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# Exploring the Impact of Sports Participation on Academic Achievement in a Middle School

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Michael J. Gorton

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**Abstract**

The writer explores the correlation of sports participation and academic achievement in a middle school. Current and dated literature on the topic is reviewed. The method in which the research was conducted is detailed, as well as the reasoning for the research. The writer examines the findings and explains their importance. Finally, the author discusses suggestions for future research, how the findings can be utilized in counseling and closes with a summary of his findings.

## **Exploring the Impact of Sports Participation on Academic Achievement in a Middle School**

Upon entering an internship at a middle school, the researcher was informed that some sports may lose funding. With severe budget cuts, this is a growing trend across the nation, but one the researcher had not yet experienced. Being a life-long enthusiast of athletics, a former student athlete and current coach, the researcher was disturbed by the information. Sports had always provided a source of structure to the researcher; discipline, hard work, winning and losing with dignity, the importance of team work and of preparation. These were lessons that he had learned from his parents growing up and sports provided an opportunity to live them.

Thinking that middle school students, when they are just starting to gain independence from their parents, would lose this opportunity struck a nerve. He remembered the students he had coached in football and the impact being on a team made on so many. The kids who were struggling to pass classes, but had a reason to keep working hard and continue coming to school. The students who had earned the opportunity to play sports in college, who might otherwise have dropped out of high school, or not continued on to college.

Wanting to take some sort of action, the researcher decided to explore the impact sports participation has on the current middle school students. He decided that providing numbers to administration, showing a correlation between sports participation and higher academic achievement existed, would help support the need for athletic funding. The following will review literature of past studies and describe the study conducted by the researcher.

### **Review of the Literature**

Research focusing on athletes in middle school is scarce. Most studies tend to look at high school student athletes and compare their achievement to their non athlete peers. For this reason, the researcher will review studies primarily examining the high school atmosphere. The

review will discuss the following areas, current state of high school athletic programs, history of high school sports, the impact of Title IX, grade point averages of student athletes and non athletes, attendance rates and behavior referrals. Both current and dated literature will be reviewed to demonstrate trends over the years.

### **History**

In the early 1800's, the primary mode of education for the lower class were charity schools (Tyack & Cuban, 1995). These schools were created by Protestant organizations and focused on serving as many needy children as possible (Tyack & Cuban, 1995). With limited budgets to operate on, extracurricular activities were not offered (Gorn, 2004). By 1850, many states paid for public schools through taxes and budgets increased compared to their charity school counterparts (Zirin, 2008). At this time, the popularity of sporting events was growing (Tyack & Cuban, 1995). The game of baseball, a variation of the English game rounders, was becoming the most popular sport in America (Orem, 1961). The first recorded contest took place in 1846 between two amateur teams in New York (Aubrecht, 2004)

The increase in public schools coincided with the Civil War (McPherson, 1988). As the North and South waged war on one another, traditions were passed (McPherson, 1988). In regards to athletics, the North passed on the game of baseball, as Union soldiers often played games against one another (Aubrecht, 2004). After the Civil War, it is estimated that more people were playing baseball than in the history of the sport (Aubrecht, 2004). American football had mostly been a game played in the South, but spread to the North at the wars conclusion in 1865 (Aubrecht, 2004).

As the popularity of sporting events increased, it was more common for public schools to fund athletic programs (Gorn, 2004). Schools still faced funding concerns and due to weather,

options were often limited, especially in the northern part of the country (Gorn, 2004). During cold winter months, athletics ceased to exist for many schools in the north and options were scarce in the sought (Gorn, 2004). The invention of a new sport would help to create more opportunities for students during the winter (Zirin, 2008).

In 1891, Dr. Naismith invented the game of basketball in an attempt to keep his Massachusetts students active during the cold winter months. The first official game was played in 1892, with a final score of 1-0 (Zirin, 2008). This new sport began an era of increased opportunities in the high school sporting world. Students could now play sports in the winter months, without having to venture outdoors. Basketball was also seen as an inexpensive, easily funded sport (Zirin, 2008).

For the next 30 years, athletic participation steadily increased (Gorn, 2004). It was a period of few significant moments (Gorn, 2004). Newer sports gained popularity, such as tennis and wrestling, but none matched the importance of basketball's creation, or the increase in public schools (Zirin, 2008). Then the Great Depression spread across the country (Schlaes, 2008).

During the initial years of the Great Depression, over twenty thousand schools were closed due to a loss in federal support (Cohen, 2002). Thousands of other schools had to eliminate, or reduce their athletic teams (Cohen, 2002). Students who were misplaced due to closing and others no longer have access to recreational activities began writing letters to First Lady Eleanor Roosevelt (Leroy, 1985). The First Lady received thousands of letters, asking her for shoes, clothing and transportation so they could attend school (Leroy, 1985). Realizing the growing number of impoverished children, the New Deal liberals began to take action (Cohen, 2002).

The New Deal liberals were Democrats who agreed with President Roosevelt's ideology and passed bills in Congress (Derthik, 1985). Rather than talk of the concerns facing the youth of America, New Deal liberals acted (Leroy, 1985). They passed bills that led to a historic expansion in federal funding to public schools (Derthik, 1985). New Deal funds assisted 70 percent of all new school construction and prevented thousands of school closings by allocating federal taxes for emergency funds to pay teachers (Leroy, 1985). Thanks in part to federal aid to students, high school enrollments rose from 4,399,422 at the opening of the Depression to 6,545,991 by the end of the 1930s (Cohen, 2002). With greater enrollment, the number of students participating in school sponsored athletics increased (Derthik, 1985).

For most of the 20<sup>th</sup> century, athletic participation was a period dominated by male students (Guttman, 1991). In the first half of the 20<sup>th</sup> century, females were typically persuaded by male students, parents and teachers to watch sporting events, not to play in them (Guttman 1991). It was not until 1972 that a bill was passed that would forever change the face of high school sports.

The first year of record for sports participation, dates back to 1971 (Thelin, 2005). The National Federation of State High School Associations (NFHS) is the national leadership organization for high school athletics, with all 50 states being members (Whitley, 1999). In 1971, 3,960,932 students participated in school sponsored sports. Males accounted for a staggering 3,666,917, close to 93% of all participants. During this time, a strong civil rights movement was being made in the United States. Equality was a focal point for civil rights leaders and while equality for sports participation was not the goal of a new law, title IX started to even the playing field.

**Title IX**

The origins of Title IX come from a 1965 Presidential Order prohibiting discrimination by federal contractors on the basis of race, ethnicity, religion or color (Valentin, 1997). In 1968, the Order was amended to prohibit discrimination based on sex (Thelin, 2005). A University of Maryland lecturer, Bernice R. Sandler, made the connection that many colleges and universities had federal contracts. As such, they were forbidden to discriminate in employment based on sex (Thelin, 2005). In 1970, Representative Martha Griffiths used this connection and gave the first speech in US Congress concerning discrimination against females in education (Valentin, 1997). At Harvard University, three weeks after the speech, the first contractual compliance investigation began (Valentin, 1997).

Following this speech, Representative Edith Green, who chaired the subcommittee that dealt with higher education, drafted legislation prohibiting sex discrimination in education and held the first congressional hearings on the education and employment of women. It was during these hearings that Congresswoman Mink proposed Title IX (Valentin, 1997). The bill gained much support in Congress and was passed into law on June 23, 1972 (Thelin, 2005).

The initial wording of Title IX was brief and President Johnson charged the Department of Health, Education and Welfare with the task of specifying the language and clarifying regulations (Thelin, 2005). It was not until 1975 that regulations from the bill were specified (Sadker & Sadker, 1994). Among these regulations, universities and high school that received federal funding were encouraged to take measures in order to increase the participation of students in activities where bias had occurred, including athletics (Sadker & Sadker, 1994). It was at this point that the ramifications of Title IX as it would apply to athletics were understood (Valentin, 1997).

In order to ensure compliance of these regulations, a three prong test was created in 1979, under Jimmy Carter's administration (Valentin, 1997). Recipients of federal aid, including public high schools, can show compliance by meeting any one of the following three prongs:

1. Prong one - Providing athletic participation opportunities that are substantially proportionate to the student enrollment, OR
2. Prong two - Demonstrate a continual expansion of athletic opportunities for the underrepresented sex, OR
3. Prong three - Full and effective accommodation of the interest and ability of underrepresented sex.

