

A COMPARISON IN THE ACADEMIC ACHIEVEMENT OF HIGH SCHOOL
ATHLETES VS. NON-ATHLETES IN THE STATE OF KANSAS

By

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ABSTRACT

The purpose of this project was to compare the academic performance of high school athletes vs. non-athletes using grade point average and ACT scores. Using information from the Kansas State Department of Education, as well as the Kansas State High School Activities Association, provides some answers to the following questions. “Is there a significant difference in the grade point averages of high school athletes vs. non-athletes?” “Is there a significant difference in ACT scores between high school athletes vs. non-athletes?” Using statistical software, a t-test was used to challenge the null hypothesis. Findings from the study indicated that there was a significant difference in grade point average and ACT scores between athletes and non-athletes. Among the 5,017 male athletes, 74% reported a GPA of 3.0 or higher and 43% reported a GPA of 3.5 or higher. Of the 3,674 male non-athletes, only 64% reported a GPA of 3.0 or higher and only 34% reported a GPA of 3.5 or higher. Among the 4,330 female athletes, 87% reported a GPA of 3.0 or higher and 62% reported a GPA of 3.5 or higher. Of the 5,547 female non-athletes, only 75% reported a GPA of 3.0 or higher and only 44% reported a GPA of 3.5 or higher. In looking at ACT composite scores, athletes averaged a score of 22.94, while non-athletes averaged a score of 21.81.

INTRODUCTION

Background, Issues, and Concerns

Being involved in athletics is a major part of many students' high school careers. Students that are involved in athletics learn many lessons that will be used in their future. They learn responsibility, respect, time management, sportsmanship, and the importance of learning how to work as a team. All of these are lessons that will be used later on in their lives regardless of the career path they choose.

Academics are a huge part of high school athletics. Athletes are required to pass classes while maintaining a certain grade point average. You can make the case that athletics push students to succeed in the classroom, some more than others. If a student wants to showcase their talents on the field, they are required to perform in the classroom first.

Practice under Investigation

The practice under investigation is the academic performance of high school athletes in comparison to non-athletes.

Conceptual Underpinning

The focus of this study will be how student learning can improve at the high school level. There are many factors that may come into play when looking at student achievement. Athletics is one of the major activities that can have a positive effect on student learning. Students who participate in after school activities, including athletics usually benefit from their involvement.

The data being reviewed will determine if there is a difference in academic achievement between high school athletes and non-athletes. This study will look at the 139,349 students who were enrolled in grades 9-12 in Kansas's high schools during the 2009-2010 school years. The study will analyze student grade point average on a 4.0 scale, as well as their ACT composite scores.

Athletics can play a major role in the maturation and growth of students. There are many benefits to being a student athlete. First of all, students must keep their grades at a certain level if they want to compete. A student's studies must come first if they want to be a part of an athletic program. Another factor in being a student athlete is attendance. To participate in athletics, students must be at school and present in the classroom. These aforementioned factors lead to more determined personalities in the classroom and on the playing field resulting in having a positive effect on student achievement.

Statement of the Problem

People have wondered whether or not athletics has any form of impact on academic achievement. The hope for this study is to shed some light on the subject and prove the importance of athletic programs at the high school level.

Purpose of the Study

The purpose of this study is to determine if students who participate in high school athletics perform higher in terms of grade point average and composite ACT scores. As a result, administrators, parents, students, teachers, and the community will see just how important high school athletics can be on student academic achievement.

Research Question

RQ 1: Is there a significant difference in grade point average and ACT scores among high school athletes and non-athletes.

Null Hypothesis

There is no significant difference between grade point average and ACT scores among high school athletes and non-athletes.

Anticipated benefits of the study

This study will show if students participating in athletics achieve greater academic success than those students that do not participate in athletics. This data will be great for administrators as well as athletic directors, teachers, and all school staff to see just how important athletic programs are and the impact they can have on academic achievement. This data can be used to support the argument against cutting school athletic programs as well as other extracurricular activities that may face the chopping block due to budget cuts.

