

# Increasing Student Achievement Through Sports

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A Special Project

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Dr. Audrian Huff

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FACULTY APPROVAL

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## ABSTRACT

There has been much research concerning the correlation of student achievement in the classroom and participation in sports. This study attempted to show the positive effects sports had on the development of overall student achievement. Grade point averages were gathered from eighth grade students that participated in sports and eighth grade students that did not participate in sports in a middle school in Eastern Washington. The data gathered was quantitative and was measured by a Test of Chi-square. The quantitative results gathered by this researcher proved further research needed to be done to measure the effects of sports on student achievement in the classroom after no significance was found in this quasi-experimental study.

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## CHAPTER 1

### Introduction

#### Background for the Project

Sports continued to be an important extra-curricular activity for middle school students. The author attempted to answer the following question in the research paper: Did after school sports have a positive or negative effect on middle school students' grade point average?

Sports and after school extra-curricular activities have for a long time been viewed as beneficial to children's overall performance in school and how children behaved socially. More and more children across America participated in after school sports in the past decade (Black, 2001). The researcher attempted to answer the following questions: Did the effect of after school sports cause negative or positive achievement in the classroom? Did the time invested by parents really benefit children's academic success? Did the money school districts spend towards transportation, coaches and equipment hinder or help students in the classroom?

Middle schools offered sports programs from the fall until spring to provide students various opportunities for success in and out of the classroom. Various student-athletes involved in school sports were involved in other various extra curricular activities such as youth group, cub scouts, music etc. "Students

who participate in structured extracurricular activities are likely to have higher academic achievement and higher levels of commitment and attachment to school” (Duncan, 2000, p. 6).

Parents played an important role in children's lives. Parents invested a majority of free time in the lives of children's sporting activities. Parents volunteered, coached and drove to many sporting activities all year round for children, while at the same time maintaining a career and family (Duncan, 2000).

Parents had to decide if sports were affecting children's academic performance in the classroom. Were the children's grades affected in a negative manner due to school sports? Were the children's time commitment and level of priority focused too much on sports? Parents had personal opinions regarding sports and academics. Parents could be extreme in letting children participate in more sports than children could handle. Certain parents found the fine balance of letting children play sports and at the same time maintain grades in the classroom. When parents put "athlete" before "student", negative effects could have been produced on children in the classroom. In the long run the negative effects could hurt student's success in school and children's overall self-esteem (Duncan, 2000).

Another important influence of after school sports for middle school students was friends. Sports were a great opportunity for students to make new friends and get to know previous friends better. Peer status was very important in middle school. One way students gained self-image and peer acceptance was through sports (Black, 2001).

Sports were a great way of boosting self-esteem because students felt a part of a team. "Many positive benefits for young adolescents may result from

participation in sports which can enhance their self-esteem and increase their interest in sports” (National Middle School Association, 1997, p.2). Children wanted to feel a part of a team, whether children chose family, sports teams, or even a gang. Being part of a sports team also gave students an opportunity to feel like an active part of the school. After school sport programs helped students gain self-esteem, meet new friends, learn new things, and exercise. “Young adolescents’ psychological well being should be a priority in developing middle level sports programs” (Vaugh, p. 21).

The Washington Interscholastic Association did not have a specific grade point average for student-athletes to participate in school sports. The Washington Interscholastic Association only indicated for scholastic eligibility that the student be passing a number of classes: 4 of 5, 4 of 6, 5 of 7 or 5 of 8 classes to be athletic eligible by Washington Interscholastic Association Rules (Washington Interscholastic Activities Association, 2006). Most school districts had a more restrictive scholastic requirement including a grade point average minimum or passing in all classes. The middle school where the following data was collected had a minimum of a 2.0 G.P.A for male and female athletes to participate in school sports.

#### Statement of the Problem

The following study determined if middle school students participating in after school sports maintained a higher grade point average than students not

participating in after school sports. Therefore a comparison was made between grade point average data gathered from the first semester in the winter of 2007 from students who participated in school sports and students who did not participate in school sports.

### Purpose of the Project

As a result of the project, the author intended to explore previous research on the topic of sports and student achievement. Evaluations of the findings from student athletes and non-student athletes' grade point average were included in the project. Data was collected from eighth grade students in the winter of 2007.

