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Academic Performance and Sport Involvement of LIU Post Athletes

An Honors College Thesis

by

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Spring, 2017

Economics Department

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Date

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Date

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Academic Performance and Sport Involvement of LIU Post Athletes

1. ABSTRACT

The objective of this study was to examine the association between academic performance (GPA) and the demographics, level of health condition, and factors of the surrounding environment of LIU Post student athletes. To do so, a survey was created and distributed to LIU Post student athletes, which resulted in a sample of 262 participants from ages 18 to 24 years old. Results show that student athletes who have teammates as best friends have a higher GPA. In addition, student athletes who base most of their academic decisions on advice from their coaches have a lower GPA. Lastly, when professors are aware of the students' athletic status, their GPA is higher. Based on the results from this study, the researcher has proposed recommendations on how student athletes can improve their academic performance.

2. INTRODUCTION

For years now, sports have been proven to be beneficial in many ways. Today, many students make sports a big part of their college experience. Researchers all over the world have conducted numerous studies to find the effects of sports on academics. Some have found sports have a positive effect while others have found a negative effect. This study aims to look at the same issue from a different perspective. This study investigates the variation in academic performance among athletes by statistically investigating relationships among athletes' GPA, demographics, level of health condition, and factors of the surrounding environment.

3. LITERATURE REVIEW

3.1 Importance of Sports Involvement

Past research by scholars have shown that sports can provide motivation for students to succeed in the classroom. For instance, the Director of the Division of Adolescent and School Health for the Centers for Disease Control, Howell Weshler, reviewed 50 studies examining the effect of school-based physical activity on academic performance and discovered that half of the studies showed positive associations and virtually none of research demonstrated any negative impact (Wechsler, 2012).

Many studies show more success for students who participate in sports regardless of age. Also, not only does it have health benefits and create teamwork skills, but participating in sports allows students to experience different types of relationships that are common in real life. By participating in sports, students are able to experience all healthy aspects of competition. Competition is something that never ends, even after the game is over. For example, after graduation, students experience competition obtaining and keeping jobs. Students of all ages who participate in sports have been found to cope better with competition in other areas of their lives (Ritchie, 2010). Lastly, research suggests that college students usually handle a pretty busy schedule with not much time left to fit in physical activity, so being part of a sports team gives students the exercise they might not normally receive (Gonca, 2012).

3.2 Demographics

When it comes to gender, a major difference between male athletes and female athletes is that male athletes are said to not value the importance of academic performance. This is usually

indicated by poor class attendance, spending more time in sports, and focusing on becoming professional athletes. This eventually influences the whole team to behave the same way (Allen, 1997). On the other hand, female athletes receive positive influence from their teammates in both academic and sport achievements. This creates a positive team subculture among female athletes, and it eventually leads to a positive influence on all the team members' academic performances (Allen, 1997). In addition to gender, race also seems to play a role in academic performance. For instance, several researchers note that the relationships between adolescent athletic involvement and academic outcomes cross racial and gender lines (e.g., Marsh, 1993; Whitley, 1998).

3.3 Level of Health Condition

Sports play a vital role in positively shaping the physical as well as the developmental skills of university students. Sports can also help a student's physical well-being. Athletically, active youth are more likely to be nutrition conscious in their food choices than students who are not actively involved in a sport (Doyle, 2007).

Today, one of the biggest health concerns is obesity. It is a serious problem that increases the risk of heart attack, Type 2 diabetes, high blood pressure, and heart disease, which is the leading cause of death in the United States (Nthangeni, 2006). According to the Surgeon General, obesity affects nearly 60 million Americans. The Governor's Council on Physical Fitness and Sports of California believes that being involved in physical activities such as sports, exercise, or recreational games, can help reduce these risks (Nthangeni, 2006). A main objective of the government is to promote physical exercise in order to prevent illnesses (Patrick et al., 2001).

Lastly, physical activity practiced on a regular basis is associated with a great amount of physical, psychological and physiological benefits (Biddle, 1993). On the other hand, leading a sedentary lifestyle can become a serious health problem at all ages, but particularly among university students (Irwin, 2007).

3.4 Factors of the Surrounding Environment

Team sports are a great way for college students to be active and healthy, while also helping make lifelong friendships. Being involved in sports teaches students valuable life skills like teamwork, responsibility, accountability, discipline, respect, communication, and self-esteem (Men's Health Magazine, 2006). Furthermore, sports provide youth with opportunities to interact with caring and supportive friends. The interaction a student has with his or her coach helps to improve self-esteem as well as lower the chance of depression. Participating in sports increases a student's self-worth, since at the end of the season students are likely to receive a trophy with some type of recognition for participating on the team. This is intended to create a sense of accomplishment, teamwork, and recognition (Tirodimos, 2009).

As mentioned before, participating in sports is good for students to form and maintain healthy relationships while in school, but also when they go out into the workforce. If employers see that a student athlete maintained good grades while participating in extracurricular activities, such as sports, they will be impressed (Polgar et al, 2012). By participating in sports, students can also expand their knowledge and become more creative.

Sports allow students to be more creative when they otherwise would not have had the chance. This can ultimately give them the opportunity to realize that they might be interested in something they never knew they were interested in before (Payne, 2008). Furthermore, student

athletes, throughout their university education, are exposed to various cultures and lifestyles that can eventually affect their academic performance. For instance, students' culture will develop as they socialize with their peers, coaches, lecturers, university staff, and faculty members, as well as academic counselors and with others in the university community from their first years until they graduate (Allen, 1997).

4. PROCEDURE PRIOR TO THE THESIS

This research was based on a survey distributed to the student athletes at LIU Post. Prior to creating the survey, the researcher completed the National Institutes of Health Web-based training course, "Protecting Human Research Participants." Upon completion, the researcher was awarded a certificate of completion, allowing him to move forward in the process of creating his survey. The survey went through several drafts to make sure all the questions were unambiguous, and worded so that they were not biased or overly personal. This was achieved with the collaboration and assistance of Dr. Veronika Dolar (LIU Post Economics Professor and Advisor).

Research involving human subjects must be reviewed by the Institutional Review Board (IRB), also known as the Independent Ethics Committee (IEC). The IRB is a committee in the United States that approves, monitors, and reviews biomedical and behavioral research involving humans (Oakes, 2002). In addition, the survey and the study were reviewed and approved by Mr. Bryan Collins (Director of the Athletic Department at LIU Post) and Dr. Joan Digby (Director of the Honors Program at LIU Post). Mr. Collins' support to this study was extremely generous to the extent that he volunteered to help the researcher distribute the surveys to all LIU

Post sport teams through coaches serving as intermediaries. The researcher was very appreciative of this gesture, as distributing the surveys to every athlete by himself would have been very time consuming. The creation of the survey and collection of the data took place during the Spring 2016 semester.

5. METHODOLOGY

The survey consisted of forty-six (46) questions, which included multiple choice, short answer, and 28 Likert scale statements. In addition, the first part of the survey included demographic information of the respondents such as age, grade, gender, ethnic group, major, sport, average amount of credits taken per semester, and academic information, which was measured in grade point average (GPA). The second part of the questionnaire was to analyze the respondents' dollar amount of scholarships in academic, athletic and/or other types of scholarships. Questions asked students about their extracurricular activities. Finally, the third part of the questionnaire collected information on the influence of parents, coaches, teammates, and the university. Furthermore, it collected information on the current perceived health conditions of the student athletes.

The data collected from the surveys were coded and entered into an excel spreadsheet for analysis during the Fall 2017 semester. Stata software was used to analyze the data. Stata is a complete, integrated statistical software package that economists use for data analysis, data management, and graphics (StataCorp, 2017). The following tables show the descriptive statistics and information collected from the 262 completed surveys by student athletes at LIU Post. LIU Post has on average 400 student athletes per academic year. More than 65% of this targeted population responded to the survey. Overall, this is a good response rate.

The research subjects were not compensated for completing the survey and had the option to decline to participate in the survey. In addition, there were not any risk factors involved in this study. To avoid legal guardianship conflicts, only student athletes over the age of 18 were allowed to take this survey.

