The Effects of Athletic Participation on Development of Adolescent Students

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Summer, 2011
## Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Figures</td>
<td></td>
</tr>
<tr>
<td>Abstract</td>
<td>3</td>
</tr>
<tr>
<td>Introduction</td>
<td>4</td>
</tr>
<tr>
<td>Statement of Problem</td>
<td>5</td>
</tr>
<tr>
<td>Review of Related Literature</td>
<td>5</td>
</tr>
<tr>
<td>Summary</td>
<td>8</td>
</tr>
<tr>
<td>Conclusion</td>
<td>9</td>
</tr>
<tr>
<td>Statement of Hypothesis</td>
<td>11</td>
</tr>
<tr>
<td>References</td>
<td>12</td>
</tr>
</tbody>
</table>
Abstract

Participation in sports is can be a powerful motivation for high academic achievement for some students in their respective high school settings. It may also have other important factors such as the development of the self, development of important social skills, and the development of life structure. Studies have shown some positive correlations between participation in sport and the development of high school students. This development is not just about academic achievement but also the level of stress that can be caused by these very important years of physical, social, and mental development. Sports can do more for these students than just keep them in shape physically, but can add structure, strong emotional support, and work ethic to some students that cannot find these things inside the classroom. There are also some scientific reasons stemming from brain functioning and exercise or physical activity. Athletics include all of these positive endeavors so participation should increase academic achievement.
The Effects of Athletic Participation on Development in High School Students

An important part of school achievement is the motivation and hard work of the students in the classroom. There are correlations among student achievement and the amount of extra-curricular activities that the students may participate in. Athletics can provide a structure of support outside the school day. Some evidence states that organized activities provide a ladder for positive developmental growth (Gardner, 2008).

While there are many studies that show a correlation between athletic participation and a positive increase in academic achievement, those studies also state the schools have to be careful in the way they take this information and put it to use. Studies show that time can be taken from the core subject areas (math, science, reading, and writing) and put into extra physical activity time without hindering academic achievement, but time taken away from physical education and put back into core classes will not enhance academic achievement and may hurt the physical health of the students (Trudeau, 2008).

Athletics may not necessarily be a positive influence in the lives students outside of the time in sport and school but it is positive for school performance and achievement and gives an incentive for adhering for school rules and regulations. Even students that are well above average in school performance use sports as motivation in school achievement. Athletics can provide higher self-esteem and pride, not only in one’s self but in the community in which the individual lives (DeMeulenaere, 2010). The introduction of positive peer role models is also an important part of sports in schools. The motivation to not let teammates down along with the family type atmosphere provided by athletic participation also causes the motivation to do better in school. While sports can positively motivate students into getting better grades there are some
individuals whose grades declined as a result of putting too much time into the athletic event that they participate.

Statement of the Problem

The purpose of this study was to investigate the relationship between participation in athletics and academic achievement in high school students grades 9-12. The activity in athletics is anything that is considered a sport in high school. They include football, basketball, volleyball, track, etc.

Review of Related Literature

There are many activities and other factors that pull at student in the modern school day. Anything from clubs to student government to athletics all take time out of the day for students. Athletics was the basis of these studies and therefore the focal point for improving student achievement in this paper. Although some of the research does not necessarily state that athletic participation is key in academic achievement, it does suggest that physical activity is an indicator of academic achievement (Fox, 2010). Since physical activity exists naturally in athletics. It is logical that student achievement will improve if they are involved in sports in high school. The study completed by Fox (2010) evaluated 4746 students from 31 high schools in the Minneapolis-St. Paul, Minnesota area. The students were administered Project EAT (Eating Among Teens) survey that assesses eating behaviors, physical activity, weight related issues, and other issues of adolescent students. Students varied in the survey by age (11-18), socioeconomic class, race, and gender. Included in the survey were sport participation questions, socioeconomic variables, physical activity questions, and questions about their school grades. Theses questions were designed to seek answers to the varying levels of economic opportunity, hours of intense
exercise, how many teams the student were on, and overall performance grade wise in school their school.

According to the study, which included four categories, (Middle School 1. Girls/2. Boys and High School 3. Girls/4. Boys.) both boys groups and high school girls who had went out for sports had higher grade point averages (GPA) than those that did not go out for athletics. Only middle school Girls that did not go out for sports had a higher GPA than girls who played sports. This study suggested that there is a correlation between being on a sports team and exercising vigorously for over seven hours a week and GPA.

The study concluded that there was a correlation with vigorous physical activity and GPA but not necessarily with participation on a team and GPA, but suggested that they go together. Students who worked out for seven or more hours per week had higher GPA’s than those that did not. This study did prove, though, that students who participate in physical activities usually have higher GPA scores than those who do not but could not conclude if it was because of the team sport or not.

A study by Gardner (2008) suggested that team participation helps in what a taxonomy coined “the five C’s”: (a) competence in academic, social, and vocational areas; (b) confidence or a positive self-identity; (c) connections to community, family, and peers; (d) character or positive values, integrity, and moral commitment; and (e) caring and compassion. The five C’s go beyond just grades but includes almost every part of the person as a whole. These five C’s” is a better way of looking at participation as a positive in high school (Gardner, 2008). In this study, information on participation in school organized avidities was gathered. There were three groups, those who did not participate, those who participated one year, and those that
participated for two or more. The study found that student who participation more frequently and intensely were more likely to be involved civically and have attended postsecondary school two and eight years removed from high school. This study does not just take into account sport, but all school and community organized activities as a whole in the high school environment. The results also showed that employment increased with participation.