### Delimitations

The study was performed using male and female eighth grade students from an Eastern Washington middle school. The study compared 50 middle school students participating in sports G.P.A. with 50 middle school students G.P.A. not involved in an after school sport. The sample size of 100 grade point averages were taken from a list starting with the first 50 athletes and non-athletes in an alphabetic sequence of eighth grade students regardless of race, gender, and socioeconomic status. The middle school included grades 6-8. The study took place from the fall of 2006 to the winter of 2007 in a rural town with a population of 61,000 in Eastern Washington.

The middle school where the data was collected had approximately 889 students with demographics of 78.3% White, 15.2% Hispanic, 2.6% Black, 3.0% Asian, and .4% American Indian. Students on the free and reduced lunch program

were 30.2%, indicating a high population of middle to upper socioeconomic status students. Special education at 9.9%, transitional bilinguals at 3.9%, and migrant students at 3.9% completed the demographics of the middle school (Office of Superintendent of Public Instruction, 2006).

### Assumptions

The researcher assumed the study at this middle school included an ample and representative sample size of eighth grade students attending middle school in rural towns in Eastern Washington. The researcher assumed middle school students at the participating school had equal opportunity regardless of race, gender, or socioeconomic background to participate in sport activities affiliated with the school. The researcher assumed the teaching staff graded participants fairly. Finally, the researcher assumed the participants were equally placed according to educational needs and equal instruction was given to the participants.

### Hypothesis

Eighth grade male and female middle school students participating in an after school sport will have a higher grade point average than eighth grade male and female middle school students not participating in an after school sport as measured by Chi-Square.

### Null Hypothesis

There is not a significant difference in the grade point average of students who participated in an after school sport and students that did not participate in an after school sport as measured by grade point average.

### Significance of the Project

The research study focused on the important issue of how middle school sports had an overall positive impact on student achievement in the classroom. Male and female athletes and non-athletes grade point average in middle school were studied in this research project to assess the significance of middle school sports and student achievement in the classroom.

### Procedure

The participants in the study were taken from a list starting with the first 50 athletes and non-athletes in an alphabetic sequence of eighth grade students. Students' grade point averages were gathered in the winter of 2007 at the end of the first semester on January 23rd. The grade point averages were taken with permission from the school's attendance office. After the quantitative data was gathered and analyzed the researcher used a Stat Pak CD containing a test of Chi-square to test for significance.

The researcher inserted the data collected into a Two Dimensional Chi-Square test: Student-athletes' grade point average versus non-athletes' grade point average. A Test of Chi-Square was used to compare grade point average observed in this study to the grade point average expected. The researcher compared the

observed frequencies and the expected frequencies to find quantitative conclusions.

### Definition of Terms

Chi-Square test- Chi-Square test was a nonparametric test of significance appropriate when the data was in form of frequency counts or percentages and proportions that could be converted to frequencies.

intramural sports- Intramural sports were a program, from elementary through college, designed for equal participation among all students regardless of gender or race that included a variety of sports.

middle school- Middle school was a school, intermediate between elementary school and high school, usually encompassing grades five or six through eight. The school the researcher gathered data from was grades six through eight.

Stat Pak- STAT-PAK was a CD-rom program of statistical tests for analyzing and comparing statistics.

### Acronyms

G.P.A.- Grade Point Average.

N.F.S.H.S.A.- National Federation of State High School Associations.

N.M.S.A.- National Middle School Association.

N.S.A.C.A.- National School-Age Care Alliance.



W.I.A.A.- Washington Interscholastic Activities Association.

## CHAPTER 2

### Review of Selected Literature

#### Introduction

In the following research paper, historical perspectives and research were reviewed to exhibit the relationship between student's participation in middle school sports and G.P.A.s. The following selected literature in chapter two explored why sports and G.P.A.s have been important to student's overall success in and out of the classroom. The following chapter also included research on social status among peer groups, positive character building, and overall well-rounded students. This chapter illustrated proven data from research concerning a positive influence of sports on student achievement.

#### Historical Perspective

Historically, sports have had a major impact in adolescent's achievement in the classroom. Research from previous studies illustrated participation in sports had an overall negative impact on student achievement in the classroom. Student's priorities were usually sports and friends before the classroom. A research study in 1961 found "getting good grades ranked relatively low in the value hierarchies of adolescents" (Eder, 2002, p.298).

