10) and "felt overwhelmed by difficulties in your life" (Item 11).

Coefficient alpha for the College Student Stress Scale Total score was .87. Test-retest reliability was assessed in a class of research methods students (n = 19) with a test-retest interval

of 5 weeks. Test-retest item correlation coefficients ranged from .62 to .86 (M = .73). Pearson r between Total scores of the College Student Stress Scale and another stress scale named "The Perceived Stress Scale" (Cohen, Karmack, & Mermelstein, 1983) was r = .76 (n = 22) (Feldt, 2008).

Student Athletes' Motivation toward Sports and Academics Questionnaire.

The SAMSAQ (see Appendix C) is an instrument developed by Dr. Joy Gaston-Gayles (2004) and designed to measure the academic and athletic motivation of student athletes. This instrument was chosen for this study because it measures student athletes' motivation in their two most prominent college roles: academics and athletics. The SAMSAQ has three separate subscales: academic motivation (AM), student athletic motivation (SAM), and career athletic motivation (CAM). The AM subscale has 16 items that measure the extent to which students are motivated toward academic related tasks. The SAM subscale has eight items that measure the extent to which student athletes are motivated to excel at athletic-related tasks. The CAM subscale has five items that measure the extent to which student athletes are motivated toward a professional career in athletics. The original 30-item questionnaire uses a six-point Likert scale ranging from a score of "1" (very strongly disagree) to a score of "6" (very strongly agree). Gaston-Gayles used the Cronbach's alpha coefficient to measure the internal consistency of the items within each subscale. The AM subscale has a Cronbach's alpha value of .79. The SAM subscale has an alpha value of .86. The CAM subscale has alpha value of .84. Total scores for each subscale on this instrument are calculated by adding the total score of each item within the subscale. The original scale has no cutoff scores to indicate high or low scores (Gaston-Gayles, 2004).

Academic motivation (AM) is an independent variable measured by the SAMSAQ. The total score of all the items in this category comprised the overall score for this variable. Sample questions that measure this variable include, “It is important for me to learn what is taught in my courses” and “I am willing to put in the time to earn excellent grades in my courses” (Gaston-Gayles, 2005, p. 326).

Student athletic motivation (SAM) is also an independent variable measured by the SAMSAQ. The total score of all the items in this category will comprise the overall score for athletic motivation. Sample questions that measure this variable are, “It is important to me to learn the skills and strategies taught by my coaches” and “I am willing to put in the time to be outstanding in my sport.” Career athletic motivation (CAM) is also measured by the SAMSAQ. An example of a question that measures this is, “My goal is to make it to the professional level or Olympics in my sport” (Gaston-Gayles, 2005, p. 326).

The SAMSAQ was found to be a valid scale and showed good internal consistency in measuring three achievement motivation constructs: (a) academic motivation, (b) student athletic motivation, and (c) career athletic motivation. The three subscales may be used to provide academic advisors information about student athletes and help them develop a balance between academic and athletic tasks (Gaston-Gayles, 2005).

Data Analysis Plan

Data were collected using The Demographic Questionnaire, The Facilitators/Barriers Questionnaire, and The SAMSAQ from a convenience sample of nursing students from both universities. Sixty-one nursing students participated in this study, 18 student nurse athletes and 43 non-athletes. Statistical analysis began with data validation and assessment of completeness. Where appropriate, homogeneity, homoscedasticity, and normality (including identification of

outliers) were analyzed between the universities on an overall basis and the same was attempted on the further stratification of student type, athlete and non-athlete. The data were analyzed using SPSS V19.0.

The Research Questions (RQ) addressed in this study follows:

RQ 1: What are the demographic and socio-economic characteristics of student nurse athletes and non-athletes?

RQ 2: What are the facilitators of student nurse athletes and non-athletes?

RQ 3: What are the barriers of student nurse athletes and non-athletes?

RQ 4: What motivational factors of student nurse athletes contribute to maintaining their self-reported level of academic success?

Chapter 4

Results

This chapter details the results of the study. It includes sections on the demographic and socio-economic characteristics, facilitators, barriers, and motivation factors of the study sample derived from the analysis of the data obtained from The Demographic/Socio-Economic Questionnaire, The Facilitators/Barriers Questionnaire, and the SAMSAQ.

Analysis of Data

Sample population.

During the four week data collection interval extending from September 8, 2014 to October 3, 2014, a convenience sample of 61 junior and senior nursing students from two separate universities voluntarily participated in this study. Of the 61 nursing students, 43 were non-athletes and 18 were athletes. Of the 43 student nurse non-athletes, one did not complete the Demographic/Socio-Economic Questionnaire, and two student nurse athletes did not complete the SAMSAQ; therefore, the usable sample size for the Demographic/Socio-Economic Questionnaire (DSEQ) was 42, while that for the SAMSAQ was 16.

Demographic/Socio-Economic Questionnaire.

The DSEQ was used to assess homogeneity over student type (athlete and non-athletes) with each variable analyzed using an appropriate non-parametric test with the exception of the continuous variable, age. On age, homogeneity of variances held per Levene's Test ($p = .282$), but normality was violated for both athletes and non-athletes according to the Shapiro-Wilk test, $p = .016$ and $< .0005$, respectively. Interpreting age with caution, a t-test reveals no statistically significant difference of means, $p = .057$, which is consistent with the Medians Test, $p = .827$; however, the Mann-Whitney U test reveals a statistically significant difference between the

distributions, p = .024. Given the lack of statistical difference of means and medians and the narrow range, the two groups - athletes and non-athletes - can be considered sufficiently similar on age so as not to confound the analysis or interpretation thereof (Table 1).

Table 1.

Age, Analysis of Homogeneity on Student Type

Age, years	Athlete n = 18	Non-athlete n = 42
Mean (SD)	20.5 (1.043)	21.1 (1.045)
Median	20.0	21.0
Mode	20	21
Range	19 – 23	20 – 26

Homogeneity over student type held for all variables on the DSEQ with the exception of 'Current Academic Status' (p=<.005) and 'Athletic Scholarship' (p=<.0005) (See Appendix I). There were no other statistically significant differences noted. The statistically significant difference in athletic scholarships was anticipated given the groups under study and does not confound the analysis. The amount of academic scholarship did not differ statistically significantly between athletes and non-athletes. The statistical significance for current academic status and athletic scholarship on student type is not sufficient to indicate any substantial confounding impact on the analysis. As such, the two student type groups, athlete and non-athletes, can be considered sufficiently similar over the demographic variables to allow for valid

between-group comparisons. Given the non-equivalency of the grading scales of the two universities, Current GPA is not a reliable variable of comparison.

Facilitators/Barriers Questionnaire.

The results of the Facilitators/Barriers Questionnaire (FBQ) follow. As normality and/or homogeneity was always violated for the questions with an interval response set, non-parametric tests were utilized, either Chi-square or Mann-Whitney U.

