

THE EFFECTS OF HIGH SCHOOL SPORTS
ON ACADEMIC ACHIEVEMENT

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Abstract

The Effects of High School Sports on Academic Achievement

Every year students participate in extracurricular activities and sports. They devote many hours to their sports and extra interests, all taking time away from academics. Research suggests that students are affected by their participation in extracurricular activities and sports, but thus far the research is not conclusive in its findings. Control groups in Northern California as a part of an experimental P.A.S.S. (Promoting Achievement in School through Sports) program saw academic improvement by using athletics as a bargaining chip. Other research in the elementary, middle, and high school levels saw varying levels of academic change for students participating in both competitive sports and simple physical activities. There are also studies noting the correlation between sports participation and emotional well-being. The following research project primarily discusses the impacts of sports on academics, but it also considers the changes to students' well-being as a result of sports participation and does so via a qualitative and quantitative study of school sports and academics at the high school level. Results suggest students improve their positive self-image, but suffer academically. The data show school sports as an integral part of student education. The concern addressed in this research project is whether or not students are willing to suffer academically in the pursuit of sports.

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Introduction

The term “jock” is all too often applied to certain types of student athletes in high school sports. Why is this so common? Just look at the multitude of images presented in the myriad of Hollywood movies produced each year. Scenes where tall and handsome jocks cram nerdy weaklings into lockers, constantly broadcast this stereotype with reckless abandonment. These ever-present Hollywood roles leads one to think that perhaps there is some truth to these stereotypes. However, if I were to ask both parties about their stereotyped roles (the jock, and the nerdy-weakling), would they confess to being such uncomplicated personalities?

Concerns about the attitudes of athletes and the way they are perceived have made an impression on many academically minded individuals. Some of these individuals (perhaps those who might have found themselves crammed inside a stuffy locker some years earlier) have made their opinions on the subject known. Simons, a professor at UC Berkeley, and Van Rheenen, an accomplished student athlete (academically and athletically), are both particularly concerned with the “negative way that athletes are viewed by some faculty, staff, and students” (Rogow, 1999, p. 1). This concern presents us with a question: If such stereotypes are so prevalent, could there be some truth behind them? Addressing this question, Van Rheenen states, “there are tremendous misconceptions about the intersection of athletics and academics” (Rogow, 1999, p. 1). I start with Van Rheenen, because he is a fine example that contradicts the Hollywood stereotypes.

Rheenen and Simons meet the Hollywood concept head-on; they are the opposition for the flimsy Hollywood stereotypes. Both athlete and professor press against

the stereotypes bearing down on student athletes. To Van Rheenen it is clear, “the negative stereotype of the student athlete harks back to the mind/body dualism. Actually, Plato and Socrates were accomplished wrestlers” (Rogow, 1999, p. 1). This is what needs to be investigated, the idea of “mind/body dualism” and the capabilities of our *student* athletes. Using the concept of the student and the athlete, (in high school sports, the athlete cannot survive without the student) this research project takes a look into the key issues behind school sports in high school. This research project, in order to answer the questions it brings up, uses these key procedures: 1) a literature review of pertinent journals in the field of education and sports; 2) related qualitative, longitudinal, and quantitative studies pertaining to athletics, academics, and the well-being of students.

Literature Review

A large body of research assesses the correlation between extracurricular sports participation and academic performance in schools across the nation and globally. The research that follows includes various scholarly journals, scientific studies, and research papers that employ methods of qualitative, longitudinal, and quantitative studies. These will all be used to determine what effects athletics have on academics. A number of these articles also address the issue of self-perception and well-being among k-12 student athletes.

Relationships: Sports Participation and Emotional Health

There are many factors that have an effect on the academic outcomes of high school athletes, and many of these factors are not related to the simple health benefits gained from remaining active. According to a study by Tamel and David Eitle (2002) titled, *Race, Cultural Capital, and the Educational Effects of Participation in Sports,*

there is a relationship between the elements of race, culture, and emotions that pertains to students and the sports they participate in. The Eitles' results showed a connection between the aforementioned elements and students' academic success. The research in this study is compelling at times, however, the findings were not always clear, nor were they consistent. Their data was recorded from 1988-1992, and was taken from the National Center for Education Statistics (NCES) and the National Education Longitudinal Survey (NELS) studies (Eitle, T. & Eitle, D., 2002). By using this data they were able to consider factors that influenced academic performance (other than student participation in sports and extracurricular activities). The Eitles found that "household educational resources, and cultural Capital," (2002, p. 127) were among a "myriad of ways" (2002, p. 126) in which academic performance for student athletes could be influenced. After demographic analysis of race, sex, and age, the Eitles were able to determine that the studies under inquiry clearly demonstrated that "the relationship between participation in sports and academics may be more complex than [previously]" (2002, p. 141) thought.

An additional element of the sports in high school discussion comes from Hodge (2008), in *A Comparison of High School Students' Stereotypic Beliefs about Intelligence and Athleticism*. This study looks at the effects brought about by preexisting stereotypes on race, athletics, and intelligence that influence students. Hodge investigates harmful stereotypes that can negatively impact students' academic and athletic outlook (i.e. stereotypes such as: African Americans are more likely to be successful athletes than white Americans). Hodge's main question was: "What are the beliefs of Black, Hispanic, White, and biracial students on their own and the intellectual and athletic abilities of other ethnic groups" (2008, p. 100)? Hodge found that Black males were more likely to

agree with the stereotypes presented in the study; stereotypes that suggested “White/European Americans are naturally more intelligent compared to ethnic minorities (African Americans/Hispanics)” (Hodge, 2008, p. 109) and that African Americans were more athletically inclined than other minorities and whites. This is important to know because it may be a factor that can warp data due to the negative impacts that student stereotypes may have on otherwise perfectly capable students. Also, Hodge’s research may help to identify a root cause for these problems. Hodge states that, “whenever teachers, coaches, and other school professionals accept and articulate [stereotypes] they do psychological harm to these impressionable youth” (2008, p. 112). In researching further on the subject of student athletes in academics, it may be important to understand the atmosphere in which the students are brought up in order to appropriately record their academic success.