For every sport offered to the male population, a comparable opportunity was to be made available for the female population (Sadker & Sadker, 1994). This dramatically changed the opportunities for female athletes and increased the number of female participants. It should be noted that in 1972, when the bill was signed into law, the number of female participants in high school athletics almost tripled, from 294,015 in the 1971 - 1972 school year to 817,073 in the 1972 – 1973 school year (Thelin, 2005; Valentin, 1997). This represents the single largest percentage increase on record (Thelin, 2005). During that same period, the number of male participants increased by less than 1% (Thelin, 2005, Valentin, 1997). While the intent of Title IX was not directed towards sports, the impact of the bill was felt immediately in the world of high school athletics.

### **Grade Point Average**

Current knowledge about the relationship between sports and academic performance is based upon a long-term body of research and writing. Much of the inspiration for this work came from James Coleman's classic *The Adolescent Society* (1961) which posited the powerful impact

of athletics in general and athletes in particular on American high school culture. Coleman's work gave rise to numerous academic studies of the relationship between athletic participation and education for individual students and student-athletes (Eidsmoe, 1961; Edwards, 1967; Rehberg & Schaefer 1968; Schafer & Armer, 1968; Spady 1970; Hanks & Eckland 1976; Otto & Duane 1977; Landers & Landers 1978). The basic result of this work was to establish a strong and positive correlation between high school sports participation and academic achievement. Students who participate in high school sports tend, on average, to perform better academically than their non-athletic peers. Although these studies are considered beyond relevance, they support a trend that has existed since the beginning of research concerning student athletes and grades. Despite these early studies, the original concern of student athletes not performing well in the class room remained (Whitley, 1999). This section will explore newer research regarding student athletes and grades.

Marsh (1992) found a small, but significant, relationship between sports participation and higher academic achievement. Using the High School and Beyond Data, Marsh (1992) compared the grades of students as sophomores and as seniors. The High School and Beyond Series followed students from 1980 – 1992 and tracked their progress from high school until they reached the work place. Data collected includes; high school and college transcripts, financial aid records and student questionnaires (Marsh, 1992).

The sophomore selection initially involved a two-stage probability sample of approximately 36 sophomores from each of 1,015 high schools. The second follow-up consisted of a random probability sample of 14,825 students from the original sample. Because the focus of the investigation was on changes that occurred during the last two years of high school, only

students who attended the same high school in their sophomore and senior years were considered in the major analyses, thereby reducing the sample size to 10,613 students (Marsh, 1992).

The results from this study showed a small, but consistently positive effect concerning sports participation and academic outcome. Student athletes received slightly higher grades than their non athlete peers and the results crossed gender, socio economic status and racial lines (Marsh, 1992). Marsh (1992) determined the effects of sports participation and academic performance was large enough to be considered practical.

Following the format of Marsh (1992) Barber and Eccles (1999) tracked 1259 students for six years, beginning when the students were sophomores in high school. Roughly 46 percent of the females and 67 percent of the males participated in team sports as sophomores (Barber & Eccles, 1999). They found that student athletes earned higher grades and were more likely to attend college (Barber & Eccles, 1999).

While Barber and Eccles (1999) were following their subjects, Whitley (1999) was conducting research in North Carolina. From 1993-96, Whitley examined the grades of 285,805 students in North Carolina high schools. At the end of each year, Whitley (1999) categorized the students as athlete or non athletes. Whitley (1999) found a significant difference between the grades of student athletes and non athletes. Whitley (1999) based his findings on the 4.0 scale and found athletes earned 22.66% higher grades, on average, than their non athlete peers.

This was also one of the earliest studies that looked at gender and race (Overton, 2000). When the population was sub grouped into race and gender, the findings were supported. Every sub group- black males, white males, black females and white females, earned much higher grades when compared to their corresponding non athlete subgroup (Whitley, 1999). Each of the four athlete subgroups also outperformed the non athletes as a whole (Whitley, 1999). These

findings helped support the belief that the benefits of sports participation were universal and not dependent on race or gender (Marsh, 1992).

Wanting to further examine the findings of Whitley (1999), Overton (2000) conducted another study in North Carolina. The study took place during the 1999-2000 school year and included 125,000 high school students from 131 North Carolina schools (Overton, 2000). In an attempt to further the work of Whitley (1999), Overton (2000) addressed seven different criteria including, grade point average, attendance rate, two different end-of-course testing components, discipline referrals, dropout rate and graduation rate. Each participating school implemented the North Carolina Student Information Management System (SIMS), helping to ensure accuracy of data (Overton, 2000). SIMS is a web based data collection program that integrates aspects of public schools and was deemed more accurate than human collection (Overton, 2000).

In regards to grade point average, the mean for student athletes was a 2.98 on a 4 point scale. Comparatively, non athletes had a mean of 2.17 (Overton, 2000). In regards to end of year tests, athletes had a mean of 66.1 on the Algebra End of Course Testing, compared to a 57.9 for non-athletes (Overton, 2000). The mean score for athletes was higher on the English End of Course Testing, this time by 11 points, with a mean score of 61.4 vs. a 50.8 for non-athletes (Overton, 2000)

For every subgroup studied, the mean grade point average for athletes was higher than non athletes, ranging from 17 percent to 23 percent higher depending on the subgroup (Overton, 2000). While the findings did not surprise Overton (2000) given the previous study by Whitley (1999), he noted shock in how significant the differences were and that the differences held true no matter how the data was compared; gender, age, race or socio economic status (Overton, 2000).

Despite findings that showed student athletes earned higher grades than their non athlete peers (Whitley, 1999; Overton, 2000) concerns still existed (Fuchs, 2005). In an attempt to ensure student athletes were meeting standards, many schools implemented athletic codes (Fuchs, 2005). Athletic codes serve as a contract between student athletes and their schools. These contracts set guidelines that the student athlete must maintain in order to stay eligible in their sport. While there is not a national athletic code, many are very similar (Fuchs, 2005). Students must maintain a minimum grade in each of their class. Often, this grade is merely passing the given subject, but some schools have higher requirements (Whitley, 1999). Typically, the athletic code applies to the entire school year, but penalties for not meeting the requirements are only applicable during the sport season (Whitley, 1999). With penalties only being enforced during the athletic season, studies have focused on student athletes and their grades in season and out of season (Fuchs, 2005).

In 1978, Laughlin examined the grades of wrestlers during the season and out of season at a rural high school in Iowa. The team was comprised of male, high school students, ranging from freshman to seniors. He found that the wrestlers earned higher grades during the wrestling season, than out of season. The findings were never compared to non athletes in the same school.

Laughlin's (1978) findings were supported in a 1998 study by Quirk and Silliker. They looked at the grades of 123 students athletes during their respective sporting season and then out of season. This comparison revealed that the in season grades were substantially higher than out of season (Quirk & Silliker, 1998). It was also noted that female athletes had less of a difference between in season and out season grades compared to their male counterparts (Quirk & Silliker,

1998). These findings led to further research examining the difference between male and female student athletes.

Crosnoe (2002) concluded that female athletes had the highest grade point averages. Non athlete males were found to have the lowest grade point averages (Crosnoe, 2002). While this study showed student athletes were receiving higher grades, the findings, along with those of Stegman (2000) and Quirk and Silliker (1998), support a growing notion that female athletes achieve higher academic results than their male peers (Crosnoe, 2002).

While the above studies showed a positive correlation between sports participation and higher academic achievement, Hill (1999) recognized in many previous studies that student athletes were clumped into one group with no regard to the amount of time that student athlete spent on their sport. He believed this created a limitation in the study, as students who participated for one hour a week during the spring were categorized with students who spent 20 hours a week for the entire year at their sport (Hill, 1999). In order to minimize this limitation, a categorical continuum was used (Hill, 1999).