According to one team of researchers, over 40 studies concluded non-athletes performed slightly better in the classroom versus students participating in athletics (Stephens & Schaben, 2002). Student-athletes were not worried about maintaining a high G.P.A. to be accepted to college. Student-athletes wanted to keep a high enough G.P.A. to be able to allow participation in sports. Schools enforced a policy that student-athletes had to maintain a certain G.P.A. to be allowed to participate in school related sports (Stephens & Schaben, 2002).

During the 1960's and the early 1970's middle school and high school sports were more limited compared to today's sports. Middle and high schools in the 1960's and the early 1970's provided less opportunity for students to participate in sports due to equal gender rights. The reason for the limited opportunity was due to the fact Title IX was not established in public schools. Title IX, established in 1972, stated "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance (Department of Labor, 2006, p.1). Females in the 1960's and early 1970's involved in sports were limited, especially in the middle schools. A few years lapsed before after school sports programs became a norm for both genders in schools.

Previously, students put a vast amount of value on friendships in school. In the 1950's, student's friendships and participation in sports were valued higher than performance in the classroom. Students were more interested in being surrounded with friends and gaining peer acceptance than in maintaining a high

G.P.A. Research stated, “Adolescents were mainly concerned with social status, as well as with areas in which they could actively participate such as friendships, relationships with the opposite sex, and expressive activities” (Eder & Kinney, 2002, p.298). Students attending school to socialize with friends was a higher priority compared to academic performance in the classroom was also revealed in later research. Kinney (1997) discovered activities involving friends were the most important reason for attending school for most students. “Students went to school to be with friends and to make sure they did not miss some central peer activity” (Eder & Kinney, 2002, p.299).

In the 1980’s, society looked to an improving economy resulting in more jobs and people moving to the United States. In order for the U.S. to maintain a competitive edge in the world’s economy, society realized the valued importance of a college degree. In order to earn a higher salary in the work place, individuals needed further education and specialized training. Competition to be accepted into colleges and universities started to rise dramatically. The standard in the past was earning and maintaining a high G.P.A. during high school. College acceptance committees also began looking at applicants’ extracurricular activities. Did colleges and universities conclude because the students participated in extracurricular activities, such as sports, students would be able to adapt better to college life and students would gain important characteristics to help in the classroom? In two separate studies, Gholson (1985) and Joekel (1985) both collected research in 1985, both in agreement for the case of sports participation and achievement in the classroom. Students actively engaged in sports were found

to be most likely to succeed in a future profession and contribute positively to society. Researchers Gholson and Joekel believed students involved in diverse activities outside of the classroom gained characteristics valuable for life outside of school.

High school students participating in interscholastic activities had an overall grade point average of over 3.0 on a 4.0 scale (N.F.S.H.S.A., 2002). A study completed in 2000 by Stephens & Schaben, discovered statistical significance in the higher G.P.A.s of high school students participating in sports compared to students not participating in sports. Student-athletes' academic achievement in the classroom improved during the participation of the sport according to data collected. "Females reporting high-participation had higher G.P.A.'s and class ranks than those male and female students with low participation or no participation" (Stephens & Schaben, 2002, p. 3).

### Research in Related Areas

Research from previous studies also showed participation in sports had an overall positive impact on student achievement in the classroom "Students who participate in structured extracurricular activities are likely to have higher academic achievement and higher commitment and attachment to school" (Duncan, 2000, p. 1).

### Activity Offerings

Almost every middle and high school in the U.S. offered some type of extracurricular activity, such as music, academic clubs, and sports. Activities offered opportunities for students to develop the values of teamwork, individual and group responsibility, physical strength and endurance, a sense of community, and enjoyment of leisure time. Extracurricular activities provided a channel for reinforcing the lessons learned in the classroom, applying academic skills in a real-world context, and thus could have been considered part of a well-rounded education. Recent research suggested participation in extracurricular activities increased students' sense of engagement or attachment to students' school, and thereby decreased the likelihood of school failure (O'Brien, Eileen, and Rollefson 1995).

### Participation and Success

Was participation in extracurricular activities related to success in school? Indicators of successful participation in school included consistent attendance, academic achievement, and aspirations for continuing education beyond high school. Extracurricular participation was positively associated with each indicator among public high school students in 1992. During the first semester of the student's senior year, participants in extracurricular activities reported better attendance than students not participating in extracurricular activities. Half of the students involved in extracurricular activities had no unexcused absences from school and half had never skipped a class, compared with one-third and two-fifths

of non-participants. Students participating in extracurricular activities were three times as likely to have a G.P.A. of 3.0 or higher and twice as likely to perform in the top quartile on a composite math and reading assessment compared with students not participating in extracurricular activities. Students participating in extracurricular activities were also more likely than students not participating in extracurricular activities to aspire to higher education: two thirds expected to complete at least a bachelor's degree while about half of students not participating in extracurricular activities expected to do so. Results cannot be known from the previous data, however, whether participation had lead to success or if successful students were more inclined to participate (O'Brien and Rollefson 1995).