The results of questions one through three regarding if the students participated in a college organized sport, if they are current athletes, and if they wanted to be an athlete but had to choose academics over athletics are expected given analysis over student type. Of interest, interpretation of these results implies that 19% of non-athletes began their university career as nursing student athletes but had to choose academics over athletics. The three athletes that answered "yes" to question three likely responded in error, since they self-identified as current athletes and, therefore, should have answered no (Table 2).

Table 2.

Results of Facilitators/Barriers Questionnaire: Q01-03

Sample Size	Athlete 18	Non-athlete 43	p-value
1. Have you ever participated in a college organized sport?			
A. Yes	18 (100)	9 (20.9)	< .0005 [1]
B. No	---	34 (79.1)	
2. Are you a current student athlete?			
A. Yes	15 (83.3)	1 (2.3)	< .0005 [1]
B. No	3 (16.7)	42 (97.7)	
3. Did you want to be a student athlete but had to choose academics over athletics?			
A. Yes	3 (16.7)	8 (18.6)	0.857
B. No	15 (83.3)	35 (81.4)	

Note: [1] Per the binomial test, the column percentages of both response categories statistically significantly differ at the .05 level

Question four, 'Rank the following by the amount of demand on your time according to your schedule:' indicated that both groups chose academics as requiring the most demand of their time. Social time and family were also ranked high for both groups. Other high time demands included athletics for the athletic group (See Appendix J). No statistically significant differences over student type were found for questions regarding the biggest challenge in maintaining their academic schedule, and current daily schedule keeps them from participating in other activities that are important. There were also no statistically significant differences noted on question seven regarding the College Students Stress Scale, or how often the students used tutors, study groups, or academic programs.

The next open-ended question asked 'What other services, if any, were not provided that you believe would have been the most helpful to you in handling your schedule so as to achieve academic success?' Common themes from both groups included time management, assistance from tutors, and meetings with their advisors as well as quality of life issues (See Appendix K).

No statistically significant differences over student type were found for question 10 regarding how much assistance they needed with time management, prioritization, and flexibility. There was also no statistically significant difference for question 11, 'Rate each of the following skills in importance to your academic success?' Both of these questions used Likert scales ranging from not important at all to vital for each category.

Related to question 12, 'Specify in rank order the six skills/characteristics you believe to be critical to your academic success. (If you believe time management, prioritization, and flexibility are in your top six, please include those.)' Results of this question indicated that time management (n=39, 67%) and prioritization (n=23, 39%) ranked as the top two characteristics critical to students' academic success (See Appendix L).

Questions 13 and 14 asked the students to rate specific academic skills prior to college and currently. The majority of the students rated time management, prioritization, and flexibility as proficient to sufficient prior to entering college and proficient currently. Comparing the distribution of the ordinal responses of athletes vs. non-athletes, the distributions were found to be statistically significantly different for the categories of time management (p=.002), prioritization (p=.044), and flexibility (p=.020). Additionally, the medians for the time management category were found to be statistically significantly different between athletes and non-athletes. Comparing the distribution of the ordinal responses of athletes vs. non-athletes, the distributions were found to be statistically significantly different for only the time management categories (p=.004), regarding how the student rated their current level of skill.

For question 15, 'How did you achieve your current level of skill? (Check all that apply)', and 16 'Do you feel that you have enough time to complete your academic responsibilities?', there were no statistically significant differences. The majority of athletes and non-athletes felt that they did not have enough time to complete their academic responsibilities. Table 3 refers to items 17 through 19, regarding the maintenance of their academic responsibilities. Majority of both groups agreed that it was difficult to maintain the needed GPA for the nursing program. The majority of athletes and non-athletes indicated agreement that maintenance of their career was challenging due to course material but a higher percentage of athletes indicated that this was due to their academic schedule. Only question 19 showed a statistically significant difference (p=.007) over student type both on distribution and median.

Table 3.

Results of Facilitators/Barriers Questionnaire: Q17 – 19

Sample Size	Athlete 18	Non-athlete 43	p-value distributions	p-value medians
17. It is difficult to maintain the needed GPA for the nursing program?				
1. Very Strongly Disagree	---	3 (7.0)		
2. Strongly Disagree	---	1 (2.3)		
3. Disagree	3 (16.7)	9 (20.9)	0.487	0.781
4. Agree	11 (61.1)	19 (44.2)		
5. Strongly Agree	2 (11.1)	8 (18.6)		
6. Very Strongly Agree	2 (11.1)	3 (7.0)		
18. Maintaining my academic career is a challenge because of the COURSE MATERIAL?				
1. Very Strongly Disagree	---	2 (4.7)		
2. Strongly Disagree	---	---		
3. Disagree	5 (27.8)	3 (7.0)	0.379	0.534
4. Agree	7 (38.9)	20 (46.5)		
5. Strongly Agree	5 (27.8)	18 (41.9)		
6. Very Strongly Agree	1 (5.6)	---		
19. Maintaining my academic career is a challenge because of my SCHEDULE?				
1. Very Strongly Disagree	---	1 (2.3)		
2. Strongly Disagree	---	1 (2.3)		
3. Disagree	1 (5.6)	13 (30.2)	0.007	0.025
4. Agree	7 (38.9)	17 (39.5)		
5. Strongly Agree	7 (38.9)	8 (18.6)		
6. Very Strongly Agree	3 (16.7)	3 (7.0)		

A higher percentage of both athletes and non-athletes agree that they would encourage students, athletes and non-athletes to pursue a degree in nursing showing no statistical significance.

For question 22, 'What do you feel would aid you to your academic success that you have no control over?', both groups indicated scheduling issues and time management were main issues (See Table 4).

Table 4.

*Results of Facilitators/Barriers Questionnaire: Q*22

Categorization	Athlete n = 18	Non-athlete n = 43
Changes in Teaching Methods	3 (16.7%)	12 (27.9%)
Scheduling Issues	8 (44.4%)	13 (30.2%)
Time Management	5 (27.8%)	11 (25.6%)
Financial Concerns	0 (0.0%)	2 (4.7%)
Left Blank (not answered)	1 (5.6%)	4 (9.3%)
Not categorized	1 (5.6%)	1 (2.3%)

SAMSAQ Questionnaire.

The SAMSAQ, applicable only to student athletes, was used to investigate the motivational factors of student nurse athletes that contribute to maintaining their self-reported level of academic success (RQ#4). The SAMSAQ is interpreted by aggregation into three distinct domains: career athletic motivation (CAM), student athletic motivation (SAM), and academic motivation (AM). These scores indicate that nursing student athletes scored both the AM and SAM subscales at the same mean level of motivation (AM = .6797 and SAM = .6771),

and scored the CAM much lower (CAM =.4208). These findings suggest that the nursing student athletes have a higher motivation toward academics than their athletic tasks.

