Academic Impact of Participation on a Division III Men’s Lacrosse Team

By Jeremy Phelps

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ABSTRACT

The purpose of this study was to determine if participation on an intercollegiate men’s lacrosse team would impact the academic performance of students. Data was gathered from the 2012, 2013 and 2014 academic years and compared through the use of a dependent $t$-test. The study showed no relation between participation on the men’s lacrosse team and positive or negative performance in the classroom. Research in the area of the impact of athletics on academic performance should continue as there are many other factors that could be considered in this area.
CHAPTER I
INTRODUCTION

Overview

The purpose of an academic institution is to help students grow and mature as they develop academic and personal skills and habits they need for success in their lives. That preparation occurs not only through coursework but also through experiences on and off campus. Student participation in various activities definitely includes athletics. There continues to be considerable debate about the pros and cons of intercollegiate athletics.

Student success has a positive impact on the collegiate institution. Gibbison (2011) claims “student [academic] success could translate into higher enrolment and revenues for the university and the possibility of attracting more talented students in the long run” (p. 247). Therefore, finding values in athletics is related to the academic success of the students resulting in benefits for both the college and the students.

According to Rees and Sabia (2010), “it may be the case that sports participation increases years of education attained and future earnings through the enhancement of social adaptability and the development of athletic skills, or the revelation of those skills to college admissions officers” (p. 759) It is possible also, for student athletes attending Division III colleges with academic scholarships to benefit from the above study.

Statement of the Problem

The purpose of the study is to examine the impact of participation on an intercollegiate Division III lacrosse team on student-athletes’ academic performance.
Hypothesis

The academic performance of student athletes, while they are actively engaged as members of the college lacrosse team, will be no different than their performance during the rest of the year.

Operational Definitions

For the purpose of this study, the following terms are defined below:

Academic Performance

For the purpose of this study, academic performance can be defined as the Grade Point Average of the student-athletes surveyed.

In-Season

The span of time during which a student-athlete is allowed to practice and participate in games as a member of a team. This is limited only to coach-led practices, as captain led practices may occur during the off-season.

Out-Of-Season

The span of time during which team practices and games are prohibited by the NCAA. This time period does not include captain-led practices, lifts and scrimmages, which are permitted year-round by the NCAA.

Athlete

A student who participates in intercollegiate athletics as a member of a team.

Team Member

Those students who are listed on a team roster for the entirety of the in-season period (January-May).
CHAPTER II
REVIEW OF THE LITERATURE

This study examines the grade point average (GPA) of student athletes at a liberal arts college, both during the in-season and the off-season. Section one of this review is an examination of the effect of athletic participation on academic performance. The second section shows the research concerning psychological effects of sports on the participants. The third section shows the effect of athletic participation on academic attainment. The final section is a summary of the literature review.

The Effects of Athletics on Academic Performance

Recent research by Rees et al., (2010) supports the fact that participation in athletics has a positive impact on students’ academic performance.

“Estimates suggest that sports participation leads to higher grades and that this benefit is positively related to frequency of participation. Specifically, playing an active sport one or two times per week is associated with a 0.109 increase in math and English GPAs; playing three to four times per week is associated with a 0.151 increase; and playing five or more times is associated with a 0.187 increase” (p. 754).

At the collegiate level, athletes will typically participate in athletic events three times a week in the off-season and six times a week in-season. It would seem, from the numerous studies shown, that the amount of participation in athletics is more important in the effect on the student’s GPA than simply participating in sports at all.

“Students who participate in recreational activities a little more than once a week (20 or more times per semester) have a higher grade point average when compared to those who visit less than twenty times per semester. More specifically, students who visit the
recreational facility twenty or more times for the semester will increase their grade point average by 0.30 points.” (Gibbison & Perkins-Brown, 2011, p. 252-253).

It is interesting and quite relevant to this study that the amount of participation and time spent in athletic competition has an impact on the GPA of student athletes. This impact suggests that it is actually the participation in a sport that impacts a GPA, rather than a time management factor or the off-the-field factors associated with athletic participation.

Additionally, student-athletes are required to maintain a 2.0 GPA. Having a goal to strive for, even one as low as a 2.0, is still enough to motivate some students. Additionally, there are competitions within an athletic department for overall individual and team GPA’s. This can be yet another factor for higher academic achievement.

Although this study focuses on participation in intercollegiate athletics, similar findings have been cited in the research regarding academic performance due to physical education in a school. In regard to the link between physical education and academic performance,

“Across all the studies, there were a total of 251 associations between physical activity and academic performance, representing measures of academic achievement, academic behavior, and cognitive skills and attitudes. Slightly more than half (50.5%) of all associations examined were positive, 48% were not significant, and 1.5% were negative.” (Rasberry, Lee, Robin, Laris, Russell, Coyle, Nihiser, 2011, p.13).