It is clear that this is not a simple study, and very few simple conclusions can be drawn from studies only considering those students who participate in sports. With this in-mind, consider a study by Yu, Chan, Sung, and Hau (2006), which researched physical activity (not to be confused with organized sports or competition) and the effects it had on academic performance. Yu et al. were convinced that achievement, conduct, physical-activity, and self-esteem needed to be investigated in order to get reliable data on their topic (2006). In the research by Yu et al. (2006), *Are Physical Activity and Academic Performance Compatible? Academic Achievement, Conduct, Physical Activity and Self-Esteem of Hong Kong Chinese Primary School Children*, they studied primary school children in Hong Kong, China, between the ages 8 and 12 over the course of one academic year. The *Physical self-description questionnaire* – first employed in 1994 by

Marsh – (Yu et al., 2006), was used in this study to assess the self-esteem of the children. The study concluded that physical activity levels did not effect boys academically, however, physical activity did improve the positive self-image of the boys (Yu et al., 2006). Girls, on the other hand, “did not have higher self-esteem than boys” (Yu et al., 2006, p. 337), and they also saw little to no academic improvement. It is important to note that the activity levels among all ages, and sexes, did not have uniform interrelationships, which means that there were some relationships, but they cannot be used to determine the outcome of one another. So, the benefits that boys received were independent of those received by girls, and visa versa. One benefit of this study was it did help to support the hypothesis that high and low achieving students will continue to behave in the same manner despite differing levels of physical activity, which is a question I had myself considered. This support could be used to predict the outcomes of student athletes in the future *if* they had considered their findings to be entirely conclusive. But, alas, they did not. In the end Yu et al. declared that the impact of physical activity could not be explicitly determined (2006). Though, much like the Eitles’ research, there appear to be many factors involved in determining the impact of students’ participation in physical activities and sports on academic output.

Another research project on the benefits of physical activity by Robert Valois (2008) titled, *Physical Activity Behavior and Emotional Self-Efficacy: Is There a Relationship for Adolescents*, also connects the physical activity benefits to students. Valois noted that, “Participation in PA [physical activity] for teens has been associated with decreased anxiety and depression, improved academic performance” (2008, p. 2). After his research finished, Valois determined that “low levels of PA participation . . .

may ultimately be associated with reduced mental/emotional health and quality of life” (2008, p. 6). The findings in Valois’ research strongly reinforced the importance of being active, and considering the Eitles’ research from before, there may be a need for sports in schools if students are only able to receive a sufficient amount of physical activity through organized school sports. Valois’ research raises the question: what is the greater factor involved in the impact sports have on students, the sports themselves, or the physical activity? Consider Valois’ research as I continue on; it will give good insight into the findings in the following research articles and projects.

Emotional Well Being and Sports

The study by Yu et al. at the Elementary and Valois’ work with Middle School students, did not find any answers that absolutely connected academics to physical activity. However, their studies did show some strong (and some minor) connections between physical activity and student self-esteem. With that morsel of information, I will delve into a somewhat more conclusive study regarding sports related physical activity, *The Effects of Sports Participation on Young Adolescents’ Emotional Well-Being*, by Donaldson and Ronan (2006). Donaldson and Ronan gathered evidence that conclusively supports the theory that physical activity does, in fact, promote positive results in students. Donaldson and Ronan’s study is somewhat similar to the study done by Yu et al., the only major difference being that it only considers middle school students. Donaldson and Ronan showed that “sport and vigorous recreational activity were positively associated with emotional well-being independent of sex, social class, or health status” (2006, p. 371). This study employed the “Self Description Questionnaire III (Marsh and O’Neill)” (Donaldson & Ronan, 2006, p. 372) on a sample of students who

were actively participating in a school sponsored interschool or club competitions. The study included students from different socio-economic, ethnic, sex, and age groups, and relied on the use of self-report assessment instruments and surveys. Their information was taken directly from student surveys and questionnaires (they did not consider academics; i.e.- student GPA). It is important to keep in mind that the elements of academic success may not be determined by any one factor alone, and that is why Yu et al., the Eitles, and Donaldson and Ronan also need to be considered in any research looking to determine how sports have affected student academics. Donaldson and Ronan reinforce the theory that many elements of student life need to be considered in order to find a more representative conclusion in regards to how athletics affect academic performance.

Donaldson and Ronan's work is not alone in its findings. Linver, Roth, and Brooks-Gunn (2009) in their longitudinal study *Patterns of Adolescents' Participation in Organized Activities Best When Combined with Other Activities?*, found that:

Participation in sports leads to positive youth development, as measured by indicators of the 5 Cs. Sports participants showed improvements, at least during high school, in academic competence (e.g., higher grades, expectations, and attainment); personal confidence (e.g., higher self-esteem and psychological functioning); connections with school (e.g., greater attachment to school and support from adults), peers (e.g., stronger peer relationships and more academically oriented friends), and family (e.g., greater attachment and more frequent parent– child conversations); character

(e.g., more restraint at avoiding risky behavior); and caring (e.g., volunteering) when compared with their peers who do not participate in sports. (Linver, Roth, & Brooks-Gunn, 2009, p. 354)

At first glance these findings are ideal for use in continuing research on the topic of sports and academics. But, the research begins to clarify its findings and they show themselves to be less substantial. The extremely positive connections drawn between sports and the 5 Cs were found to be not entirely exclusive to sports (Linver et al., 2009). Church organizations and extra curricular activities (clubs, after school honors programs, etc.) all carry with them similar results (Linver et al., 2009). It appears that the improvement of students' outcomes may be more reliant on the group/peer connections and expectations, rather than the physical benefits.