Did students involved in sports really earn higher grades? Mary Rombokas of Middle Tennessee State University said yes, students involved in sports earned higher grades. Mary interviewed 292 college students, collecting data on social and academic achievement. Mary found students participating in middle and high school extracurricular sports programs had higher intellectual and social development than students steering clear of such programs. Sports were often "the only component" that caused some students to stay in school and attend school regularly (Rombokas, 2001, p. 4).

Extracurricular activities provided students, including students in remedial classes, with an "academic safety net," according to John Holloway, a consultant for New Jersey's Educational Testing Service. Contrary to the widely held assumption sports and various activities cut into time for school study, Holloway said students tended to do better in school when participating in after-school

activities. Holloway examined extracurricular participation on the academic performance of boys and girls participating in interscholastic soccer and researchers found that grade point averages for girls and boys playing soccer were higher during the soccer season than during the off-season (Holloway, 2000, p. 2).

Extracurricular participation also was associated with adolescents' pro-social growth, leading to a stronger connection to school. Examining the "complex developmental process of school connection" in a doctoral dissertation submitted to the University of California, Davis, Holloway found that structured after-school activities tended to lessen such problem behaviors as cutting classes and using alcohol and drugs (Holloway, 2000, p. 2).

In a study of seven southeastern public schools, Joseph Mahoney followed 695 children to age 24 and determined that -- independent of risk variables such as living in poverty -- boys and girls participating in school extracurricular activities were less likely to drop out or be arrested. In a commentary on the study, Hans Steiner of Stanford University's School of Medicine wrote Mahoney's findings pointed to a protective factor in what remained an "incomplete picture" of risk factors that lead to behavior problems and crime. A single intervention did not prevent every student from delinquency and dropping out, Steiner said, but he supported the notion of encouraging every child to participate in extracurricular programs (Mahoney, 2001, p. 3).

### College Entry

Colleges and universities continued to compete for student admissions. Society wanted students to be the best, not only nationally but internationally as well when academics were involved. Students understood academic competition between colleges and universities to recruit the top academic students. Students realized the sacrifice to participate in a number of activities while maintaining a high G.P.A. to be accepted into a top college or university (Rombokas, 2001, p. 1). Qualitative surveys conducted by high school students at a prestigious suburban school, Quiroz (2000) discovered that the school's emphasis on admission to prestigious colleges and universities both stimulated and reflected a clientele intent on making the most of available opportunities to enhance the probability of success in the academic effort. Although the study was conducted from a prestigious high school, more than 70% of middle and low soci-economic class realized the importance of hard work to gain academic scholarships to attend college or a university. Various reasons promoted the participation of sports but the outcome of sports participation was usually of a positive nature.

### Social

Sports had a positive impact in teamwork, individual responsibility, enjoyment of leisure time and helped shape middle school students into beneficial contributors to society. "Participation in sport and physical activity programs outside of the regular curricular physical education program provides many positive benefits for middle school students when sound educational policies and qualified leadership are in place" (N.S.A.C.A., 2002, p.2). Despite the



recommendations from reliable sources, evidence showed middle schools offered less structured, intramural-type activities less frequently than in the past. The following data shows the downward spiral of intramural activities in the middle school:

Data from a 1993 national survey of 1,798 middle schools reported 63% of schools offered intramural sports programs for sixth graders, a decrease of 5% in 5 years. At the seventh grade level, 58% of grades 6-8 middle schools had intramural sports programs as compared with 67% in 1988, a decrease of 9% in five years. Similar decreases were found at the eighth grade level (N.M.S.A., 2002, p.1).

On the other hand, in a quantitative study of 1,798 middle schools approximately 25% of schools provided interscholastic sports for sixth graders, 77% for seventh graders and 79% for eighth graders and the percentages were increasing for seventh graders and holding steady for eighth graders. The low percentage of intramural sports offered to students was an alarming trend since intramural activities and other related activities such as sport clubs had the potential to offer middle school students the variety of activities consistent with the philosophy and purposes of middle schools when carefully designed and implemented. The National Association for Sport and Physical Education, therefore, recommended middle schools should provide high-quality intramural programs for middle school students and make intramurals accessible and available to students (Darst & Pangrazi, 2002).