Correlations between the SAMSAQ domain scores and appropriate variables from both the DSEQ and FBQ surveys were calculated. Results indicated that there were three statistical significant differences: 1.) between the DSEQ (type of athletic scholarships) and the SAM domain (p=.034), 2.) the FBQ (total score of the CSS) and the AM domain (p=.044), and FBQ (the student nursing athlete's willingness to encourage student non-athletes to pursue a degree in nursing) and the AM domain (p=.017).

Chapter 5

Discussion and Conclusions

Discussion of Findings

The purpose of this descriptive, non-experimental, cross-sectional, quantitative pilot study was to identify demographic and socio-economic characteristics as well as facilitators and barriers of student nurse athletes and non-athletes. Another focus of this study was to identify motivational factors of student nursing athletes attributing to their self-reported desired level of academic success.

Demographic variables from this current study identified that students' gender was predominantly female (90%) and white (95%), primarily single (98%). These variables are similar to what Sellers (1992) and Young and Sowa (1992) found indicating no difference between race and gender in athletes on motivational factors. Academic status of the student athletes (n=18) consisted of 78% juniors and 22% seniors. Student non-athletes (n=43) consisted of 38% juniors and 62% seniors. There was a higher percentage of students in both groups residing on campus (78% vs 57%, athlete versus non-athlete, respectively), and there was a lower percentage (33%) of student athletes who were employed part-time in comparison to 57% of student non-athletes. Almost 20% more student athletes (61%) were not employed relative to non-athletes (43%). One student nurse identified him/herself as a non-athlete but answered the questionnaire that he/she participated in a sport (dance team).

A similar percentage of student nurse athletes (77.8%) and non-athletes (92.7%) received academic scholarships, and only one student nurse athlete did not receive any form of athletic scholarship. Ninety-eight percent of the non-athletes did not receive athletic scholarships. Over 50% of the current GPA for all study participants was 3.0 to 3.49. Although the grading scale

and recorded GPA are non-equivalent at the two universities, all participants recorded their GPA at least at 2.5.

Of the available choices to the question that asked the amount of demand on their time according to their schedule, both athletes and non-athletes marked academics as requiring the highest demand of time. Non-athletes marked athletics as not important. Athletes marked athletics as the second-highest demand of time and social time as third. The non-athletes answered family as second and social time as their third highest demands.

The student athletes marked that their biggest challenges in maintaining their academic schedule is scheduling conflicts with classes (44%) and scheduling conflicts with clinical days (44%). Although 32% of the non-athletes marked scheduling conflicts with classes and 26% marked scheduling conflicts with clinical days, the highest percentage of non-athletes (42%) stated that they had no challenges, compared to 11% of athletes. These findings suggest that the athletes have more challenges with their schedule than do the non-athletes.

Time management ranked number one for athletes and non-athletes as being critical to their academic success. Prioritization ranked as number two for both athletes and non-athletes. The other areas that ranked with a higher percentage for both groups included study skills, motivation, and flexibility. Forty-four students did not respond to the question asking if there were other services not provided that would have been helpful in handling their schedule. Of the 17 students that answered this open-ended question, the responses, collectively, contained the themes of assisting with time management, providing tutors, and meeting with their advisors to assist with schedules.

The majority of the responses from both groups indicated that they need slight assistance with time management, and none to moderate assistance with prioritization. A slightly higher

percentage of non-athletes need more assistance with flexibility, which is not surprising due to athletes may have more experience with rigorous athletic schedules. Both groups felt that they were sufficient to proficient in time management and prioritization prior to entering college and proficient to expert in these skills currently. When questioned regarding how the students achieved their current level of skill, the majority of both groups reported that these skills were either self-taught or learned in their academic courses.

Approximately 60% of athletes and non-athletes felt they had enough time to complete their academic responsibilities, and the majority of both groups agreed that it was difficult to maintain the needed GPA for the nursing program. Both athletes and non-athletes do not statistically differ in their responses, that they would encourage student athletes and non-athletes to pursue a degree in nursing. Majority of both groups strongly agree that they would encourage the pursuit of a nursing degree.

When asked what the students felt would aid their academic success that they have no control over, the athlete and non-athlete responses were very similar. The top three responses in order for both groups were scheduling issues (n=21), time management (n=16), and changes in teaching methods (n=15). Some of the responses included, “more time to study, more flexible schedules, and better support from teachers.” These findings are similar to an article by Janiszeske Goodin (2003) who discussed adaptable scheduling being used to attract student athletes due to their rigorous schedule.

Results of the SAMSAQ normalized domain scores indicated that nursing student athletes scored high on the AM (M =0.6797) and the SAM (M=0.6797) subscales, and scored much lower on the CAM (M=0.4208). These findings suggest that the nursing student athletes are highly academically motivated toward their academic-related tasks and almost equally

motivated toward their athletic-related tasks. The score on the CAM suggests that the students' motivation towards a professional career in athletics is much lower. Based on Gaston-Gayles' work (2004), academic motivation is a predictor on academic performance. The student that scores higher on the AM subscale is more academically motivated than the student that scored high on the CAM. The higher the score on the AM, the more incentive the student will have to work toward attaining their desired level of academic success. A statistically significant negative Pearson Correlation was noted between the CAM domain and the Facilitators/Barriers question, 'Maintaining my academic career is a challenge because of my schedule'. A higher CAM domain score was correlated with a response of strongly disagree, meaning that the more athletically career-minded the student athlete was the less difficult it was for them to maintain their academic career due to scheduling challenges.

Three statistically significant positive moderate strength correlations were noted. First, the correlation between the type of athletic scholarship and the SAM domain of the SAMSAQ showed that nursing student athletes who received more athletic scholarships scored higher on the SAM domain and were more athletically motivated. Second, the total score of the CSS and the score of the AM domain of the SAMSAQ correlation indicated that as AM score increased so did the total score of the CSS. Third, the correlation between the student nursing athlete's willingness to encourage student non-athletes to pursue a degree in nursing and the AM domain of the SAMSAQ represented that those students who are more athletically motivated would encourage non-athletic students to pursue a degree in nursing. However, when asked if they would encourage student athletes to pursue a nursing degree, only a weak, non-statistically significant correlation was found with the AM domain of the SAMSAQ.

Limitations

There were several limitations which need to be addressed. One limitation was the limited amount of literature and studies regarding student nurse athletes. Another limitation was the small sample size. The number of student nurse athletes was approximately less than half the number of the student nurse non-athletes. Further compounding this issue was that 11% of the student nurse athletes did not fill out the SAMSAQ. From discussions with the faculty members administering the survey, possible reasons for non-compliance were the following: the students did not realize that there was another questionnaire in the packet or the students did not want to take the time to fill out this specific questionnaire. The sample consisted of a homogeneous population of predominantly Caucasian, female participants. Academic status of the student athletes consisted of a larger population of juniors (78%) than seniors (22%). Student non-athletes population consisted of 38% juniors and 62% seniors.

Another limitation was that the researcher developed two of the instruments for the study and there was no previous validity or reliability data; however, these instruments were reviewed by several experts for proper construct and appropriateness. Lack of statistical correlation may have been related to the use of the Facilitator/Barrier questionnaire as no studies have utilized this instrument.