A student who participated in no school-sponsored sports was assigned a value of zero (0). The remaining designations were as follows: less than one hour per week (assigned value of 1); 1 to 4 hours per week (assigned value of 2); 5 to 9 hours per week (assigned value of 3); 14 to 19 hours (assigned value of 4); and 20 or more hours per week (assigned value of 5). It was Hills (1999) belief that this approach was an enhancement to previous research. It also addressed the concerns first introduced by Coleman in 1961.

The study showed that among all students, sports participation had a significant positive relationship to grade point average. Hill (1999) also found that African American student athletes reported much higher levels of academic confidence than African American students

who did not play sports. The higher the assigned value of the student athlete, as described above, the greater the difference in academic confidence (Hill, 1999).

In 2000, a high school teacher and football coach, Mark Stegman, conducted a study regarding student athletes and grades at his school in Nebraska. Twenty-one interscholastic sports are offered to students during three athletic seasons. Stegman (2000) used a survey approach, asking for name, grade, gender and number of high school sports played. Surveys were handed out to junior and seniors in their math class. This information was used to split the population into four subgroups: male athletes, male non-athletes, female athletes and female non-athletes (Stegman, 2000).

In order to further explore the student athletes, Stegman (2000) placed student athletes into a high or low participant group, much like Hill (1999) before him. Student athletes who had been in high school for more years than seasons they participated in a sport were classified as low participant. Students who had participated in more sports seasons than years they had been in high school were categorized as high participant (Stegman, 2000). While not the intent, this method also addressed the previously discussed concerns of Coleman (1961).

Stegman (2000) found that the high participant subgroups outperformed their low participant counterparts in all three areas he examined; grade point average, class rank and math grade point average. These findings were in sharp contrast to the beliefs of detractors, who felt that participating in too many sports would negatively impact grades (Coleman, 1961). He also noted that the female subgroups significantly outperformed their male peers (Stegman, 2000).

Following the mindset regarding time and commitment, Loveless (2002) used state and national rankings from the 1990's in order to identify 163 schools that fell into the "powerhouse" status (Loveless, 2002). These were schools that were ranked highly in regards to their athletic

programs (Loveless, 2002). He found that these schools, when compared to schools of similar socio economic status and racial backgrounds, performed slightly higher on state tests. Loveless (2002) noted that powerhouse schools in urban and rural areas do not drop off academically because of athletic success. He went on to say that schools that ranked highly academically and athletically, were often found in wealthy sub urban communities.

Up until this point, subgroups had been created based on participation, race and gender. Barnes, et al. (2005) wanted to look at student athletes in a new way and asked participants if they viewed themselves as jocks, or athletes. The study included 600 student athletes and found that athletes are looked up to, while the label of jock connotes perceptions of ignorance and stupidity (Barnes, et al., 2005). Students who viewed themselves as jocks received lower grades than their non athlete counterparts, while students who viewed themselves as athletes received higher grades than their non athlete peers (Barnes, et al., 2005).

During the 1998-99 school year, Stephens and Schaben (2002) conducted one of the only known studies of middle school students, when they examined 8<sup>th</sup> graders in Nebraska. Athletes were categorized as anyone who had played one of the five sports the school offered. They used a sample size of 136 students, 73 athletes and 63 non athletes. After observing grade point averages and scores on the California Aptitude Test (CAT), it was discovered that student athletes had significantly higher grade point averages and Math CAT scores than non athletes. Coakley (2006) later noted that high school-aged adolescents develop in many ways, which may not be related to sport participation. Additionally, many high schools use cuts as a means to keep rosters manageable. Coakley (2006) felt this process diluted results and made it impossible to determine to high school student athletes were different before joining varsity sports, furthering the importance of the work of Stephens and Schaben (2002).

There has yet to be a large scale study that shows a negative correlation between being a student athlete and grade point average (Gehring, 2002). Despite this, there are still those that hold to the beliefs of Coleman (1961) and a growing thought that student athletes receive special consideration in the class room (Gehring, 2002).

In a paper presented at the annual meeting of the American Educational Research Association in Montreal, Jordan (1999b) revealed that some teachers feel pressure from their coaching peers to give student athletes better grades. This report had been derived through interviews Jordan (1999b) had conducted with teachers at various schools throughout the United States. Jordan (1999b) identified a strong urging from coaches that their star athletes be given preferential treatment. Many of the teachers interviewed admitted to giving such treatment at some point in their careers. While this report identified a dark aspect of high school sports, Jordan (1999b) urged listeners his presentation represented a small sample of teachers and were indicative of those teachers and coaches (Jordan, 1999b).

In addition to the pressure some teachers face (Jordan 1999b), reports of scandals (Gehring, 2002) have come to light in recent years. One of the largest scandals involved Miami University High. In 2005, the school closed after it was discovered student athletes were buying diplomas (Wilson, 2005). For \$399 students were able to purchase diplomas from the correspondence school in Miami (Wilson, 2005). Over a three year period, 28 student athletes had purchased diplomas as a way to pass the National Collegiate Athletic Association's (NCAA) standards. The school closed in 2005, but left questions over the legitimacy of student athlete achievement (Wilson, 2005).

Evidence suggests a correlation between sports participation in school sponsored athletics and higher academic achievement in terms of grade point averages exist. Student athletes have

been shown to receive higher grades than their non athlete peers. This correlation crosses lines of race, gender and socio economic status. While it needs to be noted that the above studies do not prove causation, the correlation that is present should not be ignored when discussing the importance of funding athletics.

### **Attendance**

Attendance is another area of concern when discussing student athletes (White, 2005). Studies focusing on student athlete attendance rates are very scarce (Whitley, 1999) and most of the studies examine several criteria and attendance is part of the study, not the main focus (Overton, 2000). When discussing attendance, the main concern is that student athletes only attend school so they can participate in sports (White, 2005).

In one of the earliest studies that looked at attendance, Patranella (1987) found that student athlete's attendance rates were significantly higher than those of non athletes. Student athletes missed five less days of school compared to the non athletes (Patranella, 1987). Patranella (1987) reported this as non athletes missing twice as many days as student athletes.

It was not until 1992, when Marsh sampled 10,613 students that attendance was once again examined. Marsh (1992) found that student athletes miss less days than non athletes, but the results were too small to be deemed significant. Although not scientifically significant, Marsh (1992) believed the results important enough to urge administrators to consider them while making school policy and allocating money for funding of athletics. It was his concern that harsh consequences would be faced if schools started to eliminate sports programs (Marsh, 1992).

Whitley (1999) examined attendance rates in addition to grade point averages. As with Patranella (1987), results showed that student athletes missed half as many days as non athletes

(Whitley, 1999). Again, the sample was broken into subgroups, black males, white males, black females and white females. Each athlete subgroups missed significantly fewer days than the non athlete group and their corresponding non athlete subgroups (Whitley, 1999). In addition, black male student athletes missed the most days of school of any student athlete subgroup, an average of 7.112 days. Yet, when this mean is compared to the lowest average days missed for a non athlete subgroup, 11.653 days for the white female non athletes, the difference is still significant (Whitley, 1999).

In an attempt to look at attendance rates in a different way, White (2005) used surveys to question teachers, allowing them to express their feelings in regards to athletics. Surveys were anonymous and authorized by school officials (White, 2005). In all, 94 surveys were distributed, with 33 responding, implying an interest in the survey (White, 2005). Surveys were 8 questions pertaining to athletic participation. White (2005) determined from this survey that teachers had an overall positive view on the impact of being an athlete. In terms of attendance, teachers reported a positive effect on students (White, 2005). Interestingly, none of the responding teachers reported a negative effect on attendance rates (White, 2005).

Barnes et al. (2005) used their previously discussed approach to examine attendance rates. Again, athletes were asked to identify themselves as jocks or athletes (Barnes, et al., 2005). The students that identified themselves as athletes missed fewer days of school than the non athlete subgroup (Barnes, et al. 2005). The students that identified themselves as jocks missed more days of school than the athletes and non athletes (Barnes, et al., 2005). The jocks also reported skipping class more often than the athlete and non athlete students (Barnes, et al., 2005). These findings were consistent across all subgroups (Barnes, et al., 2005).