Definition of Terms

GPA: Grade Point Average

KSDE: Kansas State Department of Education

KSHSAA: Kansas State High School Activities Association

NCAA: National Collegiate Athletic Association

Summary

The data used for the research was taken from the KSDE and KSHSAA enrollment numbers of students in grades 9-12 during the 2009-2010 school year. There

were 139,349 who were enrolled in grades 9-12 during the 2009-2010 school year. The research will analyze whether or not athletics have an effect on academic achievement.

There are many benefits to this study. This study will show how athletics have a positive impact on academics. In order to participate in athletics, the student will need to meet academic requirements and have good attendance. Athletics can be a major reason that some students are pushed to be successful in school.

The purpose of the study is to make the administrators, coaches, parents, community, and the students aware of the role that athletics play in academic success. The research question that is analyzed will help show the importance of athletics.

REVIEW OF LITERATURE

On average student athletes succeed in the classroom at a higher rate than non-athletes. This is the result of several factors, one of which is the requirements they must fulfill in order to compete. Eligibility requirements vary from school to school, but most school districts have student athletes maintain a 2.0 GPA to remain eligible for athletic competitions (Bukowski, 2010).

Eligibility requirements serve as extra motivation for student athletes to perform well in the classroom, some more than others. Students who generally do not do well in school are now given the extra motivation they need to work hard in the classroom in order to compete on the field (Valdez 2012). The NCAA is also doing their part by raising the eligibility requirements of student athletes at the collegiate level. Starting in 2016, the NCAA will be raising their minimum GPA for incoming athletes from 2.0 to 2.3 (Valdez 2012). This change was originally set to take effect in 2015, but the NCAA decided to wait an extra year. This statement by the NCAA makes it perfectly clear to prospective student athletes that their grades must be in order if they want to be able to participate in athletics at the collegiate level. It will be interesting to see in the coming years if the new eligibility requirement by the NCAA will have a trickle-down effect causing high schools to raise their own eligibility requirements.

Besides attaining high academic achievement, there are other benefits to participating in high school athletics. Even though the number of high school students that participate in athletics continue to grow (steady increase for 22 straight years), students willing to commit to the time it takes to actively participate is a major factor that

deters them from participating in athletics (Xie, 2011). Even though it is a big commitment, athletics teach students many great life skills, including time management, which will greatly benefit them as they move on to college, as well as the work place. Teamwork is another skill that students can benefit from by participating in athletics. Learning how to work together is a lifelong skill that will greatly benefit them throughout their entire lives.

Another major factor regarding academic achievement is attendance. In order to be able to participate in athletics, students have to be at school. There is a direct relationship between academic achievement and attendance. If students were participating in some type of after school activity, they would be much less likely to dropout (Ayers, 2011).

Another benefit of being involved in athletics is being part of a group. Members of a team often come together like a family and do things as a group. They provide support to one another throughout the good times and the bad (Joyner, 2011).

RESEARCH METHODS

Research Design

A T-Test and Descriptive Analysis was the base of the research design. The independent variable was whether the student was an athlete or non-athlete. The dependent variable was the student's composite ACT score. The alpha level was 0.25.

Study Group Description

The study group for this research was the data retrieved from the Kansas State Department of Education (KSDE) and the Kansas State High School Activities Association (KSHSAA). During the 2009-2010 school year, there were 139,349 students enrolled in grades 9-12 in Kansas's high schools. Of these, 62,297 were athletes.

Data collection methods and instruments

Data for this study was provided by the Kansas State Department of Education. Students acknowledged on an ACT questionnaire if they were involved in athletics and also self reported their GPA.