Implications

The results of this study imply that student nurse athletes have a high academic motivation. Time management and prioritization received very high scores from the athlete and non-athlete groups as needed skills for academic success. What is apparent from this pilot study, and given the scarcity of this subgroup of student athletes, is the need for additional evaluation of this subject. Further research on this topic is warranted.

Education.

Student nurse athletes' academic motivational factors are vital for academic success and must be taken into consideration when designing educational programs to develop and improve these characteristics. If students lack the needed time management and prioritization skills, their education can be severely impacted. Defining and enhancing these needed skills will promote positive outcomes and academic success. An obvious conclusion from this study is that informational sessions, throughout the students' academic career, are necessary to identify and enhance needed motivational characteristics.

Student counselors and academic advisors should be well suited to assist student nurse athletes and provide support to enhance educational goals. Educators, advisors, and counselors also need to provide assistance in helping the athlete's deal with possible barriers that include scheduling issues, time constraints from balancing studying and athletics, and increased reported stress. Aid should be offered during the student's first year in college to help athletes develop the needed skills. Follow-up support should be provided until the student's graduation. These skills can help the athletes succeed and assist with integration into the campus community.

Policy.

Administration needs to be on board regarding accommodating student athletes on quality of life issues. Some of these issues may include expanding meal times to accommodate practice and clinical schedules, offering later office hours to reach administrative and secretarial staff, and allowing taping of lectures to accommodate athletes who must leave campus for competitive events. Also, departmental administration should create policies that allow education of academic advisors so that they can fully understand education barriers that are specific to student athletes. These advisors can then be assigned to student athletes when they enter the

nursing program so that individualized support could be provided to promote the athletes' success.

Coaches should require dedicated study times for all athletes. The scheduled study time would help the athletes focus on academic success rather than unnecessary social activities. Study groups should be encouraged for all members of the athletic team. The nursing program could arrange for tutors to lead these study groups. The scheduled study time coupled with tutored study groups can help student athletes overcome time management and prioritization issues.

Advocacy.

Student nurse athletes' success in nursing programs will not only increase the number of new RN's but this increased number of new RN's entering the workforce will be experienced team players. This team experience will better contribute to harmonious work environments and potentially decrease workplace bullying.

Advocating for athletes recruitment into nursing programs, guidance counselors in high schools could also encourage student athletes to enter nursing programs. This could potentially assist in the current nursing shortage by increasing enrollment, and producing more graduate nurses. If the student athlete understands the challenges and realizes that special assistance is available for them to succeed, they may view the successful completion of a nursing program as an achievable and desirable goal.

Recommendations

A prospective, longitudinal study design would provide additional data that would evaluate and analyze students' perceptions at baseline and at periodic intervals of their college education to develop appropriate interventions or strategies that promote retention and success of

student athletes. Future research could be done to assess student nurse athletes' attrition rates and possible factors that affected their nursing education. These studies will allow nursing faculty to create policies and support systems specific to athletes. These policies and support systems could then improve the student athletes' ability to successfully complete the nursing program.

By improving faculty and nursing student athletes' awareness through research, such as this pilot study, programs will have a positive impact that will guide future research surrounding students' motivational factors. These findings could be generalized to other domains of education as well. This pilot study will provide the framework from which to build programs that assist students' utilization of appropriate motivational factors for students' academic success.

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Appendix A

Demographic/Socio-Economic Questionnaire

Demographic/Socio-Economic Questionnaire

Please mark your responses on this sheet by filling in the blank or by circling the appropriate answers.

1. Name of school

   A. Carlow University
   B. Saint Francis University

2. Gender

   A. Male
   B. Female

3. Age

   _____ years.

4. Race

   A. White, Caucasian
   B. African American
   C. Native American
   D. Asian
   E. Hispanic or Latino
   F. Biracial
   G. Other – specify _____

5. Marital Status

   A. Single
   B. Married
   C Widowed
   D. Divorced
   E. Separated
   F. Other – specify_____

6. Current Academic Status

   A. Freshman
   B. Sophomore
   C. Junior
   D. Senior

7. Residential status

   A. Commuter
   B. On-Campus

8. Current employment

   A. Student and employed full-time
   B. Student and employed part-time
   C. Student only

9. Current sport _____

   A. Starter
   B. Non-starter
   C. Other _____

10. Semester sport is played

    A. Fall
    B. Spring

11. Scholarship

    A. Academic
       1. None
       2. Partial
       3. Full
    B. Athletic
       1. None
       2. Partial
       3. Full

12. Current GPA

    A. <1.5
    B. 1.5 to 1.99
    C. 2.0 to 2.49
    D. 2.5 to 2.99
    E. 3.0 to 3.49
    F. 3.5 to 4.0

Appendix B

Facilitators/Barriers Questionnaire

Facilitators/Barriers Questionnaire

1. Have you ever participated in a college organized sport? Yes No

2. Are you a current student athlete? Yes No

3. Did you want to be a student athlete but had to choose academics over athletics?

Yes No (current athlete or no desire to be an athlete)

If yes why _____

4. **Rank** the following by the amount of demand on your time according to your schedule:

Rank from 1 to 6

with **1** being **most** demanding and *6* being *least* demanding,

mark N/A if you do not participate in an activity

_____ Athletics _____ Academics

_____ Family _____ Work

_____ Social Time (e.g. friends, clubs, fraternities, sororities)

_____ Other activities (e.g. music, drama)

5. The biggest challenge in maintaining my academic schedule is: (choose only one)

A. Scheduling conflicts with classes

B. Scheduling conflicts with clinical days

C. I have no challenges

6. My current daily schedule keeps me from participating in other activities that are important to me. **(circle ONLY one)**

1	2	3	4	5	6
very strongly disagree	strongly disagree	disagree	agree	strongly agree	very strongly agree

7. College Student Stress Scale

For the following items, report how often each has occurred within the last academic year.

If you are currently a student-athlete, please answer the questions as to how you felt while your sport was in season.

Please use the following scale:

1	2	3	4	5
never	rarely	sometimes	often	very often

felt anxious or distressed about personal relationships _____

felt anxious or distressed about family matters _____

felt anxious or distressed about financial matters _____

felt anxious or distressed about academic matters _____

felt anxious or distressed about housing matters _____

felt anxious or distressed about being away from home _____

questioned your ability to handle difficulties in your life _____

questioned your ability to attain your personal goals _____

felt anxious or distressed because events were not going as planned _____

felt as though you were NO longer in control of your life _____

felt overwhelmed by difficulties in your life _____

8. How often do you use the following services during a semester?

If you are currently a student-athlete, please answer the questions as to how often you used these services while your sport was in season.

Frequency of Use during a Semester

	never	once	3x	6x	9x	12x	15x	> 15x
Tutors								
Study Groups								
Academic Programs (e.g. Center for Academic Success, Center for Academic Achievement, The Writing Center)								

9. What other services, if any, were ***not*** provided that you believe would have been the most helpful to you in handling your schedule so as to achieve academic success?