Gardner (2008) found that participation in these sponsored activities led to educational, civic, and occupational success in adulthood. This study suggests that students should be encouraged to participate in organized activities in high school because of the positive experience that they can provide. School organized and community organized activities provide a positive environment of safety and support to students, one that can help them in the achievement of their goals.

Not only is academic achievement a basis for the encouragement of participation in school sponsored teams; it should be encouraged as well to promote mental health and social confidence as well. Armstrong (2009) suggests that athletes have greater levels of self-esteem and social connectedness. Because the athletes are on teams, they have a built in support group form the time they arrive on campus to attend school. Because of the group, the athletes have a greater chance to relate to others who may be going through the same problems that they face. Also, athletes, as expected, have more days filled with aerobic and strength training exercises. This study corresponds with Fox’s mentioned earlier that physical activity is able to promote higher achievement and self-esteem. The study also indicated that athletes also received more nights per week of rested sleep, meaning they felt rested the next day, than students that were not athletes. This is important to college students because the number of nights per week with rested sleep also indicated the increase of depressions which can severely inhibit academic achievement.
and can lead to many unhealthy and inhibiting habits such as drinking, drug abuse, and even suicide (Armstrong, 2009).

Exercise in sports is one of the most important tools in the equation of healthy adolescence. Along with self-reporting research and intellectual testing, experimental evidence is needed to back up the research (Trudeau, 2008). Most of the scientific research between physical activity and cognition has been focused on the hippocampus, an area of the brain that mediates memory and learning in mammals. This area supports long-term potentiation or LTP. LTP leads to a nervous influx following an introduction of stimuli. Hippocampal LTP is the main physiological reason for learning and memory in humans and exercise can increase learning and memory in three ways, 1) exercise creates heightened neurosis, an increased formation of new neurons after vigorous physical activity; 2) physical activity creates enhanced neuronal transmissions in the hippocampus; and 3) exercise creates a favorable environment for LTP by increasing the hippocampal concentrators of neuroprotective factors. Trudeau hypothesizes that, since these factors increase memory and learning, school-aged students would benefit greatly from periods of exercise and then rest where proteins are associated with these functions could be broken down and used.

Because of these scientific findings, it would be advised that parents not be so concerned with decreased homework time but should think about their children’s time spent on video-games, and on TV. Time spent exercising along with study time has the chance to increase student achievement greatly. A study by Sherif (2006) shows a correlation between physical activity and time spent reading in school meaning as the student spent more time in physical activity they were able to read more in school.
Summary

There are many reasons to participate in athletics and other sponsored activities. These reasons include academic achievement, mental health, physical health, and social connectedness. Students active in athletics also receive structure, discipline, and the ability to work in a team. Through these positive functions, students who participate in athletics are more motivated to achieve higher academic functioning.

Students who participate in athletics may see them as a way to go to college to achieve higher academic functioning. They realize that they cannot go to the school of their choice unless they receive qualifying grades that will get them into their preferred school (DeMeulenaere, 2010). This is a great motivator, especially for students that may not be high functioning academically when compared to some of his peers.

Not only do athletics motivate, they also provide healthy unseen results by increasing certain brain functions to increase their knowledge base. Exercise increases the amount of LTP used to create neurologic connections in the hippocampus where memory and learning occur. These are all reasons to encourage parents and students to participate in athletics.

Conclusion

Schools should not only be focused on academics, but should encourage students to participate in athletics. The amount of time spent on exercise and the intensity in which the exercise is performed is very beneficial to the academic achievement of the student and the school as a whole. Not only can exercise benefit individuals but it will benefit the school system as well.

Sports and activities provide a level of confidence for the students beyond the classroom. DeMeulenaere (2008) argues that the payoff of sports is that students have a source of
confidence in themselves even if the student may lack confidence in reading or any other core subject. He also states that sports provide structure and positive peer role models. Students on a team are able to connect to their teammates and they receive a positive support system to push them to be and act their best. Participation in sports builds friendships and can reduce the amount of time spent of negative, self-destructive behavior (DeMeulenaere, 2008).

Athletics are a place where exercise is needed to be in shape, increase stamina, and reduce the risk on injury. Exercise also has some unintended positive results also. It improves brain functions, releases hormones that can increase self-esteem, and improves physical health. Through these results, individuals are able to reconcile their problems themselves and are more likely to seek help from their friends or peers (DeMeulenaere, 2008).

Research on this subject is limited and can vary a great deal. Participation in sports and the participation on a team are factors that many authors and researches differ. The arguments on what actually increases academic achievement seem to have the same conclusion: exercise is the reason for the increase in functioning. Exercise, not only increases physical attributes, but also increases mental health and increases the ability of learning and memory.

This paper highlights the importance of not only athletics, but also physical education and physical activity schools. Although not all students are able to compete in athletics, the advantages of a rigorous physical education curriculum may have big ramifications in the increase in academic achievement. Hours do not need to be added to core academic courses but to physical education classes that can help student exercise their minds by increasing the LPT to the hippocampus in the brain. Middle and high school should look at their curriculum in their physical education department along with the core subject areas if they really want to increase higher academic achievement.
Statement of Hypothesis

The research and study of this subject has become greater during the last couple of years, especially with the new standards of achievement in education. It is very important that schools make sure that students are learning and that they can be tested on what they have learned. The introduction of athletics and physical activity into the curriculum can have positive influence on student outcomes. It was hypothesized that students who are involved with sports have higher GPA’s and achievement scores than those students who do not participate.
References