Competition – the Great Motivator?

Yu et al., Donaldson and Ronan, and the Eitles all determined that many connections between physical activity and self-esteem exist, but the connections are not always clear on how they impact grades. If someone were to use extracurricular activities as a bargaining chip to motivate students into reaching certain levels of academic performance, would this generate a measurable change over those results? Would it be fair to determine that physical benefits gained from participating in sports were the real catalyst in this change? Or, would the importance of participation in these activities trump any physical benefits? The aforementioned researchers did not collect data regarding programs that require athletes to maintain an acceptable level of academic performance in order to be eligible to participate in their sports programs. Fortunately, the impact of such requirements on student athletes' academic improvement is exactly

what the American Sports Institution of California (ASI, 1993) had in mind when they created their P.A.S.S. (Promoting Achievement in School through Sports) program. ASI completed research-in-application through a program that had one goal in mind “promote academic achievement and school success” (ASI, 1993, p. 2) through sports. The P.A.S.S. program, established in 1991 in Northern California, was designed to assess the influence that sports could have on student academic performance (ASI, 1993). The study managed to use sports eligibility (i.e. student must maintain a 2.5 GPA or the student loses the ability to participate in sports) to motivate students into maintaining or improving their academic standing in the school. P.A.S.S specifically sought to improve student GPA (grade point average), and did not measure any other level of statistical improvement (e.g. class participation, self-esteem, improved athletic performance.). The student subjects were required to maintain good academic standing in order to continue participation in their respective extracurricular sports. The results showed that students, when presented with the ultimatum of passing classes or not participating in sports, increased their overall GPA by an average of “+0.2” (ASI, 1993). In comparison, the control group (taken from non-P.A.S.S students) saw an average decrease of “-0.2” (ASI, 1993). After the study, students were asked how they were affected by the PASS program. Students rated their approach towards athletics, and academics with an average 4.3 points (on a 5.0 scale; 5.0 being the best possible level of positive influence) (ASI, 1993). Not only did P.A.S.S. achieve its goal, but it also improved students’ perception of themselves through the sport they were already participating in (ASI, 1993). This positive correlation between sports participation and academics has shown that students can excel over previous academic achievements when sports eligibility is contingent on academic

Second, (just as before with the findings of Linver et al.) student athletes, and those who participate in virtually any extracurricular activities, held nearly identical numbers for higher-education expectations, and SES status (Ingels et al., 2002). The research done by Ingels et al. undermines other researchers who focused on athletics alone by suggesting that any organized extracurricular activity has the potential to benefit students academically; this suggests that the findings of programs focused on using athletics as a tool to motivate students (e.g. P.A.S.S.) are even more limited than first thought.

There is a third research article by Fox, Barr-Anderson, Neumark-Sztainer, and Wall (2010) entitled, *Physical Activity and Sports Team Participation: Associations with Academic Outcomes in Middle School and High School Students*, which needs to be addressed in this subtopic in order to flesh out the findings. This study examines associations between participation in team sports, physical activity, and academic outcomes in middle and high school students, by tracking GPA and levels of physical activity in non-student athletes versus student athletes. Fox et al. adjusted for socio-economic status, demographic make-up, and age to determine that 3 of the 4 categories (high school boys/girls and middle school boys/girls) found an increase in GPA for those students who participated in school sports programs (Fox et al., 2010). In addition to the improved academic outcomes, these “students received many health benefits from their physical activity” (Fox et al., 2010 p. 36). The research done by Fox et al. found some evidence to support the idea that physical exercise (in the form of schools sports) can actually improve quality of life and the quality of students’ academics.

Physical activity appears to have an impact on students’ academic and emotional well-being. It is important to note that extracurricular sports participation is linked to

determine whether sports were the main cause of their academic results. But, the data did show that there was a “significant relationship between participating in sports and . . . high physical abilities self-concept” (Rinn & Wininger, 2007, p. 50), meaning students thought highly of themselves and how well they could perform athletic tasks. Even with student academic achievement being a non-factor, I once again see the effects of sports on student self-concept and emotional stability, and I find another unclear study on the effects of sports on academics.

Gifted adolescents aside, I return to the general population in Stephens and Schaben’s project on *The Effect of Interscholastic Sports Participation on Academic Achievement of Middle level School Students*. Stephen and Schaben recall works by Soltz in which there was a “statistical significance in the higher GPAs of athletes compared to non-athletes” (2002, p. 35). Essentially, Soltz had determined that athletes, as a whole, perform better than non-athletes. However, Stephens and Schaben’s findings were quite different than those of Soltz. Their study consisted of students at the middle school level and their data was attained via student participation lists and GPA reports. They determined that students who were not involved in “interscholastic sports seem to enhance [their] academic performance” (Stephens & Schaben, 2002, p. 38). Stephens and Schaben were not alone in what their research suggested; work done by the following researchers will rally to support them.

Health and Athletics

Chomitz, Slining, McGowan, Mitchell, Dawson, and Hacker (2008) performed a study with elementary level students in the Northeastern United States, in 2008, looking into the issues of physical fitness and academics. Chomitz et al. used standardized tests in

order to find “relationships between physical fitness and academic achievement in diverse, urban public school children” (Chomitz et al., 2008, p. 30) for both academic and physical performances. Chomitz et al. recorded the number of fitness tests each child could pass then aligned it with the grades given on the MCAS (Massachusetts Comprehensive Assessment System). The tests consisted of questions from both Mathematics and English. The data shows support for a significant relationship between physical fitness and academic achievement that can actually be measured (Chomitz et al., 2008). Chomitz’s findings help to show once again the benefits of physical activity, but do not connect directly to high school sports programs or competitive sports in general.