Statistical Analysis Methods

A Statistical Package software was used to complete the T-Test analysis as part of the study. The alpha level is set at 0.25

FINDINGS

Descriptive Analysis

	Non-Athletes			Athletes		
	N (total number)	3.0 GPA or higher	3.5 GPA or higher	N (total number)	3.0 GPA or higher	3.5 GPA or higher
Gender	9,221			9,347		
Male	3,674	64%	34%	5,017	74%	43%
Female	5,547	75%	44%	4,330	87%	62%

Out of the 9,347 athletes that reported their GPA on the ACT questionnaire 5,017 were male and 4,330 were female. 74% of male athletes reported a GPA of 3.0 or higher and 43% reported a GPA of 3.5 or higher. 87% of female athletes reported a GPA of 3.0 or higher and 62% reported a GPA of 3.5 or higher. Out of the 9,221 non-athletes, 3,674 were male and 5,547 were female. 64% of male non-athletes reported a GPA of 3.0 or higher and 34% reported a GPA of 3.5 or higher. 75% of female non-athletes reported a GPA of 3.0 or higher and 44% reported a GPA of 3.5 or higher.

T-Test Analysis

Source	Mean	Mean D	df	p-value
X = ACT non-athlete	21.81			
Y = ACT athlete	22.94	-0.13	0	0.00

The t-test shows that the mean ACT composite score of non-athletes is 21.81 while the mean ACT composite score of athletes is 22.94. Mean difference (D) is -0.13 and the Degrees of freedom (df) is 0. The p-value is 0.00, which is less than the 0.25 alpha level. Therefore, there is significant difference in the ACT composite scores between high school athletes and non-athletes. As a result, the null hypothesis, which states that there is no significant, difference in GPA and ACT scores between high school athletes vs. non-athletes, is rejected. Athletes perform at a significantly higher level in academics than those students who do not participate in athletics.

CONCLUSION

The null hypothesis of the study stated that there was no significant difference in the GPA and ACT scores of high school athletes and non-athletes. However, the result of the study showed that there is in fact a significant difference between both the GPA and ACT scores of high school athletes and non-athletes. The GPA data shows that 74% of male athletes reported a GPA of 3.0 or higher and 43% reported a GPA of 3.5 or higher. In comparison, 64% of male non-athletes reported a GPA of 3.0 or higher and 34% reported a GPA of 3.5 or higher. 87% of female athletes reported a GPA of 3.0 or higher and 62% reported a GPA of 3.5 or higher. In comparison 75% of female non-athletes reported a GPA of 3.0 or higher and 44% reported a GPA of 3.5 or higher. In looking at the ACT scores, non-athletes had an average composite score of 21.81 whereas athletes had an average composite score of 22.94. The p-value of the t-test analysis was 0.00 which is less than the 0.25 alpha level which proves a significant difference in ACT scores.

The articles that were reviewed for this study all stated that students that compete in high school athletics academically achieve at a higher level than those students that choose not to participate in athletics. Students that participate in athletics are continuously proving that they achieve higher academic success than those students who do not participate in athletics. There are various factors contributing to this. Students have to meet eligibility requirements when it comes to their grade point average in order to be eligible to participate in athletics. Another factor is sheer motivation. Most athletes are very motivated and do not like to fail at anything. These students are more likely to be the most competitive in the classroom as well as on the playing field.

The requirements for athletes to attend NCAA universities in the next few years are becoming more strict and rigid. These students are proving that on average they are outperforming non-athletes in the classroom. Athletes know that in order to be able to perform on the field, they must perform in the classroom first.

From this study, recommendations could be made for districts to raise their own eligibility standards on student athletes and match them with the new guidelines set forth by the NCAA. Doing this would better prepare students for the transition to college. It is important to prepare students the best way possible for them to make the transition to the next phase of their lives. Having eligibility standards that match those of the NCAA will continue to push and motivate students to perform in the classroom.

Perhaps a future study could examine if there are any negative effects on participation numbers in athletics as a result of raised eligibility standards. A study could also be done to examine if school district are in fact raising their eligibility standards to match the new standards set forth by the NCAA.

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