In the study, there might be some self-selection process, as it was up to the coaches to decide which students should complete the survey. As a result of this, the male to female ratio was not an actual representation of the population, as there are more female student athletes than male student athletes at LIU Post.

5.1 Participants

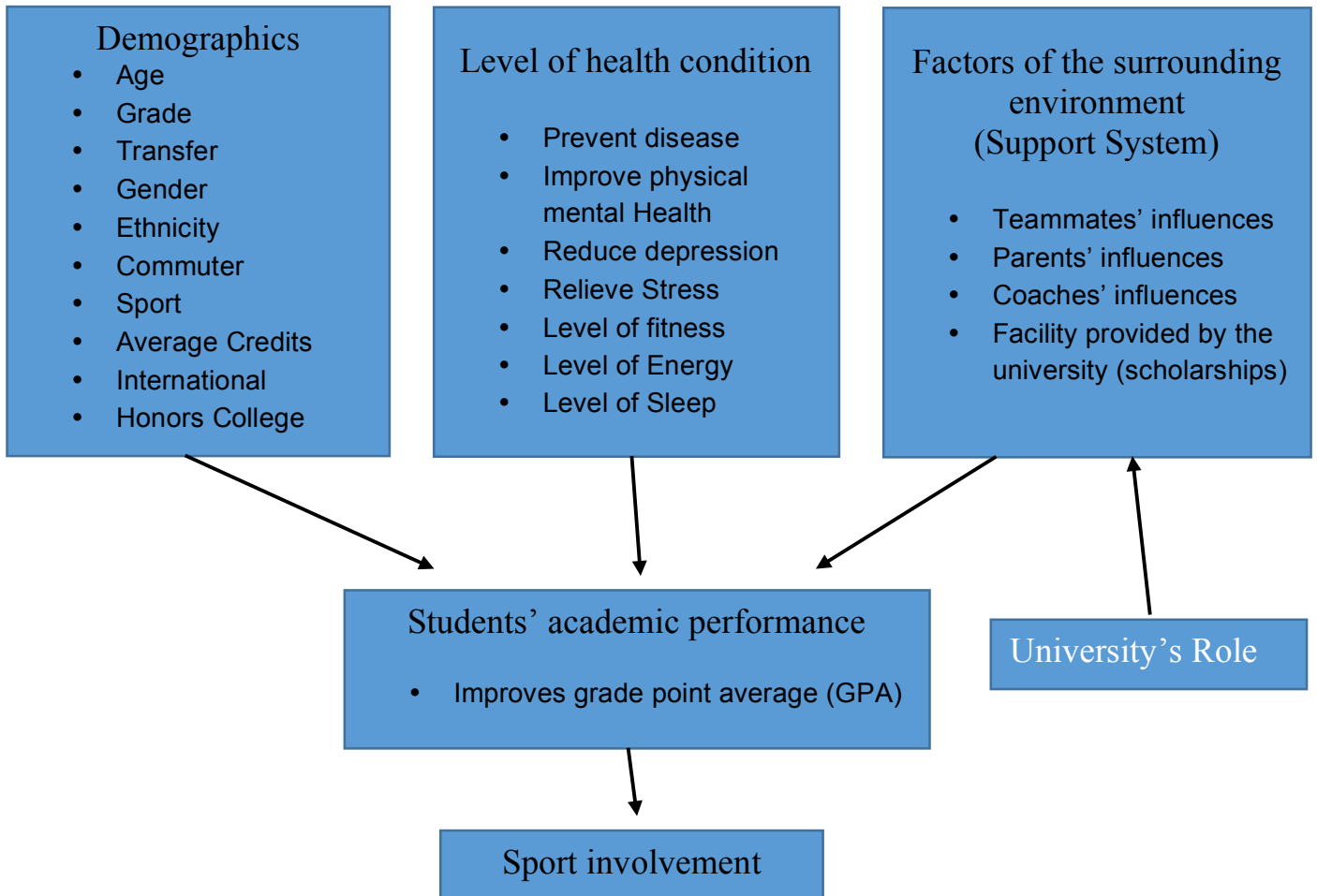
The participants ($n = 262$) in this study were female ($n = 90$) and male ($n = 172$) undergraduate (76 freshmen; 61 sophomores; 71 juniors; 50 seniors) and only 4 graduate students. There were 142 white participants, 49 African Americans, 16 Latinos, 1 Native American, 2 preferred not to say, and 2 categorized themselves as other. The participants ranged in age from 18 to 24 years, with a mean age of 20.10 ($SD = 1.40$).

Two hundred and two student athletes (77.10%) took less than or equal to an average of 15 credits per semester, whereas 87 (22.90%) took an average of more than 15 credits per semester. The majority 171 (65.27%) did not have a job while 87 (33.21%) were part-time employees and only 4 (1.53%) were full-time employees. Lastly, this sample population consisted of student athletes that were part of the following teams: football (66), lacrosse (60), baseball (37), field hockey (18), softball (17), men's soccer (16), basketball (15), swimming (15), men's indoor/outdoor track field (10), tennis (4) women's indoor/outdoor track field (3),

and wrestling (1).

5.2 Data Analysis

Table 1- Research Model



Note: The study was solely based on the survey, and therefore all the variables (data) including GPA were self-reported. This study seeks to answer the following questions:

- 1) What is the relationship between demographics on academic performance (GPA) of LIU Post student athletes?

- 2) What is the relationship between the levels of health conditions on academic performance (GPA) of LIU Post student athletes?
- 3) What is the relationship between factors of the surrounding environment (support system) on academic performance (GPA) of LIU Post student athletes?
- 4) What is the relationship between demographics, level of health conditions and factors of the surrounding environment (support system) on academic performance (GPA) of LIU Post student athletes?

For this study, a multiple linear regression model was executed. The main purpose was to try to see if the demographics, level of health conditions, and the level of support systems of LIU Post athletes had a variation on students' academic performance (GPA). The following model was used:

$$Y = B_0 + B_1X + B_2X + B_3X + u$$

Where, Y is the response variable (GPA), which can also be categorized as the dependent, outcome or output variable. The GPA was measured to the tenths place.

Where, B₀ is the intercept of the regression with y axis. In other words, this is the value of Y if the value of X = 0.

Where, B₁ (Demographics), B₂ (Health) and B₃ (Support System) are the predictor variables, which can also go by the name independent or input variable, or covariates.

6. FINDINGS

6.1 Demographics

The following table examines if GPA varies by a variety of characteristics. For this, t-tests were used. A t-test is an analysis of two populations' means through the use of statistical examination. As one can see, the female's mean GPA (3.44) is higher than the male's mean GPA (3.11) by being statistically significant at the 1% level. Additionally, the variables international student, honors college, being white and extracurricular activities are also statistically significant at the 1% level. Here, it is shown that international students (n=29) have a mean GPA of 3.48, in comparison to non-international students (n=233), who have a mean GPA of 3.19. In addition, students who are part of the LIU Honors College Program (n= 20) have a higher GPA of 3.62, in comparison to non-honors students (n=242), who have a mean GPA of 3.19. We can also see that white students (n=192) have a mean GPA of 3.29, in comparison to non-white students (n=70), who have a mean GPA of 3.03. Furthermore, students who are involved in extracurricular activities aside from sports (n= 66) have a higher GPA of 3.34 in comparison to non-involved students (n=196), who have a mean GPA of 3.18.

In table 2, it is illustrated that the mean GPA of transfer students (n=49) is 3.24, whereas the GPA of non-transfer students (n=213) is 3.22. Similarly, the mean GPA of commuter students (n=62) is 3.21, and the mean GPA of non-commuter students (n=200) is 3.22. These variables (transfer and commuter) are not statistically significant at all, because their P-values were greater than .10.