The study by Chomitz et al. took place during the course of one academic year; this is a fairly limited amount of time, so I will discuss a more lengthy study under the same topic. The research performed by Carlson, Fulton, Lee, Maynard, Brown and Kohl III (2008) titled *Physical Education and Academic Achievement in Elementary School*, was a childhood longitudinal study that looked at US students entering kindergarten in the fall of 1998 and followed them up to the spring of 2004. The research by Carlson et al. examined the “effect of introducing more physical activity and physical education programs during the school day,” which, as they found, “had mixed results” (2008, p. 721). Using standardized tests, academic records, and teacher reports Carlson et al. were able to determine that the only measurable differences were slight, at best (2008). Girls fared slightly better academically when physical education was increased. It was determined that boys, who are already more active than girls at this age, were not stimulated enough by the increase to show any academic change (Carlson et al., 2008). The limitation in this study was the lack of consideration given to the influence of

competition and organized sports programs on students (as was described in P.A.S.S.). It is possible that the lure of competitive extracurricular sports might change these results. However, it is also possible that this idea is only valid at an older age when students (and school sports programs) become more competitive. The data presented by Carlson et al., despite the lack of consideration for competitive factors, does clarify that physical education can affect young people on an emotional and academic level.

The final study that I will discuss is by Madjd-Sadjadi's (2005) titled, *A Study on the Relationship Between Participation in School-sponsored Sports and Academic Achievement in High School*. It covers his focus on finding a correlation between academic achievement and sports participation at the high school level. Madjd-Sadjadi used questionnaires, transcripts, and random sampling from a high school in Northern California in his research into high school sports and GPA changes (2005). His results compared student athletes' GPAs during participation to non-participation periods. This data was used to determine if any GPA change occurred throughout the year for those participating in school sponsored extracurricular sports. Madjd-Sadjadi's results found that participation is not a "good [indicator] of . . . students' grade point average" (2005, p. 27) throughout the year. Madjd-Sadjadi determined that participation in extracurricular sports did little to affect the GPA of students. Essentially achieving students continued to perform at high levels, while low achieving students continued at their same low level. In the end, Madjd-Sadjadi concluded: "there is no evidence to suggest an association between the number of hours of participation in school-sponsored sports and grade point average" (2005, p. 28). However, Madjd-Sadjadi did confess that his limited sample size needed to be reinforced with further research in order reaffirm his conclusion.

There are many elements to the questions behind academic and athletic relationships. Physical activity stimulates the achievement levels of some young children; specific programs can modify behavior, as demonstrated by P.A.S.S., while many other students at the high school level are not fazed by their participation in extracurricular sports. It is, however, clear that emotional and self-concept issues are strongly related to participation in sports, and this most interesting development may end up being the bigger topic needing to be addressed in future studies.

Research Question

The main question I sought to answer in this research project was the *How*, as in: *How are students affected by their participation in sports and extracurricular activities?* Each year thousands of students across the nation are involved in school sponsored (and taxpayer supported) sports. Thousands more participate in the myriad of school sponsored clubs and extracurricular activities (once again, paid for by taxpayers). I sought to answer how students are affected by their participation in order to better understand the outcomes and benefits reaped from the many hours spent in these two extra elements of public schooling. If I can better understand the impacts, then I can perhaps help schools eliminate or improve school programs that are detracting-from or benefiting students. This research project is an attempt to make schools more efficient and effective. The second question I sought to answer is: *What is the impact that sports are having on the emotional well-being of students?* After reading through numerous articles on the topic, and talking with student athletes, I began to see how the emotional well-being of a student is impacted by their participation in sports and extracurricular activities. It is common knowledge that people perform better or worse at a task

depending on their emotional state (i.e. it is difficult to concentrate when you are incredibly irate or hating what you are doing). But, are sports and extracurricular activities really modifying the students' self-esteem and well-being enough to change their emotional state? With this in mind, I tried to determine what percentage of student athletes were emotionally impacted by their participation. Finally, I considered students' willingness to maintain their participation in sports in the face of academic failure or degradation.

In my pursuit of these research questions, I expected to find that those students who play sports would continue to do so up to the point that it begins to significantly impact their academics. I also hypothesized that those students who already maintain a B average, or above, would perform better during periods of "In Season" (during a sports season) than their classmates that have lower GPAs. I had anticipated finding a general feeling of boosted self-confidence, stemming from the various health benefits, peer-bonding, and the basic idea that students generally volunteer for activities that they enjoy doing. The results that follow are directed in answering and addressing these questions and predictions.

Methodology

Methods and Rationale

This project will employ the use of both quantitative and qualitative research methods. The quantitative research will be used to determine specific numerical differences that the primary research question is directed towards answering. Any qualitative research will be used to put the quantitative data into context, and will also help to answer the secondary research questions.

The quantitative aspect of this research records the average response to questions from the *Research Questionnaire* (APPENDIX B), questions which were geared towards participation in sports or extracurricular activities. These questions and findings helped to determine the differences between the two groupings (student athletes “in season” and “out of season”) and the rest of the student body. Data from the *Research Questionnaire* will be averaged over all students, and then broken down into those who do sports, and those who do not. The results aim to represent the overall feeling of the student body and to look at changes in grade point average (GPA) over the course of the year. The use of quantitative research methods shows a numerical record of how students are reacting to sports via their performance in the classroom. The other element of the quantitative questionnaire compares the student outcomes with how they predicted they would do during the times of sports participation. For example, the total response for a student saying they would drop out of a sports team if their GPA were to drop significantly is 89% of the time, yes. This data was tabulated and compared to the student GPAs over the course of the year through “In Season” (during sports participation periods) and “Out of Season” (during non-participation periods) to determine if the majority of students that suffer academically during “In Season” actually do drop out of their sport. This type of quantitative data comparison, helped address the research question and determine student trends over the course of the year.