A quantitative study among high school students in Minnesota revealed 91% of 4,800 students surveyed stated students participating in school sports tended to be the school leaders and positive role models in the school. Ninety-two percent of high school students reported sports provided an avenue to develop self-discipline (N.F.S.H.S.A., 2002).

Lack of participation in school sports has been shown in some cases to have negative effects on students. National data stated students who had not spent any time in extracurricular activities were 57 % more likely to have dropped out of school by the time students were seniors; 49 % were more likely to have tried drugs; 37 % were more likely to have become teen parents; and 27 % were more likely to have been arrested than students who spent over four hours per week in extracurricular activities” (N.F.S.H.S.A., 2002).

Sports made students feel a part of something bigger, ultimately leading to positive effects in the long run. Sports were a positive factor in showing a sense of belonging for students stating, “Because middle schools often offer fewer opportunities for involvement in extracurricular activities, participation in those activities may be even more important for obtaining popularity and status among peers” (Eder & Kinney, 2001, p. 301). Sports were very important for students to develop socially and academically.

### Funding and Assessments

School officials across the country struggled to balance budgets and considered cutting extracurricular activities. The savings from extracurricular

activity cuts that were measured, according to the N.F.S.H.S.A., encouraged co-curricular activities that supported the academic mission of schools stated the following: “lifelong lessons are as important as those taught in the classroom” (N.F.S.H.S.A., 2002, p. 1).

Middle school sports took a back seat to state assessments and test scores. On January 8<sup>th</sup>, 2002 President Bush signed the No Child Left Behind Act putting more emphasis on results in the classroom due to international academic competition. Many middle schools across the country set aside sports as beneficial to student’s success in the classroom focusing instruction and money into the classroom (N.F.S.H.S.A., 2002).

Budget deficits in school districts across the nation have put a halt to many middle school sport teams and other various extracurricular activities. Middle school sports were a small percentage of the overall school budget. Middle school sports made up only one to three percent of the overall education budget and in some cases even smaller. “In 1992 the Chicago Board of Education budget was \$2.6 billion, and the activity programs received only \$2.9 million, a miniscule one-tenth of one percent” (N.F.S.H.S.A., 2002, p. 4).

### Summary

In summary, data has indicated benefits for students participating in after school sports. Participation in sports and success in the classroom were strongly associated as evidenced by participants higher G.P.A. as stated in Duncan (2000):

“Students who participate in structured extracurricular activities are likely to have higher academic achievement and higher levels of commitment and attachment to school” (p. 6).

Sports programs supported the overall well being of students during middle school years and into college. Sports promoted positive self-image, a sense of positive social interaction among friends, teamwork, responsibility, and enjoyment. Sports developed positive characteristics to help students reach higher levels of achievement in school and aspirations to higher levels of education. Middle school programs that were developmentally appropriate deserved attention from school budgets because of the health and welfare of young adolescents at stake. The focus of middle school sports should have been on helping students set goals reflecting current interests and abilities. This focus helped students to emphasize the importance of good grades over sports. However, when students placed priority of sports over achievement in school then sports had negative effects.

## CHAPTER 3

### Methodology and Treatment of Data

#### Introduction

Almost every middle school in the United States offered some type of after school sport activity for students. Sports offered positive opportunities for students to develop values of teamwork, individual and group responsibility, physical strength, endurance, a sense of community, building of self-esteem, and most importantly higher levels of achievement in the classroom.

With the high demands for all students meeting state standards by the N.C.L.B. act there had been more attention on student achievement in the classroom. Although sports were an important component for students to meet high levels of academic performance in the classroom, sports programs took a back seat to state standards in the classroom among schools. With the high expectations being placed on student achievement in the classroom, sports continued to provide an avenue for students to reinforce the lessons being taught in the classroom. This application of academic skills in a real-world setting was considered a key component of a well-rounded education.

G.P.A.s were taken from an Eastern Washington middle school of students that participated in sports and students that did not participate in sports. The results of the G.P.A.'s were then analyzed by a test of Chi-square.