Table 2 – Descriptive Statistics T-tests

Variable		Mean GPA	Number	Percentage
***Gender	Male	3.11	172	65.65%
	Female	3.44	90	34.35%
Transfer	Yes	3.24	49	18.70%
	No	3.22	213	81.30%
Commuter	Yes	3.21	62	23.66%
	No	3.22	200	76.34%
***International Student	Yes	3.48	29	11.07%
	No	3.19	233	88.93%
***Honors College	Yes	3.62	20	7.63%
	No	3.19	242	92.37%
***White	Yes	3.29	192	73.28%
	No	3.03	70	26.72%
***Extracurricular Activities	Yes	3.34	66	25.16%
	No	3.18	196	74.81%

Statistical difference of the means * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

From table 2, it can also be observed that the majority of our participants were male (65.65%). In addition, only 18.7% of the student athletes are transfer students from other institutions. Furthermore, approximately $\frac{3}{4}$ of the sample population reside on campus (76.34%). We can also see that 11.07% of all student athletes are international students, and

only 7.63% of student athletes are part of the LIU Post Honors College Program. Lastly, it is demonstrated that out of the 262 student athletes, the majority of them are white, 73.28%, while only 25.16% of student athletes are involved in other extracurricular activities.

6.2 Level of Health Condition

For the purpose of data collection, a structured questionnaire with 28 statements on five point Likert scale ranging from “strongly disagree” (1) to “strongly agree” (5) was used. To analyze the results, the median and modes were used. The median is the value lying at the midpoint of a frequency distribution, and there is an equal probability of any number to fall above or below it. The mode is the value that was circled the most by respondents. The medians and mode of each statement number have been provided in Table 3. As it can be observed in table 3, statements (#24, #25, #26, #27, #30, #31, and #32) prove that most LIU Post athletes believe participating in sports helps their health. All statements had a median and mode of 4 (Agree), with the exception of statement #26, which had a mode of 5 (Strongly Agree). The results showed a positive opinion towards participation in sports being a tool to promote health, improves physical health, improves mental health, makes you feel fit, it’s a tool to prevent disease, relieves stress, reduces depression, makes you feel energetic, and helps you sleep better. Despite, the fact that all statements relating to health condition resulted in a mode and median of 4 and 5, it is evident that in some statements the belief that it helps their health is stronger among LIU Post athletes. For example, for statement #26 “Participation in sports improves physical health”, 41.98% of participants marked 4 (Agree) and 48.09% marked 5 (Strongly Agree), that is over 90% of all participants. On the other hand, statement #25 “Participation in sports is a tool to prevent disease”, 34.73% of participants marked 4 (Agree) and 21.37% marked 5 (Strongly

Agree), that is only 56 percent of all participants. In spite of this, results within this category of statements did not show a negative opinion pertaining a relationship between participation in sports and health. This suggests that all the student athletes, some more than others, do actually believe their involvement has a positive effect on their health condition.

Table 3 - Level of Health Conditions

S.#	Statements	Median	Mode	Agree	Percent	Strongly Agree	Percent
#24	Participation in sports is a tool to promote health	4	4	127	48.47%	87	33.21%
#25	Participation in sports is a tool to prevent disease	4	4	91	34.73%	56	21.37%
#26	Participation in sports improves physical health	4	5	110	41.98%	126	48.09%
#27	Participation in sports improves mental health	4	4	123	46.95%	83	31.68%
#28	Participation in the sports relieves stress	4	4	112	42.75%	77	29.39%
#29	Participation in sports reduces depression	4	4	115	43.89%	65	24.81%
#30	Participation in sports makes you feel fit	4	4	126	48.09%	113	43.13%
#31	Participation in sports makes you feel energetic	4	4	120	45.80%	78	29.77%
#32	Participation in sports helps you sleep better	4	4	93	35.50%	65	24.81%

6.3 Support System

The following statements (table 4) pertain to student athletes' support system that is their parents, coaches, professors, and teammates. A popular misconception is that college professors only care about a student's performance in the classroom, and athletic coaches only care about a student's performance out in the field. However, the results from this study proved otherwise.

Statements #33 to #38 and #45 and #46, pertain to the support student athletes receive from their parents, coaches, teammates, and professors in both academics and sports. All of these statements have a median and mode of 4 (Agree) or 5 (Strongly Agree), except statement #46, "In general, most of my professors' care about my athletic performance", which had a median and mode of 3 (Neutral). Only 24.81% of participants agreed and 13.36% strongly agreed with S#46, whereas if we look at the other statements (#33 to #38 and #45), at least 70% of all participants agreed or strongly agreed that their parents, coaches and teammates encourage them to succeed in both in academics and athletics, and professors encourage them to succeed academically.

According to these results, 95.80% of participants agreed or strongly agreed with statement #35, "My coach cares about my athletic performance", and 90.07% agree with statement #36, "My coach cares about my academic performance." It is evident that coaches do seem to care more about athletic performance than academic performance even though the difference between the two percentages was very small. However, when we look at the percentages professors received between how much they cared about academic performance and athletic performance, the difference was much higher.

Table 4 - Factors of the Surrounding Environment (Support System)

S.#	Statements	Median	Mode	Agree	Percent	Strongly Agree	Percent
#33	My parents encourage me to perform well in my athletics	5	5	96	36.64%	143	54.58%
#34	My parents encourage me to perform well in my academics	5	5	70	26.72%	177	67.56%
#35	My coach cares about my athletic performance	5	5	90	34.35%	161	61.45%
#36	My coach cares about my academic performance	5	5	92	35.11%	144	54.96%
#37	My teammates encourage me to succeed in athletics	5	5	91	34.73%	152	58.02%
#38	My teammates encourage me to succeed in academics	4	4	99	37.79%	92	35.11%
#39	My teammates are my best friends at LIU Post	5	5	88	33.59%	142	54.20%
#40	My coach is my mentor not only in athletics but also academically	4	4	116	44.27%	68	25.95%
#41	I spend the majority of my free time with my teammates	4	5	96	36.64%	126	48.09%
#42	I base most of my academic decisions on advice I receive from my coach	3	3	84	32.06%	35	13.36%
#43	In general, most of my professors' are aware of my student-athletic status	4	4	126	48.09%	97	37.02%
#44	In general, most of my professors' understand my absenteeism in class	4	4	112	42.75%	66	25.19%
#45	In general, most of my professors' care about my academic performance	4	4	112	42.75%	102	38.93%
#46	In general, most of my professors' care about my athletics performance	3	3	65	24.81%	35	13.36%

To clarify, 81.68% of participants agreed or strongly agreed with statement #45, “In general, most of my professors care about my academic performance”, but only 38.17% of participant agree or strongly agree with statement #46, “In general most of my professors care about my athletic performance.” One must be reminded that these percentages do not derive from direct opinions from professors or coaches but it is the student athletes’ perception of interest. This certainly makes sense. In a general classroom setting, there is probably not the opportunity to demonstrate too much interest in each student’s extracurricular activities. Therefore, it makes sense for professors to care more about academic performance than athletic performance. When it comes to coaches, they certainly care about the students’ athletic performance as well as their academic performance. Professors do not have the same structure or incentives as coaches do. For instance, most of the professors do not have assistants whereas coaches have at least two assistants for each sports’ team. Also, another possible explanation for this is that the National Collegiate Athletic Association (NCAA) requires a minimum GPA of 2.50 in order for student athletes to be eligible to participate in athletics, as result of this, coaches have the motivation to encourage their students to excel athletically and academically.

6.4 University’s Role

Table 5 shows the opinions of the student athletes of LIU Post regarding the relationship between involvement in sports and academic performance which was measured in GPA. According to table 5, 74.81% of all participants agreed or strongly agreed with statement #19, “LIU Post adequately monitor its student athletes' academic success”. Furthermore, 91.99% and 81.91% of all participants agreed or strongly agreed with statements #20 and #21, accordingly.