In 2007, Flores and Kaylor conducted a study to examine the effectiveness of two separate programs designed to improve student hope for the future. For the study, Flores and Kaylor (2007) selected 47 female athletes. The participants were randomly divided into two groups, one participating in groups utilizing the current school program, the other using a new program (Flores & Kaylor, 2007). The study lasted for twelve weeks, with the participants meeting twice a week in their respective group (Flores & Kaylor, 2007). It was during these twelve weeks that Flores and Kaylor (2007) noticed their participants had significantly higher attendance rates than other females in the school. Although attendance rates were not the focus of the study, Flores and Kaylor (2007) noted the results in their findings.

Athletic codes typically apply to attendance as well as grades (Whitley, 1999). Students who miss school typically cannot practice that night and may not be eligible to play in games depending on their schools athletic code (Whitley, 1999). Some view this as the reason athletes miss less school (Crosnoe, 2002). Whether this is the case or not, research supports the belief that student athletes come to school more often than non athletes.

### **Behavior**

Perhaps the most debated area of concern in regards to student athletes is behavior (Barnes, et al., 2005). Coakley and Hughes (1991) argued that the close bonds often created in team sports can lead to deviant behavior. In 2006, Coakley used the word *hubris* (overbearing pride or arrogance) to describe student athletes. In his work, he found that student athletes more often thought of themselves as unique and extraordinary when compared to non athletes (Coakley, 2006). It was Coakley's (2006) belief that this attitude was often displayed in acts of pride driven arrogance and an increased sense of power within the school. Peretti-Watel, et al., (2004) discovered that student athletes who were deemed elite, the best at their sports, were more

likely to take risks. Over the past 30 years, studies have focused on drug use (Barnes, et al., 2005), violent behavior (Rhea & Lantz, 2004) and sexual behavior (Barnes, et al., 2009). This section will more closely inspect these and other studies exploring student athletes and behavior.

In 1977, Hayes and Tevis discovered that student athletes reported using alcohol more frequently than non athletes. While not surprised by this result, it was also discovered that student athletes viewed alcohol use in a different way (Hayes & Tevis, 1977). Student athletes viewed alcohol consumption as being more socially acceptable than non athletes (Hayes & Tevis, 1977). These findings were later supported by the works of Carr (1990). Carr (1990) also used a survey to study the alcohol consumption of student athletes. The surveys revealed that student athletes reported using alcohol at a greater rate than non athletes and viewed alcohol consumption as socially acceptable (Carr, 1990).

Peretti-Watel, et al. (2004) elaborated on the findings of Carr (1990) and Hayes and Tevis (1977). They found that student athletes who attended social outings with other athletes were more likely to drink (Peretti-Watel, et al., 2004). It was hypothesized that student athletes learn social values within a team atmosphere and apply those values to the larger world (Peretti-Watel, et al., 2004), supporting the earlier notions of Coakley and Hughes (1991). Coakley and Hughes (1991) found that student athletes subscribed to values and norms found in sports, not in the larger societal context.

As the world of professional sports came under scrutiny for steroid use, the concern over student athlete consumption of alcohol was replaced by the fear that student athletes were using steroids (Barnes, et al., 2005). In 2005, Barnes et al. used a three stage cluster sample in order to gain a representative sample of all ninth through twelfth grade students attending public and private schools nationwide. First, 54 primary sampling units (large counties or groups of smaller

adjacent counties) were selected from a total of 1719 nationwide (Barnes, et al., 2005). The primary units proportionally represented urban, suburban, and rural populations (Barnes, et al., 2005). Second, 191 schools were chosen; schools with higher numbers of minority students were sampled more often, deliberately oversampling Black and Latino students (Barnes, et al., 2005).

In the final selection stage, one or two intact classes of a required subject were randomly selected at each grade level within each chosen school (Barnes, et al, 2005). Under the supervision of trained data collectors, students completed a self-administered, 88-item questionnaire in the classroom (Barnes, et al., 2005). Prior parental consent was obtained and data were collected anonymously to maximize protection of student privacy. The school response rate was 79.1 %, and the student response rate within these schools was 87.2%, for a total of 16,262 responses (Barnes, et. al, 2005).

The surveys revealed that approximately 2% of the female respondents and 4.1% of the male respondents used steroids without a legal prescription (Barnes, et al., 2005). However, there was no significant correlation between being an athlete and increased steroid use (Barnes, et al., 2005). Student athletes reported using steroids at a similar rate as non athletes (Barnes, et al., 2005). These findings were supported by the Community Anti-Drug Coalitions of America, which reported one in 30 student athletes (Alcoholism & Drug Abuse Weekly, 2004). Despite these findings, steroid use among all high school students has more than doubled since 1991, according to the Centers for Disease Control and Prevention ([American School Board Journal](#), 2005).

### **Bullying**

Within the realm of behavior lies a subject that has gained attention over the years; bullying. It was reported that Eric Harris and Dylan Klebold were bullied by student athletes in

Columbine, Colorado (Toppo, 2009). It was believed that the bullying from student athletes and the popular clique within the school contributed to the horrific events that occurred in 1999 (Toppo, 2009). However, research during the past decade debunks many of the reports and shows that Harris and Klebold did not target athletes during their shooting rampage, but rather wanted to kill everyone in the school with homemade bombs (Toppo, 2009). Following the tragic events in Columbine, the media portrayed student athletes as thugs and delinquents (Videon, 2002). While this media stereotype was easily dismissed as nothing more than sensationalism, it was not without merits (Videon, 2002). This section will further explore the research examining student athletes and bullying behavior.

Bullying is a specific area of violent behavior that has been studied several times in recent years (Abrams, 2002). Lodge and Frydenburg (2001) found a correlation between student athletes and bullying. They also reported that student athletes were less likely to be victims of bullying (Lodge & Frydenburg, 2001). Kahlman (2006) believed that team sports attracted students with aggressive tendencies. Therefore, it was no surprise that student athletes were more often perpetrators of bullying (Kahlman, 2006). This belief was a further exploration of Lake's (2004) proposal that aggressive children were often aggressive in athletics, raising a question of whether team sports teach aggression, or aggressive students are attracted to team sports (Videon, 2002). Regardless of the answer, studies have shown that students who participated in aggressive team sports, were more likely to demonstrate that behavior in school (Abrams, 2002).

Along with bullying, hazing is a newer term that has been brought to light in recent years (Abrams, 2002). Hazing is defined as; any activity expected of someone joining a group (or to maintain full status in a group) that humiliates, degrades or risks emotional and/or physical harm,

regardless of the person's willingness to participate (Hoover & Pollard, 2000). Alfred University conducted a survey study with high school students in 2000 (Hoover & Pollard, 2000). Student athletes reported being hazed and participating in hazing rituals more often than non athletes (Hoover & Pollard, 2000). 35% of responding student athletes reported having been hazed during their high school athletic careers, suggesting that more than 800,000 student athletes are hazed each year (Hoover & Pollard, 2000).

A study conducted in New York City found that 17 % of middle school student athletes had been hazed (Gershel, et al., 2003). This number was not compared to non athletes (Gershel, et al., 2003). The study revealed that hazing occurred as early as the 6<sup>th</sup> grade and the highest frequency of hazing was reported by gymnasts and cheerleaders (Gershel, et al., 2003). It was reported that males were more likely to be hazed in a physical manner than female athletes (Gershel, et al., 2003).

A 1996 study by Begg, et al., consisted of 1037 adolescents being interviewed. Participants were interviewed at the age of 15 and again at 18 (Begg, et al., 1996). Results revealed that a correlation between higher participation in team sports and delinquent behavior existed (Begg, et al., 1996). It was also determined that the best predictor of delinquent behavior at age 18 was found to be delinquency at age 15, regardless of involvement in sports activity (Begg, et al., 1996).

In 2004, Rhea and Lantz revisited delinquent behavior and student athletes, with the focus being on violent behavior. Results showed that male student athletes reported higher responses of aggression than male non athletes in social settings (Rhea & Lantz, 2004). The opposite held true for female athletes, as they reported less responses of aggression than female non athletes in social settings (Rhea & Lantz, 2004).