The qualitative research aspect is important due to the need to clarify the context in which students answer questions about sports participation. The *Interview Questions* (APPENDIX A) were used to collect free response information from the students during a discussion, or interview, with myself. Through these one-on-one interviews, students

elaborated on how they felt about sports, and how they would react in the case of sports related GPA degradation. These interviews also determined why students thought grade loss would or would not occur. The interviews were essentially designed to answer the “why” behind student behavior in regards to sports and school. The interviews also looked at how students reacted to stresses and time consumption brought on by sports. Once the data was gathered, it was used to connect the quantitative results from the *Research Questionnaire* and student GPA results to the qualitative responses. Qualitative analysis answered questions behind why, and how students change throughout the course of the year.

Sample

The sample for this research project was taken from a Western Washington High School, grades 9-12. Roughly 90 students filled out, and turned in questionnaires, with a final count of 27 students having completely viable questionnaires (many did not complete the permission slips). Of those 27, 11 students were girls (6 participated in sports; 3 in Extracurricular Activities; 2 recorded no extra school activities). The remaining 16 were boys (10 were involved in sports; 3 in extracurricular activities; 3 recorded no extra school activities). These 27 students were a part of the random selection taken from two teachers’ classrooms. The classrooms were core classes, which means they consisted of students from the entire student body (no Advanced Placement, College in the High School, or elective credits were considered). Core classes contain students from all levels of achievement, which helped to provide a random sample from the student body. The classes consisted of athletes, and non-athletes from 9th grade (16 students), 10th grade (1 student), 11th grade (8 students), and 12th grade (2 students).

Instrumentation

This research project gathered information from similar research studies and, as previously noted, data from my own qualitative and quantitative research. The data collection was done through prepared questionnaires (APPENDIX A and B), which consisted of true or false, open ended, multiple choice, and one-on-one interview questions. Student GPA was also an important element of data triangulation, and was used in collaboration with the student questionnaires. GPA is the clearest way to determine a student's academic performance in and out of season.

The data within the questionnaires themselves is not particularly sensitive information, however, student GPA and interview responses can sometimes be personal. Considering the sensitivity of some of this information, any and all information gathered containing personal identities or responses of any and all participants were kept confidential. Each student's survey was coded using a numerical system to connect the data to the participant, thus ensuring the confidentiality of the information. I alone had the master list connecting names to codes. Once the data was tabulated, the list was destroyed in order to protect the identities of those students involved in this research project. A consent form was sent home before any of the aforementioned procedures and data were used, or gathered (APPENDIX C). Students had the option to participate, and had the right to withdraw at any point from this research project. Their participation was completely voluntary, and their participation could have been removed at any time, without any negative repercussions.

Analysis and Validity

Analysis of the data was initially focused on the direct comparison of participation by students in sports and extracurricular activities and their resultant class GPA. The student questionnaires (APPENDIX A and B) were compared to one another in order to determine possible trends and/or inconsistencies. These results were then compared to GPA changes between times of competition, which will be labeled as “In Season”, and times of no competition, which will be labeled as “Out of Season.” The questionnaire results were compiled, averaged and tabulated in order to construct a visual representation of student views of their participation in sports and extracurricular activities. The results were then used to triangulate the most accurate answer to both the primary and secondary research question.

Researcher Bias

I must say that this research is of personal consequence to me. I was both a High School and Collegiate athlete. I participated in various sports each year, both interscholastic and private. I bore witness to the “special treatment” of athletes; as well as the negative and positive effects caused by the loss of numerous study hours to athletics. Working through high school and college, I found that many times I was showing up to class as an athlete, more than I was as a student. School was the pathway to participation. It was not until the waning years of my college education that I realized how interesting being a student, more than an athlete, truly was. My goal in this research is to determine if students are benefiting from sports. If not, I hope to determine how the high schools can help keep students’ academics from suffering due to their participation in extracurricular sports.

Data

This table explains the sample size and make up for this research project. It also includes the areas in which students were participating throughout the year.

Table 1

Sample Makeup

Grade Level					
Sex	9	10	11	12	Totals
Male	10	1	4	1	16
Female	6	0	4	1	11

Activity Participation			
	School Sports	Extracurricular	None
Clubs/Bands			
Male	10	3	3
Female	6	3	3

The limitations of this sample lie mainly in its small number of participants. The benefits of this sample are the different ages, sexes, and levels of participation found within this group. Even though the sample may well represent the student body in the areas of sex, age, and participation it does not consider the socioeconomic status, ethnic, or racial status of the students. Seeing as the goal of this research project was to attain information that will help to determine the effects of high school sports on academics, the aforementioned categories were not seen as necessary for finding accurate results.

The following table demonstrates what effect athletic participation has on students' GPA throughout the course of the 2009-2010 school.

Table 2

GPA Data 2009-2010 School Year (for select students^a)

Student Number	GPA In	GPA Out of	GPA Change
	Season ^b	Season ^c	
103	3.3	3.5	-0.2
107	3.8	4.0	-0.2
109	2.9	2.7	+0.2
112	3.2	3.3	-0.1
114	1.8	2.1	-0.3
116	0.8	1.2	-0.4
117	4.0	4.0	0.0
123	4.0	4.0	0.0
124	3.4	3.7	-.3
125	2.7	3.0	-.3
126	4.0	4.0	0.0
127	2.2	2.4	-.2
Total Grade Points:	37.9	36.1	
Total Change: -1.8 grade points (-4.7%) lost between the “In” and “Out” seasons			
Average Change: -0.15 grades per student over the course of the 2009-2010 school year			

^aSelect students who only participated in sports or extracurricular activities during 1 season out of the year.