Table 5 - University's Role

S.#	Statements	Median	Mode	Agree	Percent	Strongly Agree	Percent
#19	LIU Post adequately monitor its student athletes' academic success	4	4	149	56.87%	47	17.94%
#20	College sports play an important role in the college experience for students	5	5	99	37.79%	142	54.20%
#21	There is a link between participation in sports and academic performance	4	4	156	59.54%	56	21.37%
#22	Students who participate in sport activities obtain a higher GPA compared to those who don't participate in sports	3	3	61	23.28%	15	5.73%
#23	Students' grades would be better if they participated in college sports	3	3	50	19.08%	12	4.58%

On the other hand, only 29.01% of all participants agreed or strongly agreed with S#22, “Students who participate in sport activities obtain a higher GPA compared to those who don’t participate in sports.” Similarly, only 23.66% of all participants agreed or strongly agreed with statement #23, “Students’ grades would be better if they participated in college sports.” Based on these results, it can be said that although student athletes believe that it is important for college students to participate in sports, and that there is a link between sports participation and academic performance. They do not believe that students who participate in sport activities obtain a higher GPA compared to those who don’t participate in sports. Additionally, student athletes do not believe students’ grades would be better if they participated in college sports.

Overall, this is an interesting topic because this demonstrates that student athletes think sports participation is important but they do not think sports participation results in a higher GPA.

7. RESULTS

Multiple Regression Analysis of factors that influence Academic Achievement at LIU Post.

Model 1 ----- GPA & Demographics

GPA = 2.425 + 0.233(Female) + 0.192(White) + 0.334(Honors College) + 0.175(International Student) + 0.035(Average Credits)

Model 2 ----- GPA & Factors of the Surrounding Environment

GPA= 2.366 + 0.139(Academic Scholarship) + 0.065(S#22) + 0.099(S#39) - 0.094(S#42) + 0.055 (S#43)

Model 3 ----- GPA & Demographics, Level of Health Condition & Factors of the Surrounding Environment

GPA= 2.150 + 0.255(Female) + 0.138(White) + 0.249(Honors College) + 0.025(Average Credits) + 0.093(Academic Scholarship) + 0.062(S#32) + 0.066(S#39) - 0.073(S#42)

Table 6 – Regression Analysis

Independent Variables	Model 1	Model 2	Model 3
Gender (0=M, 1=F)	0.233*** (4.68)		0.255*** (5.28)
White (0-No, 1-Yes)	0.192*** (3.71)		0.138** (2.57)
Honors College (0-No, 1-Yes)	0.334*** (3.92)		0.249*** (3.57)
International Student (0-No, 1-Yes)	0.175** (2.38)		
Average Credits	0.035*** (2.72)		0.025** (2.02)
Academic Scholarship		0.139*** (5.39)	0.093*** (3.78)
S#22 Students who participate in sport activities obtain a higher GPA compared to those who don't participate in sports		0.065** (2.29)	
S#32 Participation in sports helps you sleep better			0.062*** (2.83)
S#39 My teammates are my best friends at LIU Post		0.099*** (2.97)	0.066* (1.93)
S#42 I base most of my academic decisions on advice I receive from my coach		-0.094*** (-3.65)	-0.073*** (-3.15)
S#43 In general, most of my professors' are aware of my student-athletic status		0.055* (1.77)	
Intercept	2.425*** (12.37)	2.366*** (12.77)	2.150*** (8.24)
No. of Observed	262	262	262
R-squared	0.363	0.378	0.343

Statistical difference of the means * p < 0.10, ** p < 0.05, *** p < 0.01, T-statistic in parentheses

By looking at table 6, one can observe the coefficient and t-statistics values for all the variables across the three regression models. Model 1 shows the correlation between GPA and

demographics while model 2 shows the correlation between GPA and factors of the surrounding environment. Lastly, model 3 shows the correlation between GPA and demographics, levels of health conditions, and factors of the surrounding environment. Model three provides an accurate picture of independent variables that have an effect on the academic performance (GPA) of student athletes at LIU Post.

1) What is the relationship of Demographics on Academic Performance (GPA) of LIU Post student athletes?

In the first model, GPA was the dependent variable while demographic factors were the independent variables. It is observed that Honors College Participation with a coefficient of 0.33 was statistically significant all the way through to the 1% level. Here, the participation in the Honors Program is a necessary condition for student athletes to have high GPAs; in the absence of participation in the Honors Program, there might not be high GPAs. Student athletes who are part of the Honors Program need to have a certain GPA and SAT scores to be accepted into the program in the first place.

From model 1, we can also say that gender, being white and average amount of credits taken per semester are also statistically significant at the 1% level, while only being an international student is significant at the 5% level. In terms of gender, this just means that as we go from male to female students, there is an increase of 0.233 units in GPA. In terms of average amount of credits taken per semester, it can be said that for an additional unit of credit taken, a student's GPA can expect an increase in 0.03 units.

2) What is the relationship on Factors of the Surrounding Environment (Support System) on Academic Performance (GPA) of LIU Post student athletes?

In model two, GPA was the dependent variable while factors of the surrounding environment were the independent variables. This demonstrates that student athletes who are receiving academic scholarships for their high achievement are excelling in the classroom. This also demonstrated that the LIU Post academic department is rewarding academic scholarships to the right students.

In addition, this model portrays that students who participate in sports activities have a higher GPA than students who do not by +.07 units, (S#22). There is also a positive correlation between teammates being the student athletes' best friends and GPA, which results in an increase of +.10 units, (S#39). Additionally, student athletes who base most of their academic decisions on advice from their coaches have a lower GPA, by -0.09 units, (S#42). Lastly, when most professors are aware of the students' status as athletes, their GPA is higher, by +0.06 units, (S#43).

3) What is the relationships of Demographics, Level of Health Condition and Factors of the surrounding environment (Support System) on academic performance (GPA) of LIU Post student athletes?

Lastly, model 3 is the best model for this study. It demonstrates that gender, being white, honors college, academic scholarship, S#32 and S#42 are all statically significant at the 1% level. In addition, the amount of average credits taken per semester is statistically significant at the 5% level, while S#39 is statically significant at the 10% level. Here, gender (female) is the variable with the highest impact on GPA with a coefficient of 0.26 units.

This model also shows that student athletes who have teammates of a team sport as best friends have a higher GPA, by +0.06 units, (S#39). Also, student athletes who base most of their academic decisions on advice from their coaches have a lower GPA, by -0.07 units, (S#42). Lastly, when most professors are aware of the students' status of their respective students, their GPA is higher, by +0.06 units, (S#43). It is worth saying that the LIU Honors Program is doing a good job at choosing which students to accept into the program. The expectation that honors students are doing better academically than non-honors students is supported by the results. Also, the LIU Post Administration is giving academic scholarships to the right student athletes because they are over performing their teammates academically. We also found an R-squared of 0.343. This number means that approximately 34% of the GPA's variance is explained.

8. CONCLUSION & DISCUSSION

Since James Coleman (1961) first wrote about the lives of U.S. youth more than four decades ago, adolescents' enthusiasm for sports has remained remarkably constant. Athletic participation is still the single most popular school-sponsored extracurricular activity (Eccles & Barber, 1999; Eide & Ronan, 2001). Despite hundreds of studies on whether or not sports have a positive or negative effect on academics, the debate persists. However, little attention has been paid to all other aspects that come into play when we look at university athletes. Based on students' information (perception) collected from surveys completed by 262 LIU Post athletes, we can conclude that as a matter of fact demographics, level of health conditions and factors of the surrounding environment are statistically significant when looking at athletes' GPAs. This study shows that female student athletes outperform male student athletes academically.

Similarly, white students outperform nonwhite students, and honors students outperform non-honors students academically. Additionally, evidence from this study has shown that students who challenge themselves to take extra units of credits do perform better overall. Another factor that comes into consideration when we look at GPA, is the value of academic scholarships received by student athletes; as this increases, so does GPA. This might suggest that student athletes who received academic scholarships were smarter to start with.

Participating in sports results in the student athletes sleeping better. This in turn results in a higher GPA (+0.06 units). In this case, we can make two suggestions. Either, student athletes sleep better because of their sport involvement, which results in a higher GPA, or student athletes with a higher GPA know the benefit of sports and sleep. This area might require further research. Regardless of the reason, if we analyze the results it makes sense: Students who sleep better have good personal relationships, have an energetic body and an intelligent mind, which all help student athletes to give full attention in class and being more disciplined in their studies. In conclusion, this study analyzed the association of demographics, levels of health conditions and factors of the surrounding environment on LIU Post student athletes' GPAs.