However, not all studies concerning student athletes and behavior show negative effects (Whitley, 1999). In Massachusetts, 1,515 students, representing 15 high schools, were given surveys pertaining to drug and alcohol use (Naylor, et al., 2001). Surveys revealed that significantly more non athletes than athletes have smoked cigarettes (Naylor, et al., 2001). Non athletes also reported using cocaine and psychedelics with more frequency (Naylor, et al., 2001). Athletes were also less likely to use marijuana, amphetamines and barbiturates than were non athletes (Naylor, et al., 2001).

In their 2002 study, Stephens and Shaben commented that participation in athletics helped students build discipline, organize time and develop self confidence. This comment was supported by Dins and Ertz (2003) in their presentation at the Annual Conference of the Eastern Educational Research Association. Dins and Ertz (2003) examined 225 students in the Kentucky area. They found that student athletes expressed a greater sense of self esteem and confidence than non athletes (Dins & Ertz, 2003).

Videon (2002) found similar results and concluded that sports participation teaches students discipline. Chalip and Green (1998) reported that athletics can provide a positive contextual environment for socializing adolescents. It has also been noted that student athletes express higher educational aspirations (Marsh & Kleitman 2003). Feldman and Matjasko (2005) reported that students develop mutual trust and commitment through sports participation. It was noted student athletes had higher levels of attachment to other students, family members and school authorities than non athletes (Feldman & Matjasko, 2005). Coakley (2006) notes the potentially important role sport participation can play in developing a student's commitment to education.

In sharp contrast to the findings of Lodge and Frydenburg (2001), Vermillion (2007), found that non athletes are more likely to partake in deviant behavior. Upon further research, Vermillion (2007) found that student athletes in his sample were more likely to come from homes where parents were more involved and interacted with school officials more often. Overall, Vermillion (2007) concluded that athletic participation is associated with a slight decline in deviant behavior.

An earlier study by Erkut and Tracy (2002) identified that the benefits from sports participation are largely dependent on variables within the school. These variables include; student/teacher ratio, whether students feel discipline procedures at the school are fair and whether students see school rules for behavior as strict (Erkut & Tracy, 2002). Overall, the findings showed that student athletes received slightly less behavioral referrals than non athletes (Erkut & Tracy, 2002). Whitley (1999) found similar results in his research; student athletes received fewer behavioral referrals than non athletes

In opposition to the view held by Kahlman (2006), Langbein and Bess (2002) note sports programs might contribute to safer school environments by fostering teamwork and cooperative norms, thereby enhancing social capital and sociable behaviors. They explain further that if a cooperative normative structure exists within a school and behavior improves, then sports might actually be contributing to school safety (Langbein & Bess 2002).

An often neglected benefit of sports participation is overall well being (Donaldson & Ronan, 2006). Donaldson and Ronan (2006) found a positive relationship between sports participation and lower rates of depression. Student athletes had higher rates of perceived competence, as well (Donaldson & Ronan, 2006). Expanding on these findings, Brown, et al. (2007) researched the impact of sports participation on suicidal ideation. They used data from

the 2003 Youth Risk Behavior Survey. The Youth Risk Behavior Survey is a national survey that monitors priority health-risk behaviors (Brown, et al., 2006)

Over 10,000 high school students from across the United States responded to the survey (Brown, et al., 2006). Findings showed that students who participated in sports had fewer reported suicidal ideations (Brown, et al., 2006). The odds of suicidal attempts were also lower for student athletes (Brown, et al., 2006). Results were consistent, regardless of sex (Brown, et al., 2006).

Relating back to the earlier concerns of Coleman (1961), Carrano, et al. (2009) looked at student athletes who participate in other out of school activities. They used data from Grades 5 through 7 of the longitudinal 4-H Study of Positive Youth Development to assess relations among sports participation, other out-of-school-time (OST) activities, and indicators of youth development (Carrano, et al., 2009). Data suggests that the benefits of sport participation are dependent on the athlete participating in multiple activities, along with sports (Carrano, et al., 2009) It should be noted, that this study was in part funded by the 4-H (Carrano, et al., 2009).

Following their work in 2005, Barnes et al. (2009) explored student athletes and sexual behavior. Using a sample derived from 699 families in Western New York, a population sample was obtained with characteristics closely matching the census distributions in the area (Barnes, et al., 2009). Participants were between 13 and 16 years old and findings revealed that female adolescents who participated in sports were less likely than their non-athletic peers to engage in sexual activity and/or report a pregnancy (Barnes, et al., 2009). Among male adolescents, athletic participation was unrelated to sexual behavior and pregnancy involvement (Barnes, et al., 2009). It was noted that teen pregnancy prevention efforts for girls should consider utilizing sport as a strategic tool (Barnes, et. al, 2009).

Research studying the impact of sports participation on behavior is ambiguous. At this time, the correlation that exists is not as clearly defined as the correlations that exist between sports participation and grade point average and attendance. Research suggests that several variables come into play and support the beliefs of Erkut and Tracy (2002). For this reason, behavior remains one of the most debated topics when discussing sports participation (Barnes, et. al, 2009).

### **Conclusion**

Research shows that student athletes in a high school environment earn better grades and miss less days of school. Behavior is an area surrounded in debate and studies do not provide conclusive results. The following sections will focus on examining the relationship of sports participation and academic achievement in a middle school environment. An attempt will be made determine whether sports participation provides a benefit at the middle school level.

### **Method**

This section will detail the research design and process. Justification for the design will be provided, as well as alternatives that were considered. The setting for the research will be detailed and the sample size will be introduced. Characteristics of the participants will be included, as well as the criteria for eligibility. Finally, measures taken to protect participants' rights will be summarized.

### **Research Design and Approach**

The researcher, in consultation with the on-site supervisor, middle school counselors and administration, determined concerns existed surrounding funding for middle school athletics. It was also noted that there was a growing concern regarding the behavior of current 8<sup>th</sup> grade

student athletes and that student athletes were getting into more trouble than the general population. From these concerns, the question of whether sports in the middle school environment provide beneficial returns in terms of academic achievement was raised.

Academic achievement for this research was defined as grade point average, attendance rate and behavior referrals. These proved the highest areas of interest for administration and school staff, since they are tracked within the school and are used as criteria to rate the performance of the school. The researcher was left on his own to determine how to answer this question.

Initially, the researcher was interested in a survey approach. The survey was to be self made and include open ended questions regarding sports participation. This approach was deemed insufficient, since it would focus on perception and not quantitative facts. Next, the researcher examined using a survey, but asking students to answer questions pertaining to academic achievement, with a few open ended questions. This approach would require a certain level of invasion that school administration was not comfortable with and require that students reported accurately in regards to their academic achievement.

Finally, the researcher explored using stored data on the school's student information system. The school information system archives records and keeps reports for every enrolled student. The researcher had previously gained access to this program through his internship and was familiar with how to use the system. This approach would allow the researcher to examine numbers within the system and eliminate the need to have direct contacts with participants. The data would be accurate and would eliminate false findings.

Data from the previous school year would be used, allowing for a full year to be examined. It would also allow the researcher to look at the school year where many concerns regarding the 8<sup>th</sup> grade athletes originated from. It was determined the approach would involve archival information and the use of the school student information system to gather the data. Once the data were collected, the researcher would compare student athletes to non athletes and compare the results of individual athletic teams and compare athletes based on the number of sports played.

After deciding the above described approach would provide the most accurate numerical information, the researcher sought approval from the school administration. Once the approach was approved within the school, the researcher developed an Internal Review Board (IRB) proposal. The proposal is available in Appendix I and outlined the above described design.

### **Setting and Sample**

The sample was drawn from a small northeast city in the United States, with a population of just over eleven thousand. The city is divided between families of high socio-economic status and low socio-economic status, with a median income of \$46,768. Approximately 9% of the residents earn an income below the poverty level. The area is over 95% Caucasian, 1.5% African American and 1% Latino, with an average household size of 2.3 people. Within the community, over 85% of the residents aged 25 and older have a minimum of a high school diploma.

The Middle School is composed of 6<sup>th</sup> – 8<sup>th</sup> grade. There are slightly over 900 students within the school. For the 2008 – 2009 school year, over 300 students were in 7<sup>th</sup> grade, the focus of the research. The class is a microcosm of the city, mostly Caucasian with a dramatic

divide in socio-economic status. This class was selected because of the previously discussed concerns and because it was the only current middle school class that had previously participated in school sponsored athletics. Students are not eligible to compete in middle school sports until 7<sup>th</sup> grade.