This study is useful in showing that there may be benefits of exercise on academic performance, rather than just the teamwork and camaraderie that are associated with intercollegiate athletics. This would mean that for general students, simply getting to the gym to workout could potentially be just as effective in boosting GPA as participating in an intercollegiate sport is for student-athletes. This might be an easily transferrable way to raise the GPA of general students,
assuming this theory is true.

**Psychological Effects of Sports**

Another possible benefit of athletics is higher self-esteem and feeling of self-worth. Although some studies, such as the one conducted by Fisher, Juszczyk, and Freidman (1996) do not find that self-esteem and athletic participation are correlated, some do “find a relationship between reported grade point average and self-esteem, but not with depression” (p.333). This finding indicates that if sport could be found to improve self-esteem in a student-athlete, then this could be a factor for increased GPA. Although this particular study does not show this correlation, it is not focused on competitive intercollegiate athletics. Competition and winning at a high level could potentially impact the self-esteem of a student-athlete, which is not the focus of Fisher’s study.

Another interesting effect of athletics on academic performance may be the psychological influence of an individual’s teammates when competing in intercollegiate athletics. Beamon and Bell (2006) found that

“As the emphasis on athletics during the socialization process increases, poor academic performance increased. In addressing the second theoretical question, socialization emphasis was found to affect behavior. Although this sample was found to have few behavior problems, some relationships were identified indicating that as the emphasis on athletics increases, behavioral problems increase as well.” (p. 402).

If an emphasis in the socialization process on the importance of athletics being greater than academic performance is accurate, the inverse may be true as well. If during the socialization process of young athletes, the academic performance is stressed by their teammates over athletic performance, than those students should have a greater appreciation for their own academic
successes. This would mean that the environment surrounding athletes could be a key factor in academic success.

Just as creating a successful academic environment is important, it seems also that the support of teammates is a crucial factor for academic success. In regard to reasons for retention, “In general, these student athletes are more likely to be retained in their degree program if they are involved in a summer program and work in study groups.” (Person & Lenoir, 1997, p.8).

Although this information is in regard to retention of African-American student athletes, the same principle may be applied to success in the classroom. By allowing student-athletes to work with their teammates, a better environment could be created for individuals to feel like they are set up for success. Having the feeling of being positioned for success could have a major impact on a student’s perceived ability to complete an assignment.

**The Effect of Athletic Participation on Academic Attainment**

A recent study performed by Pfeifer and Cornelißen (2010) has a new take on the importance and benefits of athletics among students at the high school and college levels. The study states that athletics are known as a good leisure activity, meaning that participation in athletics can reduce the likelihood to perform a bad leisure activity, such as smoking cigarettes or marijuana, excessive partying, heavy drinking or cocaine use.

“Empirical research indeed shows that students, who are frequent drinkers, heavy cigarette smokers, and frequent marijuana and cocaine users, have lower probabilities to graduate from high school and attain less schooling after high school graduation” (Pfeifer & Cornelißen, 2010, p. 95).

Should these findings hold true, this means that participation in athletics would not only potentially have a positive impact on a student’s grade point average, but that athletic
participation would actually increase the likelihood of a student completing their four-year undergraduate degree. The research of Pfeifer and Cornelißen (2010) does indeed show a positive correlation between athletic performance and academic attainment. However, the major limitation with this study is that it was conducted in Germany, not the United States. Although the same general principles can be applied to student-athletes of other countries, there is one notable difference:

“Whereas competitive sport in the US is mostly an inside school activity which is performed on school teams, competitive sport in Germany is rather an outside school activity performed in club teams” (p., 96).

For the purpose of this study, this fact seems irrelevant, as the same team cohesion and sense of inclusion can be applied to either situation.

Summary

It is evident that participation in athletics can have a positive impact on the academic performance of a student. While there are many potential factors that could have an impact on academic performance, it seems that the amount of time spent participating in a sport is correlated to academic success. The literature has shown that the more time an athlete spends on the field, the better he will do in the classroom. While participation has been shown to have an impact, the choice of sport played has not been shown to have an effect. This could mean that it may be beneficial to require the general student population to participate on an intramural team or spend a certain amount of hours working out each week.
CHAPTER III

METHODS

Design

A causal-comparative design was used in the examination of the grade point average earned by members of a lacrosse team in-season as compared to out-of-season.

Participants

The study was conducted using a convenience sample of twenty-eight members of a college lacrosse team. The sample was limited to student-athletes who were freshmen, sophomores or juniors at the start of the study. Subjects were drawn from the Classes of 2015, 2016, and 2017. Twenty-six were Caucasian and two were African-American. They ranged in age from 18-22 and came from various economic and social backgrounds. Included in this group were players that saw significant minutes of game play, as well as players that saw very minimal time on the field during games. This data was collected from the 2013-14 and the 2014-15 academic years.

The team members were selected through a recruiting process based on their on-field ability, as well as their academic performance in high school. This process was very selective, as only 14 players are chosen per year to be part of this team. No players were on athletic scholarship, but all 28 receive some form of merit-based aide, ranging between $10,000-20,000 in value per year.