^{b,c}In and Out of season refers to periods when students are participating in sports or an extracurricular activity (“In season”) and when they are not (“Out of season”)

Table 2 shows the impact of sports as being negative. On average students lost 4.7% of their GPA during periods of competition. This shows that sports do have a negative impact, though it is minor at worst.

The following Table 3 contains the responses from those students who were asked to respond to the questions from the *Research Questionnaire* (APPENDIX B). These students were chosen because I had direct access to their student GPAs, and could use that information to corroborate their answers with their actual GPA changes. Students also fit the criteria for this part of the comparison need for this research project; they were student athletes who competed for only one semester, which allowed me to compare “In” and “Out of Season” periods. The question used are 3,5,7, and 8 from APPENDIX B. The students were asked to respond by circling the answers beside the statements from 3,5,7, and 8 (possible answers were: 1 – Strongly disagree; 2 – Disagree; 3 – Unsure, in between; 4 – Agree; 5 – Strongly Agree).

Table 3

Research Questionnaire to GPA Comparison^a

Student Number	Questions ^b				GPA Change	Academic Contract ^c
	#3	#5	#7	#8	+/-	YES/NO
<hr/>						

103	1	3	3	2	-0.2	
107	4	5	2	4	-0.2	NO
109	5	1	5	1	-0.2	NO
112	3	4	4	1	-0.1	NO
114	2	4	4	1	-0.3	YES
116	2	2	2	3	-0.4	YES
117	5	3	3	1	0.0	NO
123	3	4	3	5	0.0	NO
124	4	2	2	1	-0.3	NO
125	5	4	3	5	-0.3	NO
126	1	3	5	2	0.0	NO
127	5	2	4	4	-0.2	YES

^aOnly questions 3,4,7,8 from APPENDIX B were used. These questions were specifically pertinent to student GPA and participation in sports or extracurricular activities.

^bQuestions 3,5,7, and 8 are: 3. It is harder to finish my class work while participating in a sport, 5. I feel more stress while participating in a school sport, 7. My GPA goes up during competition/participation periods, 8. I do less homework during competition/participation periods. Available Responses to these questions were: 1 –

Strongly Disagree; 2 – Disagree; 3 – In between/unsure; 4 – Agree; 5 – Strongly Agree,

^c*Academic Contracts are for students participating in sports or extracurricular activities who do not maintain above a 2.5 GPA.*

Table 3 demonstrates the discrepancies that appear between student self-report, and actual GPA changes. For example; responses to question #7, which states “My GPA goes up during competition/participation periods” (APPENDIX A) disagree with the change in GPA on four occasions. As the table demonstrates, four of the students were incorrect in their answers, as those four students lost an average 0.2 grade points during the competition season. I will illustrate the findings of this data in greater detail later in the *Analysis* section of this research project.

Table 4

True and False Question Results (from APPENDIX B)

			Percentage%
<hr/>			
Question 1 – <i>If my coach/supervisor of my sport/extracurricular activity required my GPA to stay above a 2.5 I would work harder in order to continue participating.</i>			
	TRUE	24	88.9%
	FALSE	3	11.1%
<hr/>			
Question 2 – <i>I would do better in school if I were not participating in sports or extracurricular activities.</i>			Percentage%
	TRUE	6	22.2%
	FALSE	21	77.8%

Table 4 shows the importance of high expectations for student athletes. 88.9% of students say they would work harder if their “coach/supervisor [. . .] required [their] GPA to stay above a 2.5” (Table 4, p 27). This is of course the exact GPA requirements for students on academic contracts (Table 3, p. 26).

Table 5

Student Self-Report – “Interview Question” Responses to Questions 1, 2, and 4 (APPENDIX A).

Questions	YES	NO	^a Common responses:
1. <i>Do you feel more confident when playing a sport? Why do you think that is?</i>	96%	4%	“friends”, “encouragement”, and “coaches”
4. <i>Would you continue to participate in sports/extracurricular activities if you knew they were hurting your grades? Why?</i>	65.4%	34.6%	High GPA is important for “college”; grades are important to “family”

^a responses were taken directly from students’ answers (APPENDIX D and E)

Table 5 demonstrates the importance of the qualitative element of this research project. The *Interview Questions* (APPENDIX A) flesh out the answers given in the *Research Questionnaire* (APPENDIX B), and help explain why students participate in sports in the face of GPA loss.

Analysis

Primary Research Question

The GPA data taken from the participants in this research project shows results that do not agree entirely with my hypothesis. At the beginning of this project I suggested

that students who do very well (high achieving: B average, or above) in school would continue to do well during sports participation. I also predicted that those who do not generally do well in school (lower achieving: B- average, or below) will suffer more than the high achieving students while participating in sports. Over the course of the year students who participated in sports had, on average, .15 fewer grade points (i.e. 3.0 “Out of season”, 2.85 “In season”) during “in season” grading periods in comparison to “out of season” grades. Of the 12 students used in the GPA data, 8 lost between .2 and 1.0 grade points (on a scale of 0.0 to 4.0). Of the remaining 4 students, 3 maintained their GPA (each student maintained a 4.0 in and out of season), and only one student improved; this student improved by .2 grade points over the course of the year. Taking this raw data from the GPA change data in Table 2 I was able to make a comparison of those results to the results in Table 3. The comparison shows: five students thought GPA would improve; four thought their GPA would go down; three thought their GPA would remain the same, or were unsure where it may go. Four of the five thinking their GPA would improve either maintained their grades (one 4.0 student remained the same) actually lost an average 0.2 grade points. (Table 3, p. 26) The remaining students who were unsure or saw a decrease in their academic performance were in-line with the GPA changes that occurred over the course of the year.