_____

_____

10. How much assistance do you need with each of the following?

	No assistance at all	Slight assistance	Moderate assistance	A lot of assistance	Total assistance
Time Management					
Prioritization					
Flexibility					

11. Rate each of the following skills in importance to your academic success?

(For each skill, mark ONE box with an X)

	Not Important at all	A little Important	Somewhat Important	Important	Very Important	Vital
Time Management						
Prioritization						
Flexibility						

12. Specify in rank order the six skills/characteristics you believe to be critical to your academic success. (If you believe time management, prioritization, and flexibility are in your top six, please include those.)

1 = **most** critical to success and *6* = *least* critical

1.	4.
2.	5.
3.	6.

13. Place an X in the column of the number that best represents how you would rate your level

of each skill **PRIOR** to beginning your college education:

	0	1	2	3	4	5	6	7	8	9	10
	No Skill	Novice		Very low		Suffi-cient			Pro-ficient		Expert
Time Management											
Prioritization											
Flexibility											

14. Place an X in the column of the number that best represents how you would rate your **CURRENT** level of each skill:

	0	1	2	3	4	5	6	7	8	9	10
	No Skill	Novice		Very low		Suffi-cient			Pro-ficient		Expert
Time Management											
Prioritization											
Flexibility											

15. How did you achieve your current level of skill? **(Please check ALL that apply)**

	Time Management	Prioritization	Flexibility
No change from before college			
Academic course			
Academic Advisor			
Instructor(s)			
Tutors			
Coach			
Peers or peer group			
Self-taught			
Other (specify)			

16. Do you feel that you have enough time to complete your academic responsibilities?

Yes No

17. It is difficult to maintain the needed GPA for the nursing program **(circle ONLY one)**

1	2	3	4	5	6
very strongly disagree	strongly disagree	disagree	agree	strongly agree	very strongly agree

18. Maintaining my academic career is a challenge because of the COURSE MATERIAL **(circle ONLY one)**

1	2	3	4	5	6
very strongly disagree	strongly disagree	disagree	agree	strongly agree	very strongly agree

19. Maintaining my academic career is a challenge because of my SCHEDULE **(circle ONLY one)**

1	2	3	4	5	6
very strongly disagree	strongly disagree	disagree	agree	strongly agree	very strongly agree

20. I would encourage student NON-athletes to pursue a degree in nursing **(circle ONLY one)**

1	2	3	4	5	6
very strongly disagree	strongly disagree	disagree	agree	strongly agree	very strongly agree

21. I would encourage student-athletes to pursue a degree in nursing **(circle ONLY one)**

1	2	3	4	5	6
very strongly disagree	strongly disagree	disagree	agree	strongly agree	very strongly agree

22. What do you feel would aid you to your academic success that you have no control over?

_____

_____

Appendix C

SAMSAQ

Please circle the number that corresponds with how you feel about your academic and athletic experience:

1	2	3	4	5	6
very strongly disagree	strongly disagree	disagree	agree	strongly agree	very strongly agree

Student Athletes' Motivation toward Sports and Academics Questionnaire

1	I am confident that I can achieve a high grade point average this year (3.0 or above).	1	2	3	4	5	6
2	Achieving a high level of performance in my sport is an important goal for me this year.	1	2	3	4	5	6
3	It is important for me to learn what is taught in my courses.	1	2	3	4	5	6
4	I am willing to put in the time to earn excellent grades in my courses.	1	2	3	4	5	6
5	The most important reason why I am in school is to play my sport.	1	2	3	4	5	6
6	The amount of work required in my courses interferes with my athletic goals.	1	2	3	4	5	6
7	I will be able to use what is taught in my courses in different aspects of my life outside of school.	1	2	3	4	5	6
8	I chose to play my sport because it is something that I am interested in as a career.	1	2	3	4	5	6
9	I have some doubt about my ability to be a star athlete on my team.	1	2	3	4	5	6
10	I chose (or will choose) my major because it is something I am interested in as a career.	1	2	3	4	5	6
11	Earning a high grade point average (3.0 or above) is not an important goal for me this year.	1	2	3	4	5	6
12	It is important to me to learn the skills and strategies taught by my coaches.	1	2	3	4	5	6
13	It is important for me to do better than other athletes in my sport.	1	2	3	4	5	6
14	The time I spend engaged in my sport is enjoyable to me.	1	2	3	4	5	6
15	It is worth the effort to be an exceptional athlete in my sport.	1	2	3	4	5	6

Student Athletes' Motivation toward Sports and Academics Questionnaire

16	Participation in my sport interferes with my progress towards earning a college degree.	1	2	3	4	5	6
17	I get more satisfaction from earning an "A" in a course toward my major than winning a game in my sport.	1	2	3	4	5	6
18	During the years I compete in my sport, completing a college degree is not a goal for me.	1	2	3	4	5	6
19	I am confident that I can be a star performer on my team this year.	1	2	3	4	5	6
20	My goal is to make it to the professional level or the Olympics in my sport.	1	2	3	4	5	6
21	I have some doubt about my ability to earn high grades in some of my courses.	1	2	3	4	5	6
22	I am confident that I can make it to an elite level in my sport (Professional/Olympics).	1	2	3	4	5	6
23	I am confident that I can earn a college degree.	1	2	3	4	5	6
24	I will be able to use the skills I learn in my sport in other areas of my life outside of sports.	1	2	3	4	5	6
25	I get more satisfaction from winning a game in my sport than from getting an "A" in a course toward my major.	1	2	3	4	5	6
26	It is not important for me to perform better than other students in my courses.	1	2	3	4	5	6
27	I am willing to put in the time to be outstanding in my sport.	1	2	3	4	5	6
28	The content of most of my courses is interesting to me.	1	2	3	4	5	6
29	The most important reason why I am in school is to earn a degree.	1	2	3	4	5	6
30	It is not worth the effort to earn excellent grades in my courses.	1	2	3	4	5	6

See Gaston-Gayles, J. L. (2005). The factor structure and reliability of the Student Athletes' Motivation toward Sports and Academics Questionnaire (SAMSAQ). Journal of College Student Development, 46(3), 17-327.

Appendix D

Carlow University IRB Approval Letter

CARLOW UNIVERSITY
INSTITUTIONAL REVIEW BOARD

To: Kimberly Forst
Mildred Jones, Ph.D.

From: Robert A. Reed, Psy.D.
Co-chair, Institutional Review Board

Date: July 21, 2014

Re: Motivational Factors of Student Nursing Athletes Attributing to Academic Success

The above project was reviewed and approved by this Co-chair of Carlow's Institutional Review Board. The project is approved for a period of up to one year.

APPROVAL DATE: July 21, 2014
EXPIRATION DATE: July 20, 2015

If any untoward incidents or unanticipated adverse reactions should develop in the course of your research with human subjects, you must notify the Institutional Review Board Office at 578-6349 immediately.