9. RECOMMENDATIONS

This section of the paper provides some ways students can increase their academic performance (GPA). The main goal for a student athlete in college should be to excel not only out in the playing field, but also inside the classroom. It is recommended that the LIU Post athletic department organizes more social and networking events for the student athletes to socialize among each other and construct better relationships, which in the long run leads to a positive impact on GPA. By doing this, student athletes will surpass not only their athletic but

academic expectations because results in this paper have demonstrated that having teammates as best friends is associated with a higher GPA. This might suggest that student athletes who challenge themselves on taking an extra class compared to their teammates perform better academically. It is advised for student athletes to not base most of their academic decisions on advice received from their coach, as this results in a decrease in GPA. Instead, student athletes should get a mentor other than their coach for academic decisions. Lastly, student athletes should inform professors of their athletic status, as the results show that the professors' awareness of students' involvement increases their GPA. This probably happens when the students meet the professor outside of class or attend office hours.

10. LIMITATIONS

It is important to mention that in this study, there were a number of substantial limitations. One noteworthy limitation: This survey only included student athletes who were from LIU Post. This survey could have been more effective if it were distributed to non-athletes as a sort of control group who might have other extracurricular commitments. Another limitation of this study is that the sample did not include all of the student athletes from LIU Post, because 262 student athletes completed the survey from approximately 400 student athletes. The reason behind this is because some student athletes were off season when the surveys were distributed and collected. This constraint made it harder for the researcher to obtain information from all the student athletes. Additionally, the survey did not ask the respondent's community service hours per academic semester. It has come to the researcher's attention that every student athlete has to complete three hours of community service per academic semester.

An additional shortcoming of the study was that some student athletes had more time to complete the surveys than others. For instance, some coaches allowed their students to complete the surveys at home while other coaches made their students take the surveys either before or after practices. As a result of this, some surveys could have gotten lost or misplaced. Other limitations, include the fact that respondents may not feel encouraged to provide accurate and honest answers, or they may not feel comfortable providing answers that represent themselves in an unfavorable manner. Lastly, a big section of the survey was based on the Likert Scale, and these survey questions answer options could lead to unclear data because certain answer options may be interpreted differently by student athletes. For example, the answer option “agree” or “strongly agree” may represent different things to different subjects, and have its own meaning to each individual respondent.

11. DEDICATIONS

I would like to dedicate my thesis work to my family, friends and the people who have been there to support me and motivate me. A big special thanks go to my parents, Milton Farez and Sandra Hurtado for always encouraging me to give my best. I also dedicate this work to Rubi Catalan and my wonderful sister Jamie Farez for being there for me throughout this entire project. All of you have been an inspiration for me. Thank you all.

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helping me in the beginning stages of this project and for always being there to clarify any inquiries. Mr. Collins, thank you for helping me distribute the surveys to all student athletes at LIU Post; without your assistance it would have taken me much longer. To all of the student athletes and coaches, I want to thank you for taking the time to distribute and complete the survey. To Professor Granitz, I want to thank you for becoming my reader, and for always pushing me to accomplish more. Lastly, I would like to thank Professor Dolar; your guidance during my tutorial, thesis and beyond has been invaluable. Thank you for encouraging and guiding me throughout the duration of this project. This project would not have been possible without everyone's admirable help and assistance. Thank you all.

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14. APPENDIX

A. Survey

Consent Form

LONG ISLAND UNIVERSITY Post – Student Athletes

You are being asked to volunteer in a research study called Academics and LIU Post. As a participant, you will be asked to complete a survey that should not take longer than 10 minutes. Your feedback is greatly appreciated as it will allow an insight into the relationship between athletic participation in college teams and academic performance.

PARTICIPATION

Your participation in this research study is voluntary. You may withdraw at any time without penalty.

BENEFITS & RISKS

You will receive no direct benefits from participating in this research study. However, your responses may help us learn about the relationship between the involvement of LIU student athletes in sports and its effect in Academics and Health. There are no foreseeable risks involved in participating in this study other than those encountered in day-to-day life.

CONFIDENTIALITY

All information collected will be used only for this research and will be kept confidential. Some personal information will be asked. However, every reasonable effort will be made to keep your responses anonymous. Your identity as a participant will remain confidential. Your name will not be included in the survey. This consent form is the only document identifying you as a participant in this study; it will be stored securely in the office of Dr. Veronika Dolar, Assistant Professor of Economics at LIU Post. All data collected will be destroyed at the end of three years.

CONTACT

If you have questions at any time about the study or the procedures, you may contact my research supervisor, Veronika Dolar or me, Milton Farez.

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If you have questions concerning your rights as a subject, you may contact the Executive Secretary of the Institutional Review Board, Ms. Patricia Harvey at (516) 299-3591.

Your signature indicates you are at least 18 years of age, have fully read the above text, and have had the opportunity to ask questions about the purposes and procedures of this study. Your signature also acknowledges receipt of a copy of the consent form as well as your willingness to participate in this survey.

Typed/Printed Name of Participant

Signature of Participant

Date

Milton Farez

Typed/Printed Name of Investigator

Signature of Investigator

Date

Long Island University Post Survey

1) What is your age?			
<input type="radio"/> 18	<input type="radio"/> 22	<input type="radio"/> 26	<input type="radio"/> 30 and above
<input type="radio"/> 19	<input type="radio"/> 23	<input type="radio"/> 27	
<input type="radio"/> 20	<input type="radio"/> 24	<input type="radio"/> 28	
<input type="radio"/> 21	<input type="radio"/> 25	<input type="radio"/> 29	
2) What grade are you in?			
<input type="radio"/> Freshman			
<input type="radio"/> Sophomore			
<input type="radio"/> Junior			
<input type="radio"/> Senior			
<input type="radio"/> Graduate			
3) Are you a transfer student?			
<input type="radio"/> Yes			
<input type="radio"/> No			
4) What is your gender?			
<input type="radio"/> Male			
<input type="radio"/> Female			
5) Ethnicity origin (or Race): Please specify your ethnicity.			
<input type="radio"/> White			
<input type="radio"/> Hispanic or Latino			
<input type="radio"/> Black or African American			
<input type="radio"/> Native American or American Indian			
<input type="radio"/> Asian / Pacific Islander			
<input type="radio"/> Unknown (Prefer not to say)			
<input type="radio"/> Other			
6) What is your current cumulative GPA?			
<input type="radio"/> Below 2.5	<input type="radio"/> 3.0	<input type="radio"/> 3.5	<input type="radio"/> 4.0
<input type="radio"/> 2.6	<input type="radio"/> 3.1	<input type="radio"/> 3.6	
<input type="radio"/> 2.7	<input type="radio"/> 3.2	<input type="radio"/> 3.7	
<input type="radio"/> 2.8	<input type="radio"/> 3.3	<input type="radio"/> 3.8	
<input type="radio"/> 2.9	<input type="radio"/> 3.4	<input type="radio"/> 3.9	
7) Do you live on campus or do you commute?			
<input type="radio"/> Live on campus			
<input type="radio"/> Commute			
8) What is your major? If more than one, please write your primary one?			
<hr/>			

9) What sport do you play at LIU Post?

- | | | |
|---|----------------------------------|------------------------------------|
| <input type="radio"/> BASEBALL | <input type="radio"/> FOOTBALL | <input type="radio"/> KICKLINES |
| <input type="radio"/> WRESTLING | <input type="radio"/> BASKETBALL | <input type="radio"/> DANCE |
| <input type="radio"/> CROSS COUNTRY | <input type="radio"/> FENCING | <input type="radio"/> CHEERLEADING |
| <input type="radio"/> FIELD HOCKEY | <input type="radio"/> GOLF | <input type="radio"/> VOLLEYBALL |
| <input type="radio"/> INDOOR TRACK & FIELD | <input type="radio"/> LACROSSE | <input type="radio"/> TENNIS |
| <input type="radio"/> OUTDOOR TRACK & FIELD | <input type="radio"/> SOCCER | <input type="radio"/> SWIMMING |
| <input type="radio"/> SOFTBALL | | |

10) On average how many credits do you take per semester?