Any student who had participated in a sport was classified as a student athlete. They were further classified based on the sport they participated. Athletic rosters are archived within the school and readily available. In order to be on a roster, a student only had to participate in practice, they did not have to finish a season, or remain eligible for the season. This approach was used because it was the most accurate available means. Any student who did not appear on an official roster, but was enrolled in the Middle School the previous year was classified a non athlete.

### **Instrumentation and Materials**

As noted, the school student information system was used to collect and verify all data. The system records all relevant information and stores that information within the school intra-web. The three variables being examined are grade point average, attendance and behavior referrals. Grade point average is the average grade the student earned while in 7<sup>th</sup> grade. This grade is not reflective of state mandated tests. The scale within the school ranges from a 0 to a 100, meaning the lowest a student can score is 0 and the highest 100. This is in contrast to some institutions that use a 4.0 scale, with a 4.0 being the highest a student can earn.

Attendance refers to the number of days of school a student missed. The school student information system relies on teachers marking students as absent each period they are not in school. The Middle School utilizes 9 periods each day of school and students rotate their

teachers. Therefore, each teacher is responsible for taking attendance and marking a student as absent. For the sake of this research, absences were counted when a student missed a full day of school for sickness, family sickness, truancy, or unverified reasons. The scale for attendance started at 0 with no limit on the number of absences.

When a student receives a discipline referral, a note is created within their file on the school student information system. These referrals indicate a student received a consequence for their actions. Within the school, a principal must sign off on each referral before it is entered in the school student information system. Each referral was counted as one behavior referral in the data collection. The offense was not noted, nor the consequence.

### **Protection of Participants**

In order to protect the participants, the researcher used archival information. Names were present on initial rosters and immediately removed once the data for that individual was collected. To further protect privacy, the researcher saved information on a password protected lap top computer; that only he had access to. Once all information was collected, the researcher calculated means for each subgroup and erased individual data. This was an extra precaution taken to protect the privacy of each participant.

### **Results**

Data was collected on a total of 318 eighth grade students. Of this, 206 were student athletes and 112 were non athletes during the 2008-2009 school year. Grade point averages, attendance and behavior referrals were compared between student athletes and non athletes. These numbers were further compared within the student athlete subgroup, according to specific

sports. This section will highlight findings and a breakdown of all results can be found starting on page 37.

### **Student Athletes vs. Non Athletes**

Student athletes earned a mean grade point average of 87.9, compared to non athletes earning a mean grade point average of 84.05, for a difference of 3.9 points. This difference was determined to be significant to the .449 level, falling just short of statistical significance.

Student Athletes missed an average of 5.96 days of school during the 2008-2009 school year. This is compared to non athletes missing an average of 8.04 days of school, for a difference of 2.08 days of school. This difference was deemed significant to the .097 level.

The final statistic being examined is that of behavior referrals. This is the area of highest concern within the school and prompted this research to be conducted. Student athletes received an average of 1.11 behavior referrals during the 2008-2009 school year. Non athletes received an average of 1.7 behavior referrals during the same time, for a difference of 0.59. This difference was determined significant to the .421 level; again falling just short of statistical significance.

### **Individual Sports**

The school offers a total of 20 sports during the school year. A full list can be found in table 3 on page 37. When looking at the achievement of individual teams, 20 of the 21 teams earned a higher grade point average than non athletes. The exception was winter cheerleading, with a mean grade point average of 82.85. Cross country had the highest grade point average with a mean of 95.08. Due to sample size, a statistical analysis was deemed unwarranted.

Fall and winter cheerleading missed more days of school than non athletes. Every other sub group missed less days on average than non athletes. Girls swimming missed the fewest

amount of days with an average of 2.73 days of missed school. Winter cheerleading missed the most, with an average of 8.9 days of missed school.

Three individual sports received more behavior referrals, on average, than non athletes; winter cheerleading, wrestling and football. Basketball (boys) received .01 less average referrals than non athletes. Nine individual sports did not receive a single behavior referral during the 2008-2009 school year.

### **Number of Sports**

Averages were compared based on the number of sports student athletes participated in. Three sport athletes received the highest grade point average, 91.21. One sport athletes had the lowest grade point average, 84.89, only .84 points higher than non athletes.

Three sport athletes missed the least amount of school, averaging 4.35 absences. Two sport athletes missed the most, 6.95, more than the overall athlete average. One sport athletes missed 5.8, slightly less than the 5.96 of the overall athlete group. Still, all three groups missed less than non athletes, 8.04.

When looking at behavior referrals, three sport athletes once again ranked the highest, receiving .32 behavior referrals. Two sport athletes received .55 behavior referrals, both performing better than the overall athlete group. However, one sport athletes received more behavior referrals than non athletes, at 1.92.

### **Conclusion**

Although the level of significance varied, the findings show that student athletes are performing at a higher level than non athletes across all three variable of academic achievement. With few exceptions, this statement holds true when looking at individual sports. This benefit

seems to increase as the level of participation increases, showing that a need exists for the continued funding of athletics.

Table 1

*Academic Achievement of Student Athletes and Non Athletes*

Category	Grade Point Average	Attendance	Behavior Referrals
Athletes	87.9	5.96	1.11
Non Athletes	84.05	8.04	1.7

Table 2

*Academic Achievement of One, Two and Three Sport Athletes*

Category	Grade Point Average	Attendance	Behavior Referrals
One Sport	84.89	5.8	1.92
Two Sports	88.7	6.95	.55
Three Sports	91.21	4.35	.32

Table 3

*Grade Point Averages of Individual Sports*

Baseball Boys	93.75
Tennis Girls	93.36
Softball	92.87
Basketball Girls	91.49
Lacrosse Girls	91.27
Soccer Girls	90.64
Volleyball Boys	90.45
Tennis Boys	89.72
Volley Girls	89.69
Lacrosse Boys	89.51
Swimming Girls	89.08
Swimming Boys	88.61
Track	88.31
Basketball Boys	87.25
Soccer Boys	86.8
Cheerleading Fall	85.53
Wrestling	84.79
Football	84.32
Non Athletes	84.05
Cheerleading Winter	82.85

Table 4

*Attendance of Individual Sports (Days Missed)*

Cross Country	2.8
Basketball Girls	3.21
Volley Girls	3.75
Softball	3.81
Lacrosse Girls	4
Tennis Boys	4.66
Baseball Boys	4.86
Tennis Girls	5
Volleyball Boys	5.06
Basketball Boys	5.13
Soccer Girls	5.28
Soccer Boys	5.36
Lacrosse Boys	5.82
Track	6.05
Swimming Boys	7.08
Wrestling	7.46
Football	7.83
Non Athletes	8.04
Cheerleading Fall	8.68
Cheerleading Winter	8.9

Table 5

*Behavior Referrals of Individual Sports*

Baseball Boys	0
Cross Country	0
Lacrosse Girls	0
Soccer Girls	0
Softball	0
Tennis Boys	0
Tennis Girls	0
Volley Girls	0
Basketball Girls	0.07
Soccer Boys	0.29
Swimming Girls	0.33
Swimming Boys	0.58
Lacrosse Boys	0.64
Cheerleading Fall	0.68
Volleyball Boys	0.76
Track	1.26
Basketball Boys	1.69
Non Athletes	1.7
Cheerleading Winter	1.95
Wrestling	2.69
Football	2.83

## **Discussion**

### **Why the Study was Conducted**

This study was conducted in order to assess the impact sports participation has on academic achievement in a middle school environment. The 2008-2009 school year was the focus of this study, allowing for a full school year to be examined. This data was then used to compare student athletes and non athletes on a large scale. Based on the findings, student athletes earn higher grades, miss less days of school and receive fewer behavior referrals than non athletes. This section will interpret the findings previously outlined, discuss the implications and recommendations for future counseling as well as recommendations for future research.