Instruments

Data collection instruments will include spreadsheets comparing official grade point averages by semester inclusive of in-season and off-season data.

Procedures

Grade Point Averages (GPA’s) of student-athletes from the men’s lacrosse were collected from the Fall 2012, Spring and Fall 2013 and Spring 2014 semesters. This information was then
used to compare the GPA’s of both individual players and the team as a whole and focused on their GPA in-season compared to their GPA out-of-season. This comparison was accomplished through the use of a dependent $t$-test.
CHAPTER IV

RESULTS

The purpose of the study was to examine the impact of participation on an intercollegiate Division III lacrosse team on student-athletes academic performance. A causal-comparative design was used in the examination of the grade point average earned by members of the lacrosse team in-season and out-of-season.

Table 1

GPA Means and Standard Deviation for the Group for Each Semester

<table>
<thead>
<tr>
<th>Semester</th>
<th>Mean (Standard Deviation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2012</td>
<td>2.95 (.488)</td>
</tr>
<tr>
<td>Spring 2013</td>
<td>2.97 (.635)</td>
</tr>
<tr>
<td>Fall 2013</td>
<td>2.98 (.455)</td>
</tr>
<tr>
<td>Spring 2014</td>
<td>2.93 (.587)</td>
</tr>
</tbody>
</table>

For each year's semester GPA comparison, a dependent t-test was run to see if there was a significant difference in athlete's GPA in-season as compared to out-of-season.

Results showed that there was no significant difference during the 2012-2013 academic year \([t(26) = -.225, p > .05]\) and that there was no significant difference in GPA during the 2013-2014 academic year \([t(26) = .639, p > .05]\). The null hypothesis was accepted as there was no significant difference in athletes' GPA in-season compared to out-of-season. These results and their implications will be discussed in Chapter V.
CHAPTER V

DISCUSSION

The original hypothesis was that being actively engaged as a member of the men’s lacrosse team would have no significant impact on a student-athlete’s academic performance when comparing in-season and out-of-season GPA’s. This hypothesis was supported through the use of a dependent t-test.

Implications

The research supported the null hypothesis that the academic performance of student athletes, while they are actively engaged as members of the college lacrosse team will be no different than their performance during the rest of the year. The means that there is no support for the argument that student-athletes perform better academically when in-season than they do out-of-season. The study investigated relationships between athletic participation and academic performance; however, this was not supported by the data.

As the null hypothesis was supported, the theoretical consequence would be that there is no positive or negative impact from participation on the men’s lacrosse team in relation to academic performance. While athletics may have a positive impact from a therapeutic perspective, there is no difference from an academic perspective.

Threats To Validity

The greatest threat to validity was that all students attended the same college. The services offered in and out-of-season, as well as the time commitments required by season can vary greatly by school. At the Division One level for example, tutors may be offered while in-season but not while a student is in their traditional off-season.

Another threat to the validity of this study was that the sample size was small and all of the
participants were male. This did not allow for diversity within the pool of participants. Although these findings can be applied to the team that was studied, it would be very difficult to make a case for the findings to apply to teams in different sports, at different institutions, or of a different gender or background.

**Connections to the Literature**

The study shows that there is no positive or negative impact related to academic performance based on active participation on the men’s lacrosse team. This is contradictory to the findings of Rees et al. (2010), Gibbison et al., (2011), Rasberry, et al, (2011) all of whom found that participation in athletics has a positive impact on a student’s academic achievement.

Rees et al., found between sports and GPA that “playing five or more times is associated with a 0.187 increase” (2010, p. 754). This is in direct contradiction to the findings of this study. Out-of-season, lacrosse players are allowed 15 practices total for the semester. In season, lacrosse players are competing in either practice or games 6 days a week which would meet the five or more threshold of Rees et al., study. Since the GPA was only increased by .02 in 2012-13 from fall to spring and actually went down by .05 in 2013-14, the results of the Rees et al., study did not hold true in relation to this study.

**Implications for Future Research**

The initial purpose of the study was to prove that a positive relationship exists between athletic participation and academic performance so that future studies could be based on these findings. As this relationship was not supported, follow up studies based on this concept would not be possible. However, it is possible that a follow up study could be conducted on the therapeutic value of participation in athletics. While this would not support the original hypothesis from this study, finding a therapeutic value in athletic participation could show that it
is beneficial.

It would be beneficial to conduct this same study with a bigger and much more diverse participant pool. By incorporating data from different sports, school, genders and races, it is possible that very different results could be found. Although there is no significant data to support this hypothesis at the research site college it is possible that other college’s operate in such a way that this data could be found to be significant.

Conclusions

After a collection and review of data from the research site’s men’s lacrosse team, no significant relationship was found between active participation on the team and academic performance. Although this data cannot be used to support the positive benefits of athletics in an inter-collegiate setting, they do show that there is no negative impact on a student-athletes GPA while in-season. It seems apparent in the data that the ability to manage coursework with the demands of athletic participation is very much on a case-by-case basis in regard to the individual student-athletes on the team.
REFERENCES