- | | | | |
|-------------------------|--------------------------|--------------------------|-----------------------------------|
| <input type="radio"/> 3 | <input type="radio"/> 12 | <input type="radio"/> 21 | <input type="radio"/> Other _____ |
| <input type="radio"/> 6 | <input type="radio"/> 15 | <input type="radio"/> 24 | |
| <input type="radio"/> 9 | <input type="radio"/> 18 | <input type="radio"/> 27 | |

11) Is there a minimum GPA requirement for you to be eligible to participate in sports?

- Yes
 No
 I don't know

If yes, what is the GPA requirement? _____

12) Is this minimum GPA requirement the primary factor in keeping grades up?

- Yes
 No
 Not Applicable

13) Do students' grades improve or decline during the time that they are playing sports?

- Improve
 Decline
 No change

Why do you think this is the case? Please write your answer provided in the space below.

14) Are you an International student?

- Yes
 No

15) Are you part of the Honors College at LIU Post?

- Yes
 No

16) Are you receiving any scholarships? Check all that apply.

Academic	Athletic	Other
<input type="radio"/> Yes, full tuition <input type="radio"/> Yes, more than half of my tuition <input type="radio"/> Yes, half of my tuition <input type="radio"/> Yes, less than half of my tuition <input type="radio"/> No	<input type="radio"/> Yes, full tuition <input type="radio"/> Yes, more than half of my tuition <input type="radio"/> Yes, half of my tuition <input type="radio"/> Yes, less than half of my tuition <input type="radio"/> No	<input type="radio"/> Yes, full tuition <input type="radio"/> Yes, more than half of my tuition <input type="radio"/> Yes, half of my tuition <input type="radio"/> Yes, less than half of my tuition <input type="radio"/> No If yes, what type? _____
<p><i>If you answered "yes" to the question above, is there a minimum GPA requirement for this academic scholarship?</i></p> <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> I don't know <input type="radio"/> Not Applicable If yes, what is the GPA requirement? _____	<p><i>If you answered "yes" to the question above, is there a minimum GPA requirement for this athletic scholarship?</i></p> <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> I don't know <input type="radio"/> Not Applicable If yes, what is the GPA requirement? _____	<p><i>If you answered "yes" to the question above, is there a minimum GPA requirement for this type of scholarship?</i></p> <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> I don't know <input type="radio"/> Not Applicable If yes, what is the GPA requirement? _____

17) Are you involved in any other activities on campus? Check all that apply.

- Honors Societies
- Greek Life
- Student-Run Business
- Student Organizations
- Other

If other, please specify _____

18) Do you work during the school year?

- Yes, Full Time
- Yes, Part Time
- No

Please read the following statements and tell us if you agree or disagree.

Circle one. (*Questions 19-32*)

19) LIU Post adequately monitor its student athletes' academic success

<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>

20) College sports play an important role in the college experience for students

<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>

21) There is a link between participation in sports and academic performance

<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>

22) Students who participate in sport activities obtain a higher GPA compared to those who don't participate in sports

<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>

23) Students' grades would be better if they participated in college sports

<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>

24) Participation in sports is a tool to promote health

<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>

25) Participation in sports is a tool to prevent disease

<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>

26) Participation in sports improves physical health				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
27) Participation in sports improves mental health				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
28) Participation in the sports relieves stress				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
29) Participation in sports reduces depression				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
30) Participation in sports makes you feel fit				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
31) Participation in sports makes you feel energetic				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
32) Participation in sports helps you sleep better				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
Please read the following statements and tell us if you agree or disagree. Circle one. (Questions 33- 46)				
33) My parents encourage me to perform well in my athletics				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
34) My parents encourage me to perform well in my academics				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
35) My coach cares about my athletic performance				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>

36) My coach cares about my academic performance				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
37) My teammates encourage me to succeed in athletics				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
38) My teammates encourage me to succeed in academics				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
39) My teammates are my best friends at LIU Post				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
40) My coach is my mentor not only in athletics but also academically				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
41) I spend the majority of my free time with my teammates				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
42) I base most of my academic decisions on advice I receive from my coach				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
43) In general, most of my professors' are aware of my student-athletic status				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
44) In general, most of my professors' understand my absenteeism in class				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
45) In general, most of my professors' care about my academic performance				
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>

46) In general, most of my professors' care about my athletics performance

<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>

☺ Thank you very much for your cooperation and time! It is greatly appreciated!

B. Tables

TABLE 1

Table 1 illustrates the number of observations, mean, standard deviation, minimum and maximum of Age, GPA and average credits per semester.

By looking at table 1, it is observed that the minimum age was 18 years old. As stated before, only student athletes who were 18 and older were eligible to take the survey. This number would have been different if other student athletes who were 18 and younger would have allowed to take the survey. An assumption of the maximum or max age (24) would be that as students get older, they lose interest in sports since they have other stuff to worry about. In addition, the minimum or min GPA of (2.50) says that some students are fulfilling the minimum requirement just to be eligible for their academic, athletic or other scholarships. For instance, an anonymous student athlete stated in the survey that he/she only motivation is to have a GPA of 2.5 and above since this will make him/her eligible to participate in the NCCA Division II National Championship.

	Obs.	Mean	Std. Dev.	Min	Max
Age	262	20.10687	1.396503	18	24
GPA	262	3.221756	0.4225719	2.5	4
Average Credits	262	15.3626	1.840949	9	24

TABLE 2

Table 2 illustrates the ages of the 262 student athletes at LIU Post who completed this survey. It shows that almost half of the sample population (50%) are 19 year olds (24.81%) and 21 year olds (24.81%). Also, the sample only had only one student that was 24 years old.

Age	Frequency	Percent
18	36	13.74%
19	65	24.81%
20	52	19.85%
21	65	24.81%
22	33	12.6%
23	10	3.82%
24	1	0.38%
Total	262	100%

TABLE 3

Table 3 shows that out of the 262 student athletes at LIU Post, 76 (29.01%) were freshmen, 61 (23.28%) were sophomores, 71 (27.10%) were juniors, 50 (19.08%) were seniors and 4 (1.53%) were graduate students. This could be due to the fact that the NCAA does allow students to play sports as graduate students as long as they did not use their 4 years of eligibility.

Grade	Frequency	Percent
Freshman	76	29.01%
Sophomore	61	23.28%
Junior	71	27.10%
Senior	50	19.08%
Graduate	4	1.53%
Total	262	100%

TABLE 4

Table 4 illustrates that out of the 262 student athletes at LIU Post, 213 (81.30%) are not transfer student athletes whereas 49 (18.70%) were commuters.

Transfer	Frequency	Percent
No	213	81.30%
Yes	49	18.70%
Total	362	100%

TABLE 5

Table 5 illustrates that out the 262 student athletes at LIU Post, 172 (65.65%) were male, whereas 90 (34.35%) were female.

Gender	Frequency	Percent
Female	90	34.35%
Male	172	65.65%
Total	362	100%

TABLE 6

Table 6 illustrates that out of the 262 student athletes at LIU Post, 192 (73.28%) were white, 16 (6.11%) were Hispanic or Latino, 49 (18.70%) were Black or African American, 1 (0.38%) were Asian/Pacific Islander, 2 (0.76%) were unknown or preferred not to say and lastly 2 (0.76%) categorized themselves as other. It is important to highlight that there were no Native/American or American Indian in this sample.

Ethnicity	Frequency	Percent
White	192	73.28%
Hispanic or Latino	16	6.11%
Black or African American	49	18.70%
Native American or American Indian	1	0.38%
Unknown (Prefer not to say)	2	0.76%
Other	2	0.76%
Total	262	100%

TABLE 7

Table 7 illustrates that out the 262 student athletes at LIU Post, 200 (76.34%) lived on campus during the Spring 2015 of the academic semester, whereas 62 (23.66%) were actually commuters.

Commuter	Frequency	Percent
No	200	76.34%
Yes	62	23.66%
Total	362	100%

TABLE 8

Table 8 illustrates that out of the 262 student athletes at LIU Post, the majority of them played Football (66) followed by Lacrosse (60) and Baseball (37).