### **Interpretation of Findings**

#### **Student athletes compared to non athletes.**

A total of 318 students were used for this study. This encompassed the entire seventh grade class from 2008-2009. There were 206 student athletes and 112 non athletes within this sample. Since this composed the entire class from the 2008-2009 school year, the researcher deemed this sample size significant. In all three areas of interest, student athletes outperformed non athletes.

Student athletes received slightly higher grades than non athletes (Table1, page 37). However, this difference was not deemed significant. These findings do not support earlier studies (Barber & Eccles, 1999; Crosnoe, 2002; Marsh, 1992; Overton, 2000; Whitley, 1999) suggesting student athletes at the high school level earned significantly higher grades than their non athlete peers. These findings do support the findings of Coakley (2006), who stated that the

use of cutting members from high school teams diluted results. Cutting members refers to coaches making selections on who is allowed to play and who is “cut” from the team, or deemed not good enough athletically to be on the team.

As predicted, student athletes miss fewer days of school compared to non athletes (Table 1, page 37). Studies (Marsh, 1992; White, 2005; Whitley, 1999) showed student athletes at the high school level missed less days of school than non athletes. Once again, studies examining this relationship at the middle school level do not exist. Still, the results were predicted based on previous research and outcomes.

Overall, student athletes received less behavior referrals than non athletes (Table 1, page 37). Despite the current literature regarding sports participation and behavior being ambiguous, the researcher expected student athletes to receive fewer behavior referrals than non athletes because of athletic codes. If a student athlete breaks a school rule, they risk being suspended from their team, while non athletes do not face the same consequences.

Although student athletes outperformed non athletes, the results were not statistically significant. There are several reasons for this. The research examined the first year of sports eligibility for these students, thus student athletes had not experienced the level of involvement needed in order to play on a school sponsored sport and still achieve high grades. Student athletes who suffer academically during middle school are eventually forced out of competing in sports by the time they reach high school. This is either done by the student, their parents, or the school through the athletic code. These students are then grouped with the non athletes, thus lowering the mean grade point average of non athletes at the high school level. In short, the

student athlete sample size decreases and often includes the “best” student athletes at the high school level, while the middle school includes all student athletes.

### **Comparing individual sports.**

The middle school offers a total of 19 sports, a list of those sports can be found in Table 3 on page 37. Of these sports, only winter cheerleading had a lower mean grade point average than non athletes (Table 3, page 37). Based on the concerns within the school, the researcher hypothesized several teams would score lower than non athletes, thus the findings were surprising.

Research in this area is non-existent, so a comparison is not possible. Previous research (Laughlin, 1978) has examined one sport, but there is no documented research that compares teams within the same school to one another and non athletes. Reasons for this are unknown, but it is far easier and politically correct to examine the entire student athlete and non athlete samples without directing attention to any one sport. This allows for comparisons to be made, while not pointing out possible flaws within the larger samples.

Only fall and winter cheerleading missed more average days of school than non athletes (Table 4, page 38). The researcher expected this outcome, due to student athletes having to be in school in order to participate. If a student athlete misses a day of school during their sports season, they are not allowed to participate in practice and may not be able to play in the next game.

Despite the results being predictable, the researcher did note fall cheerleading once again underperformed non athletes and that winter cheerleading was the only other sport to do the same. This was interesting to the researcher and led him to explore the world of cheerleading.

Unfortunately, no studies have been conducted that explore cheerleading specifically in regards to grade point averages or attendance. It is not a surprise that both cheerleading teams fell in the same range, because many of the same students participated in both sports, thus the results for both teams were very similar.

Three sports; football, wrestling and winter cheerleading each had a higher mean number of behavior referrals higher than non athletes and boys' basketball was almost identical (Table 5, page 38). In regards to football and wrestling, findings support the idea that aggressive sports can lead to deviant behavior (Coakley, 2006). Further research exploring aggressive sports and off the field behavior would be needed in order to further explore the correlation that is present, however it is not a surprise that aggressive sports would have more members who display aggressive behavior. That type of behavior is needed in order to compete and be successful on the field and is often rewarded with more playing time and praise. For a maturing adolescent, the line could easily become blurred between acceptable behavior on the field and unacceptable conduct in the classroom, especially when surrounded by peers.

### **Exploring the results of one, two and three sport athletes.**

The last way that data was compared concerns the number of sports participated in. Student athletes were grouped into one, two or three sport samples. From this, it was determined that student athletes who participated in three sports earned the highest mean grade point average (Table 2, page 37). Student athletes who participated in one sport had the lowest mean grade point average and were only slightly higher than non athletes. These results are found in Table 2 on page 37 and were expected by the researcher. They are in sharp contrast to the initial concerns of Coleman (1961), who believed students face a zero sum situation and time spent on

athletics came at the expense of school. Stegman (2000) found a similar result in his study of high school student athletes, supporting the belief that the greater the participation, the greater the impact.

Three sport participants missed the fewest number of days (Table 2, page 37). Two sport athletes missed the most amount of days of the three sub groups, but it was still fewer days than non athletes. This result was not predicted, as the researcher believed one sport athletes would miss the most days of school based on the results concerning grade point average and the previous research of Stegman (2000). Due to the athletic code, three sport athletes missing the fewest amount of days was predicted; they simply cannot afford to miss school often and remain eligible.

Perhaps the most surprising result from all of the research is that one sport athletes receive more behavior referrals than non athletes (Table 2, page 37). Two and three sport athletes receive significantly less than non athletes, with three sport athlete receiving the lowest number. One sport athletes receiving more behavior referrals than non athletes further supports the findings of Stegman (2000) and those of Zarret, et al. (2009). Zarret, et al. (2009) found the positive impact of sports participation was dependent on the student athlete participating in several activities throughout the year. In terms of sports participation, one sport athletes only participate in their sport for a short period each year. Due to the lower level of commitment, one sport athletes do not risk the same negative consequences for getting in trouble at school. If they break a rule out of season, they may face disciplinary action such as detention, but it is unlikely they will be suspended from any athletic events.

In terms of time, one sport athletes also have much more free time than one or two sport athletes. During the season, an athlete has practices and games to vent frustrations and anger. For one sport athletes, there are fewer opportunities to release aggression in a controlled environment, resulting in unwanted behavior in school. This is an area where further research would be warranted.

Three sport athletes seem to benefit the most from participating in sports. They earn the highest grades, miss the least amount of school and get in less trouble at school. While further research would be needed in order to further explore this correlation, the results are fairly predictable. Three sport athletes must have a high level of commitment in order to remain eligible all year and in order to compete in three different sports. This discipline and commitment seems to carry over to the class room.

### **Conclusion**

Overall, student athletes earn higher grades, miss less days of school and receive fewer behavior referrals than non athletes. Although the significance of these findings vary depending on how the data was reported, the relationship remains very important. These findings support the need for continued funding for middle school athletics and future research to further understand this relationship

### **Implications and Recommendations for Counseling**

As student advocates, school counselors should take note of the findings presented in this paper. School counselors are tasked with helping students get better grades, come to school more often and get in less trouble. These results support the belief that students should be

encouraged to participate in sports and that sports can provide a positive influence. Further, students should be encouraged to participate in several sports.

In order to promote sports participation, school counselors need to become active in their community. Many communities offer youth leagues, locally funded programs that elementary students can play in. School counselors can collaborate with these organizations to help promote the leagues within the school. In the site for this research, advertising within the elementary school was non-existent.

Even more confusing, was the lack of advertising in the middle school for school sponsored sports. Counselors could work with coaches within the district to help promote middle school sports. Posters and announcements can be used to inform students when sport seasons begin and counselors can encourage individual students in a one on one manner. Currently, the researcher is in the process of communicating with youth league officials in the hopes of increasing school advertising. He is also in contact with modified coaches and helping to develop ways to better advertise the programs offered by the school.

When looking at the data it became clear that a group catering to athletes would be useful, specifically for one sport athletes. There are several student athletes who would benefit from such a group and research suggests close bonds are created through sports (Langbein & Bess, 2002). These bonds could be used by counselors to foster group conversations and that athletes would be more willing to participate when other athletes are present. Since one sport athletes get in more trouble, a group catering to them would be beneficial. In this case, a group focused on anger management, stress reduction, empathy and decision making would be appropriate.