## Methodology

The following study was conducted in the educational setting of a middle school in Eastern Washington. The purpose of this study was for the researcher to insert the following data gathered into a two dimensional Chi-Square test:

Students that participated in sports G.P.A.s compared to students that did not participate in sports. A Chi-Square test was used to compare G.P.A.s observed in this study to the G.P.A. expected. The researcher compared the observed frequencies and the expected frequencies to find quantitative results.

## Participants

The participants used in the following study were male and female eighth grade students from one Eastern Washington middle school. The study compared the G.P.A.s of 50 middle school students participating in sports with 50 middle school students not involved in an after school sport during the first semester. The sample size of 100 G.P.A.s were taken from a list starting with the first 50 athletes and non-athletes in an alphabetic sequence of eighth grade students regardless of race, gender, and socioeconomic status. The Eastern Washington middle school included grades 6-8. The study took place from the fall of 2006 to the winter of 2007 in a rural town with a population of 61,000 in Eastern Washington.

The middle school where the data was gathered had approximately 889 students with demographics of 78.3% White, 15.2% Hispanic, 2.6% Black, 3.0% Asian, and .4% American Indian. Students on the free and reduced lunch program were 30.2%, indicating a high population of middle to upper socioeconomic status students. Special education at 9.9%, transitional bilinguals at 3.9%, and migrant

students at 3.9% completed the demographics of the middle school (Office of Superintendent of Public Instruction, 2006).

### Instrument

The data was analyzed using a computerized statistics package called Stat Pak. All appropriate numerical statistics were utilized. A two dimensional Chi-Square test was used to compare G.P.A.s of students that participated in sports with students that did not participate in sports in this Eastern Washington middle school.

### Design

In the following quasi-experimental study the researcher used students' first semester G.P.A.s from August 29<sup>th</sup>, 2006, to January 23<sup>rd</sup>, 2007, via the permission of the school's attendance office. The participants in the study were taken from a list starting with the first 50 athletes and 50 non-athletes in an alphabetic sequence of eighth grade students.

### Procedure

Permission to collect data for the purpose of this research study was granted by the Eastern Washington middle school principal. The researcher requested of the attendance office a list of G.P.A.s starting with the first 50 eighth grade students participating in sports and 50 eighth grade students not participating in sports in an alphabetic sequence regardless of race, gender, and socioeconomic status. The data was printed out via computer and given to the researcher for analysis.

### Treatment of Data

The quantitative results of the 100 students' G.P.A.'s were then analyzed by using a test of Chi-square. The student's G.P.A.'s were measured during first semester from August 29<sup>th</sup>, 2006 to January 23<sup>rd</sup>, 2007. Stat Pak was the researcher's software used to find statistical calculations.

### Summary

The researcher collected G.P.A.s regardless of race, gender, or socioeconomic status from 100 students that participated in sports during the first semester of the 2006-2007 school year and students that did not participate in sports from an Eastern Washington middle school. The researcher analyzed the results using non-parametric statistics and statistical tables.



## CHAPTER 4

### Analysis of the Data

#### Introduction

The G.P.A's from eighth grade students that participated in sports and students that did not participate in sports were quantitative data. The 100 G.P.A.s gathered from the students were analyzed using numerical statistics and statistical tables.

#### Description of the Environment

The study was performed using 100 male and female eighth grade students from an Eastern Washington middle school. The middle school had approximately 889 students attending; 30.2% of students were receiving free and reduced lunch. The demographics of the middle school was 78.3% White, 15.2% Hispanic, 2.6% Black, 3.0% Asian, and .4% American Indian (Office of Superintendent of Public Instruction, 2006). Students' schedules, lessons, and teachers' classroom environments remained consistent throughout the study. The purpose of this research study was to determine if a statistical difference between G.P.A.s among students that participated in sports and students that did not participate in sports.

#### Hypothesis/Research Question

Eighth grade male and female middle school students participating in an after school sport will have a higher grade point average than eighth grade male and female middle school students not participating in an after school sport by a test of Chi-Square.

### Null Hypothesis

There is no significant difference in the grade point average of students that participated in an after school sport and students that did not participate in an after school sport as measured by grade point average.

### Results of the Study

Table 1.

#### $\chi^2$ of G.P.A.'s of Athletes versus Non-Athletes

G.P.A	Athletes	Non-Athletes
3.6-4.0	19	18
3.1-3.5	13	14
2.6-3.0	12	4
2.0-2.5	6	5
.1-1.9	0	9

df = 49

$\chi^2 = 15.91$

P > .05

After recording student's G.P.A.s in the Chi-square test, Table 1. indicated the results of the analysis. The null hypothesis was accepted. There were no significant differences in the G.P.A.s of students that participated in sports and students that did not participate in sports during the first semester from the fall of 2006 to the winter of 2007.