Appendix E

Saint Francis University IRB Approval Letter

SAINT FRANCIS UNIVERSITY
FOUNDED 1847

14 August 2014

Re. Motivational Factors of Student Nursing Athletes Attributing to Academic Success (082014-kforst-nursing)

Dear Ms. Forst:

The research application and supporting documents received on 16 July, 2014 by the Institutional Review Board have been reviewed for applicability of human subjects protection regulations.

It is understood that your project has been reviewed and approved by the Carlow University Insitutional Review Board and that they will serve as the IRB of record.

In the event that there is a change to the research protocol, the Principal Investigator must notify the IRB and send a description of the changes to the chairman of the IRB (sbaker@francis.edu).

Stephen H. Baker, Ph.D.
Co-Chairman, Institutional Review Board
Associate Professor of Psychology

Irene Wolf, Ph.D.
Co-Chairwoman, Institutional Review Board
Assitant Professor of Biology

Appendix F

Dr. Gayle's Approval Letter regarding SAMSAQ

Approval for SAMSAQ

From: Joy Gayles <jggayles@ncsu.edu>
Sent: Wednesday, June 18, 2014 3:48 PM
To: Kimberly A Forst
Cc: joy_gayles@ncsu.edu
Subject: Re: Request to use your instrument (SAMSAQ)

Hi Kimberly. You have permission to use the instrument under the condition that you provide an executive summary of your findings.

Best,

Joy Gayles.

Sent from my iPhone

On Jun 18, 2014, at 3:19 PM, Kimberly A Forst <kaforst@live.carlow.edu> wrote:

> Dr. Gayles,
>
> I am a Doctor of Nursing Practice Candidate from Carlow University located in Pittsburgh, Pennsylvania. Currently, I am in the process of completing my graduate research project in the study of student nursing athletes. The title of my study is "Motivational Factors of Student Nursing
>
> Athletes Attributing to Academic Success." The purpose of this quantitative, cross-sectional, descriptive pilot study is to identify the student nursing athlete's motivation and retention rates in two separate BSN nursing programs. In addition, data will be collected from junior and senior student nursing athletes to determine demographic characteristics, specific motivational factors, and facilitators and barriers for academic success.

1

The specific aims of my study are:
- to identify the demographic factors of nursing student athletes in 2 separate BSN schools
- to describe motivational factors that influence the nursing student athletes
- to identify retention rates of nursing student athletes, and
- to identify a potential correlation between the motivational factors that influence the nursing student athletes and their retention rate.

I would like your permission to use the Student Athletes' Motivation toward Sports and Academic Questionnaire (SAMSAQ) as one of the instruments for my data collection. I am also planning to use a demographic questionnaire as well as a facilitator/barrier questionnaire to assess areas for recruitment for future nursing student athletes. I do not plan to modify your questionnaire and would like to use it in its entirety.

If you have any specific requests for using this tool please let me know. If there are any specific articles or references on the psychometric properties of the instrument or specific directions

for scoring the tool it would be greatly appreciated. I will be glad to share my findings with you regarding my study and use of your tool. I will give full credit to you in any reports or manuscripts referring to your instrument.

Your attention in this matter would be greatly appreciated.

You can contact me at email address: kforst@francis.edu or simply reply to this email address.

Thank you for your time and consideration concerning my graduate research study.

Sincerely,
Kimberly Forst, MSN, RN, Doctoral Candidate
Carlow University
633 Meade Street
Portage, PA 15946

2

Appendix G

Cover Letter

Dear Participant,

My name is Kimberly Forst, MSN, RN, and I am conducting a study as part of the requirements for the Doctor of Nursing Practice program at Carlow University. The purpose of my study is to identify what assists or hinders your academic success as a nursing student. In addition, information will be obtained to determine basic demographic information. If you are a nursing student athlete, your motivational factors related to your athletic and academic success will be measured. Understanding motivational factors as well as facilitators and barriers of current athletic and non-athletic nursing students will provide valuable information to nursing education programs. Generating research in this area will provide some evidence for nursing programs to utilize appropriate recruitment and retention standards and strategies that will support the nursing student's success.

Thank you for your valuable contribution to this research study.

Sincerely,

Kimberly Forst, MSN, RN (DNP Candidate)

Appendix H

Informed Consent

Informed Consent Form

CONSENT TO ACT AS A PARTICIPANT IN A RESEARCH STUDY

TITLE: Motivational Factors of Student Nursing Athletes Attributing to Academic Success

PRINCIPAL INVESTIGATOR: Kimberly Forst, MSN, RN

Carlow University

Phone number: (814) 341-7573

CO-INVESTIGATORS : None

SOURCE OF SUPPORT : Dr. Mildred Jones, PhD, CS, RN

Why is this research being done?

You are being asked to participate in a study to identify facilitators and barriers toward your academic success as a nursing student. In addition, information will be obtained to determine basic demographic information and if there are other significant factors that contribute to your success as a nursing student. If you are an athlete, your motivational factors related to your athletic and academic success will also be measured.

Who is being asked to take part in this research study?

You are being asked to participate because you are a student nurse in your junior or senior year of your nursing program. You will have a graduation date scheduled for fall 2014, spring 2015, fall 2015, or spring 2016.

What procedures will be performed for research purposes?

If you decide to take part in this research study, you will participate in completing a total of two or three paper and pencil questionnaires that include: The Demographic Questionnaire; The Facilitator and Barrier Questionnaire; and for athletes, The Student Athletes' Motivation toward Sports and Academics Questionnaire (SAMSAQ). It is anticipated that the entire process will take approximately 30 minutes.

What are the possible risks, side effects, and discomforts of this research study?

The motivational factor study is considered to be of minimal risk to you and only involves the use of written response questionnaires. There are no expected physical side effects to the study. You may

experience an inconvenience in the time it would take to complete the questionnaires. If you find any of the activity in completing the questionnaires to cause you to be uncomfortable or unsettling, you are to inform the Principal Investigator who will be available to address any questions or concerns.

What are possible benefits from taking part in this study?

You will likely receive no direct benefit from taking part in this research study; however, information that is obtained from this study will serve to assist nursing faculty members in the future management and recruitment of nursing student athletes and non-athletes. Each study participant will receive a $5.00 gift card in appreciation for their time and responses.

Who will know about my participation in this research study?

Any information about you obtained from this research will be kept as confidential (private) as possible. All records related to your involvement in this research study will be stored in a locked file cabinet. You will not be identified by name in any publications.

Is my participation in this research study voluntary?

Your participation in this research study is completely voluntary. Your decision to consent or not consent to participate in this research study will have no effect on your current or future relationship with Carlow University or this researcher.

****

This activity has been approved by the Carlow University Institutional Review Board. This Committee administers both the General Assurance of Compliance with the United States Department of Health and Human Services Policy for the protection of Human

Subjects and the University policy covering the protection of human subjects. The Committee may be contacted through the Chairperson by calling 412-578-6349 to discuss any questions or concerns.