Sport	Frequency	Percent
Baseball	37	14.12%
Wrestling	1	0.38%
Field Hockey	18	6.87%
Indoor/Outdoor Track Field	13	4.96%
Softball	17	6.49%
Football	66	25.19%
Basketball	15	5.73%
Lacrosse	60	22.90%
Soccer	16	6.11%
Tennis	4	1.53%
Swimming	15	5.73%
Total	262	100.00%

TABLE 9

Table 9 illustrates that out of the 262 student athletes at LIU Post, 202 (77.10%) took less than or equal to an average 15 credits per semester whereas 87 (22.90%) took an average of more than 15 credits per semester.

Average Credits	Frequency	Percent
$n \leq 15$	202	77.10%
$n > 15$	87	22.90%
Total	262	100.00%

TABLE 10

Table 10 illustrates that out of the 262 student athletes at LIU Post, 14 (5.34%) did not know whether there was a minimum GPA requirement for them to be eligible to participate in sports while 246 (93.90%) said there is a minimum GPA requirement. Only 2 (0.76%) said there was not a minimum GPA requirement.

Is there a minimum GPA requirement for you to be eligible to participate in sports?	Frequency	Percent
I don't Know	14	5.34%
No	2	0.76%
Yes	246	93.90%
Total	262	100.00%

TABLE 11

Table 11 illustrates that out of the 262 student athletes at LIU Post, 159 (60.69%) said this minimum GPA requirement is not the primary factor in keeping grades up the while 89 (33.97%) said this was actually a primary factor. For 14 student athletes (5.34%), this question was not applicable.

Is this minimum GPA requirement the primary factor in keeping grades up?	Frequency	Percent
No applicable	14	5.34%
No	159	60.69%
Yes	89	33.97%
Total	262	100.00%

TABLE 12

Table 12 illustrates that out of the 262 student athletes at LIU Post, 80 (30.53%) said students' grades improve during the time they are playing sports while 128 (48.85%) said students' grades improve. For 54 (20.62%), the student's grade did not change.

Do students' grades improve or decline during the time that they are playing sports?	Frequency	Percent
No change	54	20.62%
Decline	80	30.53%
Improve	128	48.85%
Total	262	100.00%

TABLE 13

Table 13 illustrates that out of the 262 student athletes at LIU Post, 233 (88.93%) are not international students whereas 29 (11.07%) were actually international.

International Student	Frequency	Percent
No	233	88.93%
Yes	29	11.07%
Total	262	100%

TABLE 14

Table 14 illustrates that out of the 262 student athletes at LIU Post, 242 (92.37%) are not part of the LIU Honors College Program where as 20 (7.63%) are part of it.

Honors College	Frequency	Percent
No	242	92.37%
Yes	20	7.63%
Total	262	100%

TABLE 15

Table 15 illustrates that out of the 262 student athletes at LIU Post, 171 (65.27%) do not have a job while 87 (33.21%) have a part time job and only 4 (1.53%) have a full time job.

Job	Frequency	Percent
No	171	65.27%
Part Time	87	33.21%
Full Time	4	1.53%
Total	362	100%

University's Role Statements

19) LIU Post adequately monitor its student athletes' academic success

20) College sports play an important role in the college experience for students

S # 19	Frequency	Percent
Strongly Disagree	6	2.29%
Disagree	10	3.82%
Neutral	50	19.08%
Agree	149	56.87%
Strongly Agree	47	17.94%
Total	262	100.00%

S # 20	Frequency	Percent
Strongly Disagree	3	1.15%
Disagree	1	0.38%
Neutral	17	6.49%
Agree	99	37.79%
Strongly Agree	142	54.20%
Total	142	100.00%

21) There is a link between participation in sports and academic performance

22) Students who participate in sport activities obtain a higher GPA compared to those who don't participate in sports

S # 21	Frequency	Percent
Strongly Disagree	4	1.53%
Disagree	4	1.53%
Neutral	42	16.03%
Agree	156	59.54%
Strongly Agree	56	21.37%
Total	262	100.00%

S # 22	Frequency	Percent
Strongly Disagree	11	4.20%
Disagree	34	12.98%
Neutral	141	53.82%
Agree	61	23.28%
Strongly Agree	15	5.73%
Total	262	100.00%

23) Students' grades would be better if they participated in college sports

24) Participation in sports is a tool to promote health

S # 23	Frequency	Percent
Strongly Disagree	7	2.67%
Disagree	35	13.36%
Neutral	158	60.31%
Agree	50	19.08%
Strongly Agree	12	4.58%
Total	262	100.00%

Level of Health Condition Statements

24) Participation in sports is a tool to promote health

25) Participation in sports is a tool to prevent disease

S # 24	Frequency	Percent
Strongly Disagree	3	1.15%
Disagree	4	1.53%
Neutral	41	15.65%
Agree	127	48.47%
Strongly Agree	87	33.21%
Total	262	100.00%

S # 25	Frequency	Percent
Strongly Disagree	6	2.29%
Disagree	21	8.02%
Neutral	88	33.59%
Agree	91	34.73%
Strongly Agree	56	21.37%
Total	262	100.00%

26) Participation in sports improves physical health

27) Participation in sports improves mental health

S # 26	Frequency	Percent
Strongly Disagree	1	0.38%
Disagree	3	1.15%
Neutral	22	8.40%
Agree	110	41.98%
Strongly Agree	126	48.09%
Total	262	100.00%

S # 27	Frequency	Percent
Strongly Disagree	3	1.15%
Disagree	7	2.67%
Neutral	46	17.56%
Agree	123	46.95%
Strongly Agree	83	31.68%
Total	262	100.00%

28) Participation in the sports relieves stress

29) Participation in sports reduces depression

S # 28	Frequency	Percent
Strongly Disagree	5	1.91%
Disagree	20	7.63%
Neutral	48	18.32%
Agree	112	42.75%
Strongly Agree	77	29.39%
Total	262	100.00%

S # 29	Frequency	Percent
Strongly Disagree	3	1.15%
Disagree	13	4.96%
Neutral	66	25.19%
Agree	115	43.89%
Strongly Agree	65	24.81%
Total	262	100.00%

30) Participation in sports makes you feel fit

31) Participation in sports makes you feel energetic

S # 30	Frequency	Percent
Strongly Disagree	1	0.38%
Disagree	-	-
Neutral	22	8.40%
Agree	126	48.09%
Strongly Agree	113	43.13%
Total	262	100.00%

S # 31	Frequency	Percent
Strongly Disagree	2	0.76%
Disagree	12	4.58%
Neutral	50	19.08%
Agree	120	45.80%
Strongly Agree	78	29.77%
Total	262	100.00%

32) Participation in sports helps you sleep better

S # 32	Frequency	Percent
Strongly Disagree	7	2.67%
Disagree	24	9.16%
Neutral	73	27.86%
Agree	93	35.50%
Strongly Agree	65	24.81%
Total	262	100.00%

Factors of the Surrounding Environment Statements

33) My parents encourage me to perform well in my athletics

34) My parents encourage me to perform well in my academics

S # 33	Frequency	Percent
Strongly Disagree	-	-
Disagree	-	-
Neutral	23	8.78%
Agree	96	36.64%
Strongly Agree	143	54.58%
Total	262	100.00%

S # 34	Frequency	Percent
Strongly Disagree	-	-
Disagree	-	-
Neutral	15	5.73%
Agree	70	26.72%
Strongly Agree	177	67.56%
Total	262	100.00%

35) My coach cares about my athletic performance

36) My coach cares about my academic performance

S # 35	Frequency	Percent
Strongly Disagree	-	-
Disagree	-	-
Neutral	11	4.20%
Agree	90	34.35%
Strongly Agree	161	61.45%
Total	262	100.00%

S # 36	Frequency	Percent
Strongly Disagree	1	0.38%
Disagree	2	0.76%
Neutral	23	8.78%
Agree	92	35.11%
Strongly Agree	144	54.96%
Total	262	100.00%