### Findings

The results indicated eighth grade students that participated in sports did not result in higher G.P.A.s compared to eighth grade students that did not

participate in sports, as measured by the two dimensional Chi-Square test. While the study group of students that participated in sports did not show significance in G.P.A, the results could vary if the study was duplicated due to the strategy of selecting participants by alphabetical sequence.

### Discussion

The results of this study did not provide evidence that participation in after school sports was positively related to student achievement in the classroom. The researcher found middle school students in general typically have higher G.P.A.s compared to students attending high school. High school students that participated in sports tended to show more significance in G.P.A. compared to students that did not participate in sports.

The quantitative results found in this study did not display the connection of positive links of sports and student achievement. Students in general that participated in sports did not perform overall at higher academic levels in the classroom than students that did not participate in sports.

### Summary

Through the analysis of the results from the students' G.P.A.s from August 2006 to January 2007, the null hypothesis was accepted showing students that participated in sports did not have a higher overall G.P.A. compared to students not participating in sports, as measured by Chi-Square. These statistics were useful to be able to assist students to achieve at higher levels in the classroom by helping students place a higher priority on school than sports.

## CHAPTER 5

### Summary, Conclusions, and Recommendations

#### Introduction

With the high demands of students meeting state standards in the classroom there has been a decreased emphasis on after school sports in schools. Washington schools, like schools in any other state, faced increased pressure from the state and federal government concerning student academic achievement in the classroom. Statistics, historically, have proved students' participating in extracurricular activities tended to perform better in the classroom. With today's growing work industry demanding well-rounded employees, schools needed to connect classroom achievement with extracurricular activities. The goal of this research study was to research if students that participated in sports would achieve better in the classroom than students that did not participate in sports.

#### Summary

The researcher investigated whether eighth grade students in an Eastern Washington middle school that participated in sports received higher G.P.A.'s compared to students that did not participate in sports. G.P.A.'s from first semester were compiled from the middle school's attendance office. The first fifty students G.P.A.s in alphabetical sequence regardless of race, gender, and socioeconomic status were compiled and analyzed.

By using quantitative analysis to compare students' G.P.A.s, the researcher measured the data using a two dimensional Chi Square test to find significance and to either reject or accept the null hypothesis. The non-

significance in the students' G.P.A.s guided the researcher to better understand the role of sports in the middle school setting and if there is any positive influence that sports has on student achievement in the classroom.

### Conclusions

The findings of the researcher's data gave a better understanding to the research question regarding a correlation between achievement in the classroom and participation in sports. The support for the conclusion was taken from quantitative data and analysis done by using statistical tables.

The answers the researcher found was the balancing of priorities regarding students meeting state standards in the classroom and students becoming well rounded individuals through the avenue of sports. The researcher discovered no significance in students involved in sports outside of the classroom and achievement in the classroom. If the goal of educators was to produce well-rounded students that would be able to face the real world after graduating high school then participation in after school sports was not necessarily a solution for students to meet this challenge. In this quasi-experimental study data shows sports did not entirely assist students in becoming engaged, motivated, and achieving at higher levels in the classroom.

### Recommendations

Conclusions of this research study did not support research from every eighth grade student in this Eastern Washington middle school. Future research would consider including all eighth grade students and a variety of different schools with various socioeconomic backgrounds and locations. Was this school

different in terms of achievement in the classroom to other schools in a different region of the state? Would the research be similar if gender were taken into account? Would the data be similar comparing percentages of students that passed and did not pass the Washington Assessment of Student Learning from various schools? These were a few questions considered for further research.

Future research may also include a larger sample size that includes other grade levels such as seventh grade or high school. Another strategy may also include qualitative surveys distributed to students that participate in sports and students that do not participate in sports to further validate future research.

The research conducted in this study proved conclusively that students involved in after school sports did not develop higher levels of academic achievement in the classroom. However, the researcher did learn from this study that hypothetically students participating in sports could have learned valuable lessons in other areas not tested such as teamwork, individual and group responsibility, physical strength, endurance, a sense of community, and building of self-image.