The remaining students that did not think their GPA would suffer saw an average loss in GPA. Eight of the nine remaining students, ranging from 3.7 (A-) to 1.2 (D) worsened over the course of the year. This finding is contrary to my hypothesis. I predicted students with a 3.1 GPA and above would improve or maintain their GPA throughout the course of the year. When in fact, these students lost an average .22 grade

points while in season. The remaining “low achieving” students, 2.7 (B-) to 0.8 (D), were predicted to lose a higher percentage of grade points during the “In Season” periods of the year. On average, the “lower achieving students” lost .175 grade points during “In Season”, which is .045 grade points better than the “High achieving” students. These findings suggest that students who maintain average to below-average grades perform better “in Season” than high achieving and above-average students.

At first glance the above results may be confusing, and somewhat counter intuitive. I will now consider the factors that may have generated these results. All sports at the sample high school require a grade contract for students that are below, nearing, or at some point during the season slip below a 2.5 GPA (that goes for any class a student may take). Students who are already maintaining a GPA well above the 2.5 GPA requirements do not need to fear preparation of a grade contract. Let me explain the grade contract so that it may be better understood why students may fear such a document. The grade contract is written up in order to maintain schooling as a priority over sports. The contract is designed to protect the student in *Student-Athlete*. Any student that does not fulfill the requirements of the contract (students must maintain a 2.5, or maintain an appropriate work ethic which leads to grade improvement – to be determined by the teacher giving the grade) will not be allowed to participate in any competitions. Student athletes will be essentially benched and declared academically *ineligible* if they fail to meet requirements. The love of sports is used as a motivator (much like the P.A.S.S. program did in California) to help students maintain their GPAs, so that they may become academically *eligible* for sports (since getting students to graduate is also a primary goal). Back to our high and low achieving athletes; students in my sample that

have a 2.7 or below are at risk of being declared academically ineligible. This added pressure, or stress, may motivate students to do better quality work while competing in sports. This would explain the smaller loss of GPA for average and lower-than-average students in comparison to the above average, and high-achieving students used in this research sample.

Secondary Research Question

The responses to the *Interview Questions* (APPENDIX A) helped me to determine that students were deeply impacted by their participation in sports. Their emotional state was boosted through peer contact, coach support, and the overall improvement of physical health. The questions in this section were geared towards discovering whether or not the student athletes were feeling a boosted self-esteem from the school sports program. 96% of students that responded to question one of the *Interview Questions* sheet said that “yes” (Table 5, p.28), they felt better about themselves while participating in sports. Perhaps the more interesting part is that students felt better about themselves for a myriad of reasons (APPENDIX D, p. 41). They felt “more accomplished”, they felt better because their “team is very encouraging”, or because “[they] get to show [their] talent” (APPENDIX D, p. 41).

In the end, my research found that student participation in sports negatively effects GPA performance, but students are willing to take a minor GPA loss in exchange for the benefits that school sports bring. Students were excited about the activities, despite grueling practices and time commitments. It is clear that students are benefiting emotionally from the time and energy they spend in their sport. Whether these benefits

were physical or emotional, students responded positively about their participation in high school sports in the face of academic loss.

Recommendations

After talking with numerous students, over surveys and questionnaires I have come to consider sports as being a critical part of student life. The data does, however, show that students run the risk of affecting their grades negatively if they choose to participate in sports. I would like to recommend that the academic contracts given to those students who do not achieve the mediocre score of 2.5 GPA stay intact, and that the rest of the student athletes be added onto this system. In order to stifle the loss of GPA and the loss of academic productivity, all students should be held to higher standards by placing every student on an academic contract. Why should the student with a 4.0 GPA be allowed to drop 1.5 grade points before slipping onto a contract? Should schools not be more persistent in maintaining academics as paramount over sports? I think they should. That is why I recommend that all students be on contract, and that all students should be required to turn in their homework, maintain their GPA (perhaps with a .4 grade point maximum change), and keep up with class participation in order to have the privilege of participating in school sponsored sports.

Conclusion

To conclude this research project, I too (just as many of the researchers from the literature review) found mixed results for those students who participate. Virtually all who turn out voluntarily for school sports enjoy what they are doing (which may change my perspective on some of the literature review articles, now that I know that students in sports are having fun), but many students who turn out *will* lose academically. The

academic impacts were mostly negative, though they were slight. Students who sit comfortably above the 2.5 GPA academically ineligible line are more likely to do worse throughout the course of the competition season (“in season”), than those who are running the risk of becoming academically ineligible. This was not something I saw considered by previous researchers. They did not consider that high and low achieving students will perform differently based on necessity. Low achieving students will perform because they have to, while high achieving students have more freedom of choice. Low achieving students will need to improve or stay closer to the same GPA to maintain eligibility, while those who are in the higher ranges only need to keep from slipping by as much as 1.4 total grade points (e.g. 4.0 to 2.6). In the end, it was more definitive that student athletes were impacted emotionally by their sports, and the academic changes were small and not entirely determinable.

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APPENDIX A

Interview Questions

Name: _____ Grade: _____

Sport/Extracurricular Activity: Fall _____ Winter _____
Spring _____

Questions:

1. Do you feel more confident when playing a sport? Why do you think that is?
2. Do you believe in the “jock” stereotype? If so, how would you describe it?
3. Why do you think the “jock” stereotype persists?
4. Would you continue to participate in sports/extracurricular activities if you knew they were hurting your grades? Why?