Since the results support a positive correlation between sports participation and academic achievement, it is important for school officials to pay close attention. This would include; the superintendent, school board members, principals and the athletic director. These are individuals charged with ensuring the success of the district and any cuts to athletic funding should be carefully and thoroughly examined.

### **Recommendations for Further Study**

After reviewing the results, it became clear that further details would have been beneficial. This was most evident when examining behavior referrals. When developing the criteria for the study, the researcher did not take into account the importance of categorizing behavior referrals. A main concern within the school centered on student athletes bullying, or getting into fights and labeling would have allowed for a clearer answer to the original concern. Reporting the consequences would have given a better understanding of how significant the behavior referral was.

Reporting the percentage of students who received a behavior referral would also have benefitted the overall study. By doing so, it would allow the reader to see if a difference exists in the number of athletes and non athletes who are receiving behavior referrals. Currently, the means allow the reader to compare sub groups, but it is a general comparison. Percentages would allow the reader to see if a difference exists in how many athletes and non athletes are receiving behavior referrals.

Collecting results on state mandated tests would allow for students to be compared on the same scale. Within the school, students take classes with multiple teachers, who grade in different ways, creating a concern of teacher bias when looking at grades within the school.

Looking at state scores would eliminate these concerns, as students are on even ground. State scores also hold more merit when discussing federal funding, since schools have to meet minimum requirements. If a correlation existed between higher state scores and sports participation, a stronger case could be made for continued funding.

Exploring the correlation between academic performance and the number of sports played would add depth to the results presented in this paper. Currently, research in this area is scarce and focused on results, not the reasons. Research exploring the correlation between one sport athletes and behavior would be most useful. The research would need to focus on what student athletes are getting into trouble for and when they are getting in trouble, in season or out of season. These results would add clarity to previous findings and also help provide possible solutions to this apparent concern.

Additionally, using a qualitative approach would allow greater access to individual stories. While quantitative results were needed for this study, a qualitative approach would allow the researcher to gain better understanding into the impact sports does or does not have on the individual. This would open an entirely new realm of questions and comparisons between student athletes and non athletes. Since athletic codes are often seen as a primary reason (Whitley, 1999) student athletes achieve higher in school, the impact athletic codes actually have could be examined.

The relationship between coach and athlete could be approached. This relationship is typically viewed as having an impact (Coakley, 2006), but the degree of that impact is unknown. Through interviews, or surveys, a better understanding could be gained. This would also pertain

to the relationship between team mates and the role that plays in a student athlete's life. These results could be compared to the influences in a non athlete's life.

A qualitative approach would also allow the researcher the chance to know the participants. During this process, the researcher spent several hours looking at numbers and calculating means and percentages, but never talked to the people he was collecting data on. As a counselor, a major piece was missing and that piece was the participants' story. Knowing that story would provide a much greater understanding of the numbers.

The area of most interest to the researcher involves looking at participants for a longer period. This would provide an opportunity to track students from middle school until graduation and see if a difference exists as sports participation changes. With athletes being cut from teams at the high school level, some of the current student athletes in this sample will no longer be student athletes in the future. Some will choose to quit playing sports, some will choose to play different sports during their school careers and students who did not play a sport in seventh grade may eventually participate in a sport. By following a sample for several years, differences in academic achievement could be tracked, providing a more in depth view of the impact sports participation has.

Finally, the researcher would look at in season and out of season achievement for student athletes. The researcher initially intended to do so, but was unable to using the school student information system. Grades are kept by quarter and sports seasons overlap quarters of the school year. This made it impossible to determine grades during the season and out of season.

Overall, the researcher believes the method used provided a general comparison of student athletes and non athletes. Breaking results down further based on sport played and

number of sports played allowed for deeper analysis. Knowing what the researcher does now and being able to look back at the process, the above discussed recommendations would provide further analysis.

### **Statement**

In a time where funding is being cut and administrators are forced with difficult choices, every decision should be carefully scrutinized. It is easy to cut funding for athletics and view sports as an extracurricular activity; one that costs too much and is not mandated. However, the findings presented in this paper tell a different story. They show that sports are beneficial to the students and ultimately to the school through higher test results, less absences and fewer behavior referrals. Instead of looking at sports as a privilege, decision makers should look at sports as a benefit to their districts.

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**Appendix 1**

SUNY BROCKPORT INSTITUTIONAL REVIEW BOARD

Human Participant Research Review Form

Proposal #

(# will be inserted by IRB)

Please type or neatly print.

1. Investigator(s) name(s) Michael J. Gorton

Department: Counselor Education

Phone Number: (585) 554-6516

(where you can be reached during the day - so we can call with questions)

E-mail address: [gortonmjb@yahoo.com](mailto:gortonmjb@yahoo.com)

Local mailing address: 158 State Route 245

**2. Project Title:**

**3. College Status** (for each investigator):

Faculty/Staff \_\_\_\_\_

Undergraduate Student \_\_\_\_\_

Graduate Student: Michael J. Gorton

4. If the principal investigator is a student, list name, department, and local telephone number of faculty supervisor. Please note that the Faculty/Staff Supervisor must indicate knowledge and approval of this proposal by signing this form.

Faculty /Staff Supervisor's name: Thomas Hernandez

Department and phone number: Counselor Education, (585) 395-5498

**5. Check appropriate category of research project (complete after reviewing guidelines):**

Category 1 (Exempt Review)   X  ; Category 2 (Expedited Review)

Category 3 (Full Review) \_\_\_\_\_

**6. The Principal Investigator must sign this form.** (If the P.I. is a student, their faculty/staff supervisor must also sign this form).

I certify that: 1) the information provided for this project is accurate; 2) no other procedures will be used in this project; 3) any modifications in this project will be submitted for IRB approval prior to use; 4) I have successfully completed the required online IRB training program.

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A. Signature of Investigator	Date
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**B. Faculty/Staff Supervisor:** 1) I certify that this project is under my direct supervision and that I am responsible for insuring that all provisions of approval are complied with by the principal investigator. 2) I have successfully completed the required online IRB training program. 3) My signature indicates I have reviewed this proposal and agree it is in final form and ready to be submitted to the IRB.

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Signature of Faculty/Staff Supervisor	Date
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1a. The objective of this proposal is to compare the academic achievement of 7<sup>th</sup> grade student athletes and non athletes at the Canandaigua Middle School. For the purpose of this study, academic achievement is comprised of grade point average, attendance and behavioral referrals.

Rosters from the 2008-2009 academic year will be collected to determine what students participated in sports during the last academic year. The researcher will then look at records from the 2008-2009 academic year to determine academic achievement as described above.

b. The purpose of this research is to determine if there is a correlation between higher academic achievement and sports participation at the Canandaigua Middle School. The researcher has examined this topic and discovered studies supporting a correlation between student athletes and higher academic achievement (Whitley, 1999). The findings of this study may support the need for additional sports at the Canandaigua Middle School, as well as the need to promote sports to younger students and their families.

c. Since the researcher is working with archival information from the 2008-2009 academic year; there will be no direct contact with participants.

d. Questionnaires and surveys will not be used in this project.

2. Each participant will have been a 7<sup>th</sup> grade student at the Canandaigua Middle School during the 2008-2009 academic year. A minimum of 250 student records will be examined during this project. The researcher will examine 7<sup>th</sup> graders based on the fact that 7<sup>th</sup> grade is the first year students may participate in school sponsored athletics. This also means it is the first year student athletes have to abide by an academic policy in order to maintain eligibility. Results will be reported using correlation coefficients to determine the significance of said findings.

3. Subjects are selected solely on the criteria of having been a 7<sup>th</sup> grade student at the Canandaigua Middle School during the 2008-2009 school year. These subjects will then be

divided into student athletes and non athletes. The criteria for being a student athlete is that the student must have participated in a school sponsored sport during the 2008-2009 school year.

All other students will be categorized as non athletes. Participants will not receive any incentives.

4. There will not be any research assistants involved in this project.
5. All funding will be paid for by the researcher.
6. This project will begin once IRB approval is attained and it will end May 20, 2010.
7. There are no questionnaires or testing instruments being used in this project.
8. The researcher's transcript of completion for the online training course is attached.