## References

- Black, Susan (2002). The well-rounded student. *Extracurricular activities and academic performance go hand in hand*. 189, 1-4.
- Darst, P.L., & Pangrazi, R.P. (2002). *Dynamic Physical Education for Secondary School Teachers*. (4<sup>th</sup> edition) San Francisco, Ca: Benjamin Cummings.
- Department of Labor. (2006) *Department of Labor website*. Retrieved September 29, 2006 from <http://www.dol.gov/>
- Duncan, S. (2000). *Family Matters: What is the Role of 'Extracurricular' Activities*. Montana State University.
- Eder, AuthorD., & Kinney, D.A. (1995). The effect of middle school extracurricular activities on adolescents' popularity and peer status. *Youth & Society*. 26, 298-325.
- Gholson (1985). Student activities and academic eligibility requirements. *NASSP Bulletin*, 69 (483), 3-9.
- Holloway, J. H. (1999/2000). Extracurricular activities: The path to academic success? *Educational Leadership*, 57, 1-3.
- Joekel, R.G. (1985). Student activities and academic eligibility requirements. *NASSP Bulletin*, 69 (483), 3-9.
- Mahoney, J. (2001) Children who participated in school extracurricular activities. *Evidence-Based Mental Health*, February 2001.

National Federation of State High School Associations. (2002) *The Case for High School Activities*.

National Middle School Association (1997). *Sports in Middle Schools*. NMSA Research Summary #10. Westerville, Ohio: National Middle School Association.

National School-Age Care Alliance. (1998). *NSACA Standards for Quality School Age-Care*. Boston, MA: National School-Age Care Alliance.

[<http://www.nsaca.org/>]

O'Brien, Eileen, and M. Rollefson. (1995) Extracurricular participation and student engagement. *National Center for Education Statistics*, June 1995.

Office of Superintendent of Public Instruction. (2006). *Washington State Report Card*. Retrieved November 20, 2006, from

<http://www.k12.wa.us/>

Quziroz, P. (2000). A comparison of the organizational and cultural contexts of extracurricular participation and sponsorship in two high schools.

*Educational Studies*, 31, 249-276.

Rombokas, M. (2001) High School Extracurricular Activities & College.

*Presented at the Southeastern Conference of Counseling Center Personnel*, 1 ED391134.

Silliker, S. Alan, and J.T. Quirk. (1997) The effect of extracurricular activities and participation on the academic performance of male and female high school students. *School Counselor*, vol.44, March 1997, 288-293.



- Stegman, M., & Stephens, L. J. (2000). Athletics and academics: Are they compatible? *The High School Magazine* 7(6): 36-39.
- Stephens, L.J., & Schaben, L.A. (2002). The effect of interscholastic sports participation on academic achievement of middle school students. *NASSP Bulletin*, 86 (630), 35-41.
- Vaugh, L.K. (1984). Psychological impact of organized sports on children. In L.J. Micheli (Ed.), *Pediatric and adolescent sports medicine*. Boston: Little, Brown and Company.
- Washington Interscholastic Activities Association. (2006) *W.I.A.A. website rulebook*. Retrieved January 4, 2007, from <http://www.wiaa.com/>

## **APPENDIX**

Figure 1

Athletes versus Non-Athletes G.P.A.

Students	Athletes	Non-Athletes
1	2.7	3.5
2	2.0	3.5
3	3.1	3.5
4	2.9	2.8
5	2.4	2.5
6	3.1	3.2
7	4.0	3.2
8	3.7	3.9
9	2.9	3.5
10	3.6	1.9
11	2.8	3.6
12	3.6	3.6
13	2.7	2.3
14	3.2	1.8
15	3.9	3.9
16	2.2	1.5
17	3.3	3.9
18	4.0	1.2
19	2.9	3.1
20	2.8	2.3
21	3.9	2.1
22	2.3	3.9
23	3.9	3.1
24	3.2	3.9
25	4.0	3.8
26	4.0	1.6
27	3.9	1.5
28	3.8	3.7
29	2.6	3.8
30	3.2	3.9
31	3.6	3.6
32	3.3	3.1
33	3.6	1.3
34	3.9	3.3
35	4.0	2.9
36	3.4	3.1
37	2.2	3.9
38	3.1	1.8
39	3.0	2.7

40	3.3	1.9
41	2.8	3.7
42	3.9	3.2
43	3.4	3.0
44	2.9	3.4
45	3.6	3.1
46	2.7	3.9
47	2.2	4.0
48	3.3	3.3
49	3.2	2.1
50	3.8	3.1