Thank you for your valuable contribution to this research.

VOLUNTARY CONSENT

Your voluntary response to this request constitutes your informed consent to your participation in this activity. You are not required to participate. If you have questions about this study you may contact me at (814) 341-7573 or by email at kforst@francis.edu

Kimberly Forst, MSN, RN

Appendix I

DSEQ

All values are: count (% within Student Type)	Student Type		p-value
	Athlete	Non-athlete	
Sample Size	**18**	**43[1]**	
1.School	N/A, data in this table has been aggregated by Student Type		
2. Gender			
A. Male	2 (11.1)	4 (9.5)	0.887
B. Female	16 (88.9)	38 (90.5)	
3. Age	See Table 1		
4. Race			
A. White, Caucasian	18 (100)	40 (95.2)	0.346
B. African American	---	---	
C. Native American	---	---	
D. Asian	---	---	
E. Hispanic or Latino	---	---	
F. Biracial	---	2 (4.8)	
G. Other - specify	---	---	
5. Marital Status			
A. Single	18 (100)	41 (97.6)	0.436
B. Married	---	1 (2.4)	
C Widowed	---	---	
D. Divorced	---	---	
E. Separated	---	---	
F. Other - specify	---	---	
6. Current Academic Status			
A. Freshman	---	---	0.005
B. Sophomore	---	---	
C. Junior	14 (77.8)	16 (38.1)	
D. Senior	4 (22.2)	26 (61.9)	
7. Residential status			
A. Commuter	4 (22.2)	18 (42.9)	0.129
B. On-Campus	14 (77.8)	24 (57.1)	

8. Current employment			
A. Student and employed full-time	1 (5.6)	---	0.099
B. Student and employed part-time	6 (33.3)	24 (57.1)	
C. Student only	11 (61.1)	18 (42.9)	
9. Current sport (skill level)			
A. Starter	10 (58.8)	---	N/A
B. Non-starter	3 (17.6)	---	
C. Other	4 (23.5)	---	
10. Semester sport is played			
A. Fall	13 (72.2)	---	N/A
B. Spring	1 (5.6)	---	
C. Both Fall and Spring	4 (22.2)	1[2] (100)	
11. Scholarship			
A. Academic			
1. None	4 (22.2)	3 (7.3)	0.264
2. Partial	13 (72.2)	35 (85.4)	
3. Full	1 (5.6)	3 (7.3)	
B. Athletic			
1. None	1 (5.6)	40 (97.6)	< .0005
2. Partial	15 (83.3)	1 (2.4)	
3. Full	2 (11.1)	---	
12. Current GPA			
A. <1.5	---	---	
B. 1.5 to 1.99	---	---	
C. 2.0 to 2.49	---	---	
D. 2.5 to 2.99	2 (11.1)	1 (2.4)	0.360
E. 3.0 to 3.49	9 (50.0)	24 (57.1)	
F. 3.5 to 4.0	7 (38.9)	17 (40.5)	

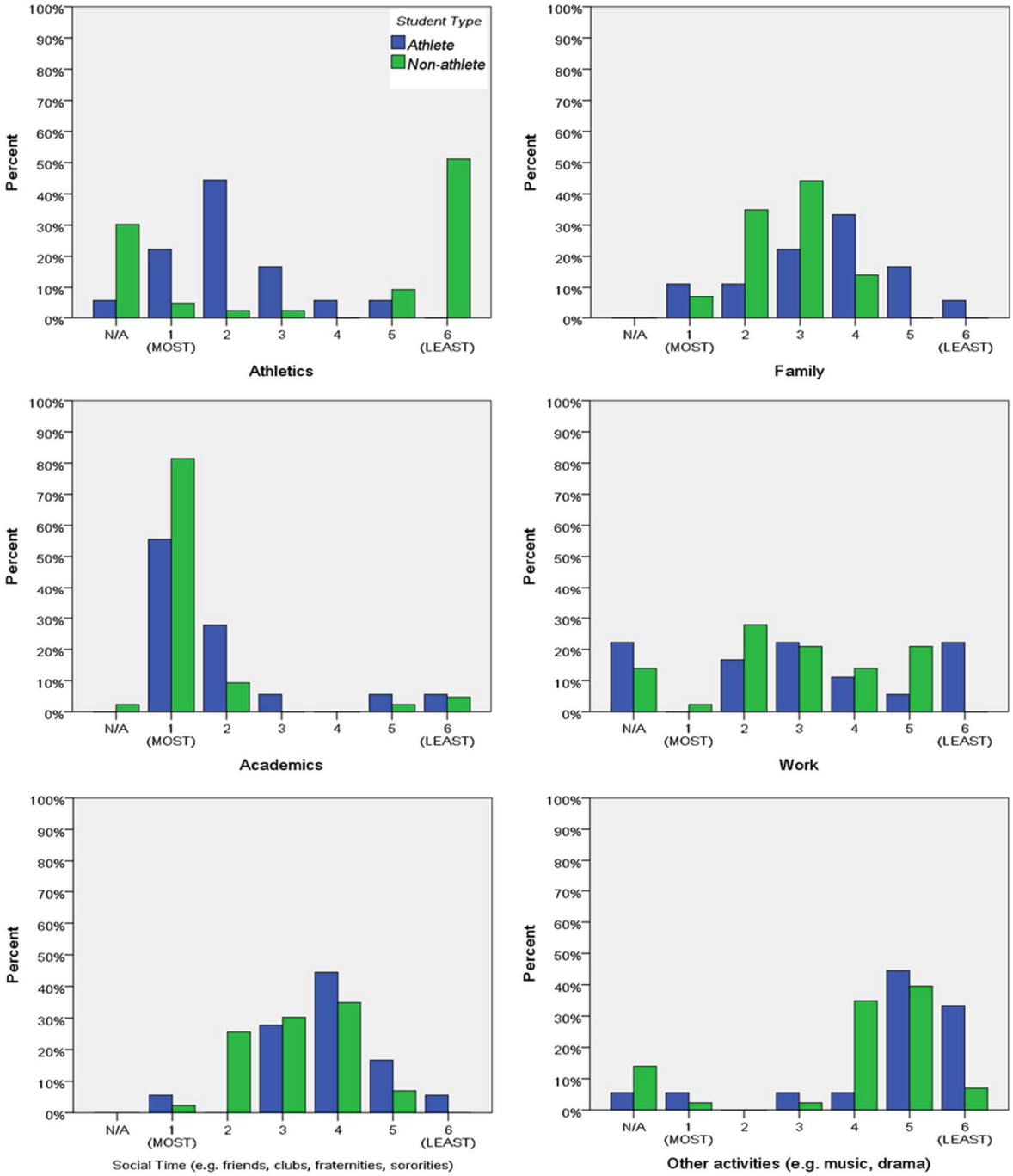
NOTES:

[1] one non-athlete did not complete the DSEQ

[2] one student self-identified as a non-athlete but answered this question due to participation in dance team

Appendix J

FBQ 4



Appendix K

FBQ 9

Student Type	Question 9. What other services, if any, were not provided that you believe would have been the most helpful to you in handling your schedule so as to achieve academic success? - Open-Ended Response (actual responses)
Athlete	A MEETING AT THE START OF THE YEAR WITH ADVISOR AND/OR PROFESSORS ABOUT OVERALL SCHEDULE. BREAKFAST. CAFE SHOULD BE OPEN BEFORE CLINICAL HOURS SPECIFICALLY DEDICATED TO STUDYING SET BY AD OR COACH AND SPECIFIC PRACTICE TIMES JUST TO HAVE A SAY IN MY SCHEDULE MORE STUDY GROUPS MORE TEACHER/STUDENT HELP IF CLASSES ARE MISSED PRACTICE TESTS
Non-athlete	ALL SERVICES ARE GOOD DIVERSITY OF CLASS TIME/SESSIONS I THINK THERE ARE ADEQUATE AMOUNT OF SERVICES PROVIDED MEETING WITH INSTRUCTOR/PROFESSOR ON LINE RESOURCES AND OPEN LAB TIMES ASSIST WITH LEARNING PERSONAL TUTORS AT THE TUTORING CENTER RATHER THAN GROUP TUTORING REVIEW SERVICES WITH A DESIGNATED TA TEST REVIEWS TIME MANAGEMENT, MORE MENTAL HEALTH PROGRAMS OTHER THAN ONE-ON-ONE COUNSELING (IE: MOTIVATION BUILDERS, HOW TO BE POSITIVE, HOW TO BE YOUR OWN BEST) WENT TO SEE MY INSTRUCTORS

Appendix L

FBQ 12

Rank: Critical to your academic success #1	Athletes 18		Non-athletes 42	
CRITICAL THINKING	*1*	5.6%	0	0.0%
FAITH	*0*	0%	1	2.4%
FAMILY SUPPORT	*0*	0%	1	2.4%
FLEXIBILITY	*0*	0%	1	2.4%
FOCUS	*0*	0%	1	2.4%
HARD-WORKING	*0*	0%	1	2.4%
KNOWLEDGE	*0*	0%	1	2.4%
MOTIVATION	*0*	0%	2	4.8%
NOTE TAKING	*1*	5.6%	0	0.0%
PRIORITIZATION	*2*	11.1%	2	4.8%
SLEEP	*1*	5.6%	1	2.4%
STRESS MANAGEMENT	*0*	0%	1	2.4%
STUDY SKILLS	*0*	0%	2	4.8%
STUDYING	*0*	0%	1	2.4%
SUPPORT	*0*	0%	1	2.4%
TIME MANAGEMENT	*13*	72.2%	26	61.9%
16 skills/characteristics				

Rank: Critical to your academic success #2	Athletes 18		Non-athletes 42	
ABILITY TO FOCUS	*0*	0.0%	1	2.4%
ATTENDING TUTORING SESSIONS	*0*	0.0%	1	2.4%
CONDUCIVE LEARNING/STUDY ENVIRONMENT	*0*	0.0%	1	2.4%
CRITICAL THINKING	*0*	0.0%	1	2.4%
DETERMINATION	*1*	5.6%	0	0.0%
DRIVE/MOTIVATION	*0*	0.0%	1	2.4%
EXERCISE	*1*	5.6%	0	0.0%
FLEXIBILITY	*0*	0.0%	2	4.8%
HANDLING STRESS	*1*	5.6%	0	0.0%
INTELLECT	*0*	0.0%	1	2.4%
KNOWING THE INFORMATION	*0*	0.0%	1	2.4%
MAINTAINING BALANCE	*0*	0.0%	1	2.4%
MANAGEMENT	*0*	0.0%	1	2.4%
MANAGEMENT OF TIME	*0*	0.0%	1	2.4%
MENTAL HEALTH	*0*	0.0%	1	2.4%
MOTIVATION	*0*	0.0%	1	2.4%
PRIORITIZATION	*7*	38.9%	16	38.1%
READING SKILLS	*0*	0.0%	1	2.4%
SLEEP	*1*	5.6%	0	0.0%
STRESS MANAGEMENT	*1*	5.6%	1	2.4%
STUDY AS I GO	*1*	5.6%	0	0.0%
STUDY GROUPS	*2*	11.1%	0	0.0%
STUDY SKILLS	*1*	5.6%	0	0.0%
TEST TAKING ABILITY	*0*	0.0%	1	2.4%
TIME MANAGEMENT	*2*	11.1%	9	21.4%
25 skills/characteristics				

Rank: Critical to your academic success #3	Athletes 18		Non-athletes 41	
ABILITY TO FOCUS ON TASK AT HAND	*1*	5.6%	0	0.0%
ABILITY TO TAKE SMALL BREAKS AND IMMEDIATELY REFOCUS	*1*	5.6%	0	0.0%
ADEQUATE TIME FOR STUDY	*0*	0.0%	1	2.4%
BALANCE	*1*	5.6%	0	0.0%
BEING ORGANIZED	*0*	0.0%	1	2.4%
BEING SPIRITUALLY GROUNDED	*0*	0.0%	1	2.4%
CARING	*0*	0.0%	1	2.4%
DEDICATION	*1*	5.6%	0	0.0%
DETERMINATION	*0*	0.0%	1	2.4%
FINANCIAL STABILITY	*0*	0.0%	1	2.4%
FLASH CARDS	*1*	5.6%	0	0.0%
FLEXIBILITY	*2*	11.1%	3	7.1%
INTELLECT	*0*	0.0%	1	2.4%
LEARNING	*0*	0.0%	1	2.4%
MOTIVATION	*1*	5.6%	0	0.0%
MOTIVATION LEVEL	*0*	0.0%	1	2.4%
NUTRITION	*1*	5.6%	0	0.0%
ORGANIZATION	*1*	5.6%	2	4.8%
PATIENCE	*0*	0.0%	1	2.4%
POSITIVE ATTITUDE	*1*	5.6%	0	0.0%
PRIORITIZATION	*3*	16.7%	16	38.1%
READING COMPREHENSION	*0*	0.0%	1	2.4%
SLEEP	*0*	0.0%	1	2.4%
STRESS MANAGEMENT	*1*	5.6%	0	0.0%
STUDY	*0*	0.0%	1	2.4%
STUDY HABITS	*0*	0.0%	1	2.4%
TIME FOR YOURSELF	*1*	5.6%	0	0.0%
TIME MANAGEMENT	*2*	11.1%	3	7.1%
USING RESOURCES	*0*	0.0%	1	2.4%
WILLINGNESS TO LEARN	*0*	0.0%	1	2.4%
WORKING AHEAD WHEN POSSIBLE	*0*	0.0%	1	2.4%
31 skills/characteristics				