37) My teammates encourage me to succeed in athletics

38) My teammates encourage me to succeed in academics

S # 37	Frequency	Percent
Strongly Disagree	-	-
Disagree	-	-
Neutral	19	7.25%
Agree	91	34.73%
Strongly Agree	152	58.02%
Total	262	100.00%

S # 38	Frequency	Percent
Strongly Disagree	1	0.38%
Disagree	2	0.76%
Neutral	68	25.95%
Agree	99	37.79%
Strongly Agree	92	35.11%
Total	262	100.00%

39) My teammates are my best friends at LIU Post

40) My coach is my mentor not only in athletics but also academically

S # 39	Frequency	Percent
Strongly Disagree	1	0.38%
Disagree	1	0.38%
Neutral	30	11.45%
Agree	88	33.59%
Strongly Agree	142	54.20%
Total	262	100.00%

S # 40	Frequency	Percent
Strongly Disagree	5	1.91%
Disagree	14	5.34%
Neutral	59	22.52%
Agree	116	44.27%
Strongly Agree	68	25.95%
Total	262	100.00%

41) I spend the majority of my free time with my teammates

42) I base most of my academic decisions on advice I receive from my coach

S # 41	Frequency	Percent
Strongly Disagree	1	0.38%
Disagree	7	2.67%
Neutral	32	12.21%
Agree	96	36.64%
Strongly Agree	126	48.09%
Total	262	100.00%

S # 42	Frequency	Percent
Strongly Disagree	11	4.20%
Disagree	25	9.54%
Neutral	107	40.84%
Agree	84	32.06%
Strongly Agree	35	13.36%
Total	262	100.00%

43) In general, most of my professors' are aware of my student-athletic status

44) In general, most of my professors' understand my absenteeism in class

S # 43	Frequency	Percent
Strongly Disagree	1	0.38%
Disagree	10	3.82%
Neutral	28	10.69%
Agree	126	48.09%
Strongly Agree	97	37.02%
Total	262	100.00%

S # 44	Frequency	Percent
Strongly Disagree	6	2.29%
Disagree	16	6.11%
Neutral	62	23.66%
Agree	112	42.75%
Strongly Agree	66	25.19%
Total	262	100.00%

45) In general, most of my professors' care about my academic performance

46) In general, most of my professors' care about my athletics performance

S # 45	Frequency	Percent
Strongly Disagree	2	0.76%
Disagree	3	1.15%
Neutral	43	16.41%
Agree	112	42.75%
Strongly Agree	102	38.93%
Total	262	100.00%

S # 46	Frequency	Percent
Strongly Disagree	15	5.73%
Disagree	47	17.94%
Neutral	100	38.17%
Agree	65	24.81%
Strongly Agree	35	13.36%
Total	262	100.00%

C. Regressions

Model 1 Output

*G = White

. reg GPA Gender HonorsCollege G AverageCredits InternationalStudent

Source	SS	df	MS	Number of obs	=	262
Model	12.9418945	5	2.5883789	F(5, 256)	=	19.68
Residual	33.6640979	256	.131500382	Prob > F	=	0.0000
				R-squared	=	0.2777
				Adj R-squared	=	0.2636
Total	46.6059924	261	.178567021	Root MSE	=	.36263

	GPA	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
	Gender	.2330261	.0498074	4.68	0.000	.1349417 .3311105
	HonorsCollege	.3338735	.0852556	3.92	0.000	.1659819 .5017651
	G	.1924499	.0519158	3.71	0.000	.0902135 .2946863
	AverageCredits	.0345502	.0127125	2.72	0.007	.0095159 .0595845
	InternationalStudent	.1747756	.0733529	2.38	0.018	.0303236 .3192276
	_cons	2.425064	.1960724	12.37	0.000	2.038944 2.811184

Model 2 Output

Source	SS	df	MS	Number of obs	=	262
Model	10.0069229	5	2.00138459	F(5, 256)	=	14.00
Residual	36.5990694	256	.142965115	Prob > F	=	0.0000
				R-squared	=	0.2147
				Adj R-squared	=	0.1994
Total	46.6059924	261	.178567021	Root MSE	=	.37811

	GPA	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
	AcademicScholarship	.1393071	.0258343	5.39	0.000	.0884322 .1901819
	Q22	.0645195	.028154	2.29	0.023	.0090765 .1199624
	Q39	.099809	.0335567	2.97	0.003	.0337267 .1658913
	Q42	-.0944474	.0258686	-3.65	0.000	-.1453897 -.0435052
	Q43	.0550778	.0311705	1.77	0.078	-.0063055 .1164611
	_cons	2.366314	.1853215	12.77	0.000	2.001365 2.731263

Model 3 Output

*G = White

Source	SS	df	MS	Number of obs	=	262
Model	16.7662515	8	2.09578143	F(8, 253)	=	17.77
Residual	29.8397409	253	.11794364	Prob > F	=	0.0000
				R-squared	=	0.3597
				Adj R-squared	=	0.3395
Total	46.6059924	261	.178567021	Root MSE	=	.34343

GPA	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Gender	.2548936	.048238	5.28	0.000	.1598944	.3498929
HonorsCollege	.2487417	.0830268	3.00	0.003	.08523	.4122534
G	.1377967	.0537214	2.57	0.011	.0319986	.2435948
AverageCredits	.0254395	.0125815	2.02	0.044	.0006618	.0502172
AcademicScholarship	.0927502	.0245603	3.78	0.000	.0443815	.1411189
Q32	.062289	.0220251	2.83	0.005	.0189131	.105665
Q39	.0655506	.0339887	1.93	0.055	-.0013862	.1324875
Q42	-.0732986	.0232867	-3.15	0.002	-.119159	-.0274381
_cons	2.150218	.2608591	8.24	0.000	1.636486	2.66395

D. IRB Approval

NIH CERTIFICATE & IRB APPROVAL

LONG ISLAND UNIVERSITY
UNIVERSITY OFFICE OF SPONSORED RESEARCH
BUSH-BROWN HALL, UNIVERSITY CENTER

NOTICE TO ALL RESEARCHERS:

Please be aware that a protocol violation (e.g., failure to submit a modification for any change) of an IRB approved protocol may result in mandatory remedial education, additional audits, re-consenting subjects, researcher probation, suspension of any research protocol at issue, suspension of additional existing research protocols, invalidation of all research conducted under the research protocol at issue, and further appropriate consequences as determined by the IRB and the Institutional Officer.

TO: Professor Veronika Dolar, Economics
Mr. Milton Farez, Student Principal Investigator

FROM: Patricia Harvey, University IRB Administrator
LIU Post Institutional Review Board



DATE: April 5, 2016

PROJECT TITLE: Academics and LIU Sports

PROJECT ID NO: 16/03-483

ACTION: IRB Exempt Determination/Approval

Thank you for sending the additional information.

Your project submitted on March 22, 2016 has been determined to be an EXEMPT educational methodology/approach as defined in 45 CFR 46.101.b.2:

Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior unless:

- The information obtained is recorded in such a manner that human subjects can be identified, either directly (e.g. name) or through identifiers linked to the subject (i.e., through ANY code used with the intent of being traced back to the subject.)
- AND**
- Any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Your approval expires on **April 4, 2017**, unless you submit an appropriate continuation application.

Please note: Revisions and amendments to the research activity must be promptly reported to the IRB for review and approval prior to the commencement of the revised protocol.

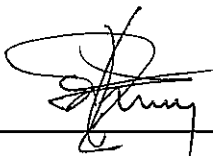


Verification of Institutional Review Board (IRB) Exempt Determination/Approval

LIU IRB ID: 16/03-483

Project Title: Academics and LIU Sports

Expiration Date: April 4, 2017

Signature: _____


Name/Title: Patricia Harvey, University IRB Administrator



LIU

Post

720 Northern Boulevard
Brookville, N.Y. 11548-1300

Institutional Review Board :

I have met with Milton Farez and we have discussed his research survey. His presentation to me was outstanding. I give Milton permission to distribute his survey to our student-athletes. Our coaches will assist in the distribution and collection of this survey.

If you have any questions or concerns please feel free to call.

Bryan Collins

LIU Post

Athletic Department

X 2847