APPENDIX B

Research Questionnaire

Name: _____ Grade: _____

1. Do you participate in any school-sponsored sports? ____ If so, which ones?

Fall _____ Varsity/Junior Varsity (circle one)

Winter _____ Spring _____

2. I am: Male _____ Female _____

3. Do you participate in any extracurricular activities? (i.e. – film club, school plays, etc.) ____ If so, which ones?

Fall _____ Winter _____ Spring _____

On a Scale of **1 to 5**, **1** being **STRONGLY DISAGREE** and **5** being **STRONGLY AGREE** how would you rate the following statements?

- | | |
|--|-----------|
| 1. Student athletes receive better than average grades in class. | 1 2 3 4 5 |
| 2. Sports are distracting students from their work in class. | 1 2 3 4 5 |
| 3. It is harder to finish my class work while participating in a sport. | 1 2 3 4 5 |
| 4. Teachers give preferential treatment to athletes. | 1 2 3 4 5 |
| 5. I feel more stress while participating in a school sport. | 1 2 3 4 5 |
| 6. I feel more stress while participating in an extracurricular activity. | 1 2 3 4 5 |
| 7. My GPA goes up during competition/participation periods. | 1 2 3 4 5 |
| 8. I do less homework during competition/participation periods. | 1 2 3 4 5 |
| 9. I feel more confident when playing sports. | 1 2 3 4 5 |
| 10. I feel more confident while participating in extracurricular activities. | 1 2 3 4 5 |

True/False

1. If my coach/supervisor of my sport/extracurricular activity required my GPA to stay above a 2.5 I would work harder in order to continue participating. TRUE-FALSE

2. I would do better in school if I were not participating in sports or extracurricular activities.

TRUE-FALSE

APPENDIX C

Consent Form

Dear Parent or Guardian,

I am currently working on research project that can be helped by your students participation. Please permit your child to participate in two simple questionnaires. I have generated these questionnaires for the purpose of gaining student insight into the relationship between academic performance and participation in extracurricular sports. Your student's participation would be much appreciated. Thank you.

My signature below states that I permit my child to participate in this research study, and that at any time he/she may withdraw from the project without any consequence.

Parent/Guardian Name (please print): _____

Student Name (please print): _____

Parent/Guardian signature*: _____ Date: _____

**Parent Signature is required for students under that age of 18.*

APPENDIX D

Question 1: *Do you feel more confident when playing a sport? Why do you think that is?*

101. yes, when I do well it feels good.
102. Yes, because I feel more accomplished
103. Yes because Your team is very encouraging.
104. Yes, because when I do well or my coach gives me good feedback my self esteem goes up.
105. I do feel more confident when doing track, because I know im doing well.
106. I depends if Im doing good because then people are cheering and encouraging me.
107. I feel more in shape and healthier while in a sport. It makes me feel more confident in that way, and when I do well it boosts my confidence too.
108. Yes, because sports create teamwork between people, building confidence.
109. Yes, because I can show my talent.
110. Yes. Being on varsity makes me feel really good about myself.
111. Yes I do. Cause I feel good about myself when I'm good at something.
112. Yes, I do because I'm part of a team.
113. Yes, because I'm constantly trying to meet a goal.
114. Kind of. I feel like I am on a team that I have to be confident in order to do good.
115. Yes, because U feel I am working for something.
116. Yes, cause I have something to work for.
117. Yes, because you can have goals and set yourself up to succeed. You can make lots of close friends and it's a good responsibility.
118. NO ANSWER
119. Yes, because you have to have confidence to play sports.
120. NO ANSWER
121. Yes, it helps to get your mind off things that make you stressed.
122. Yes, because you feel good about yourself when you make the team.
123. I do feel more confident because then I know I am good at something.
124. Yes, I feel like I'm doing something constructive.
125. Yeah, more energized and bonds w/others
126. Yes because when you play sports, you are trying your best and you need confidence to do that.
127. Yes, because I feel better about myself.

APPENDIX E

Question 4: *Would you continue to participate in sports/extracurricular activities if you knew they were hurting your grades? Why?*

101. Yes. They are fun.
102. yes, because I would try harder to get better grades.
103. Yes, its fun to be part of the team.
104. I would cut down and choose the one I like most, but not completely quit.
105. I could continue because I know that I will stay fit in track.
106. Yes. I would just make sure I worked even harder to get everything done.
107. No. I don't necessarily want to continue on with sports into college and beyond but grades are important in order to get into college and to graduate and get a job.
108. Yes, sports are my way to relieve stress in my life. It is also a way for me to bond with friends.
109. yes. Because I love sports.
110. No. Academics are more important to me.
111. yes, I would because sports are what keep me happy.
112. I would because I have done sports all my life and I love them.
113. No, because my academics need to come first in order to get to college, not sports.
114. Yes, because it good for you to stay active.
115. Yes, because sports are what I love.
116. Yes, cause I love them.
117. Yes, because it's what I love to do. I would just try harder and study more and get help. It's not necessarily a bad thing to be stressed or overwhelmed. The responsibility set you up for life and sports make you healthy and give you more energy, and whether you're smart or average you still have to try hard. It's how responsible you are.
118. No, because grades are extremely important to me and my family.
119. No, because I love soccer and would have to work harder.
120. NO ANSWER
121. Yes, because I would want to do something that I enjoy and loved doing.
122. yes I would
123. No, I wouldn't because grades are more important.
124. No, grades are more important than sports, always.
125. No because grades show how well you can do, if you can't do both. Go with the school work.
126. yes I would. I think it is good for students to stay well rounded because they need stress relievers from school. Sports are great stress relievers and great way to express yourself.
127. No, because I need to have a good GPA