THE EFFECTS OF ATHLETIC PARTICIPATION ON THE STUDENT'S SELF-CONCEPT

by

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ABSTRACT

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The purpose of this research was to determine if differences existed in the self-concept of athletes and non-athletes at the sophomore level as measured by the Piers-Harris Children's Self-Concept Scale. 20 male and 20 female athletes and 20 male and 20 female non-athletes were surveyed using a Piers-Harris Children's Self-Concept Scale to evaluate the psychological health of the sophomore students. The scale assessed self-concept in six areas as well as the total self-concept. The six areas included 1) physical appearance and attributes, 2) anxiety, 3) intellectual and school status, 4) behavior, 5) happiness and satisfaction, and 6) popularity. Current research was also analyzed.

The result of the study showed that athletes scored significantly higher on the self-concept scale than non-athletes. Although it was not significant, both male and female athletes outscored their counterparts on the self-concept scale. The biggest difference in mean scores for males was in the area of behavior. The biggest differences

in mean scores for females were in the areas of happiness and satisfaction as well as intellectual and school status. The biggest difference between athletes and non-athletes was the total self-concept score.

The results suggest that educational policy makers should view athletics as an essential part of the child's education. It is recommended that the study be conducted in several other districts before generalizations are made. It is also recommended that the study be expanded throughout more grade levels. A final recommendation would be to explore the role gender plays in the student's self-concept.

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CHAPTER 1

Introduction

Student-athletes in the past have often been regarded as "arrogant and cocky" students. Throughout the researcher's years as a student-athlete, science teacher, and coach, these remarks from the public have been heard many times. Defending the advantages of participating in sports has occurred often and had the researcher wondering whether if what was said was accurate. Are these students confident or arrogant? There are two questions to be answered. First, what have others found pertaining to the relationship between high school athletics and academic achievement? Second, does participation in athletics have an impact on the student's self-esteem?

Participation in high school extracurricular activities is often viewed as a nonessential part of a child's education. These activities are often among the first items to be targeted for budget cuts in times of financial constraints. However, student participation in extracurricular activities is associated with a host of positive outcomes including increased school performance and participation, increased in community pride and involvement, and increased self-esteem and perception of self-worth (McNeal, 1998).

Many studies have been done pertaining to the relationship between high school athletics and its impacts on the student. Studies have indicated that there is a positive correlation between participation and athletics in academic achievement. According to Stegman (2000), students frequently participating in athletics outperformed students who seldom participated in athletics. Many schools require a certain GPA to play, thus "forcing" students to perform in the classroom. Some schools even have a policy of "no pass, no play." Several schools require students to maintain a minimum GPA in order to

participate in extracurricular activities, including athletics. In a study by Whitley (1999), the athlete's average GPA was almost 23% higher on a 4.0 scale than that of the non-athlete over a three-year study period. In addition, not only was the GPA higher in athletes, but also attendance in school was better for athletes than non-athletes. In the same study, athletes averaged over six days less in missed class days than the non-athletes. Another study, Zaugg (1998), showed that the GPA of athletes was significantly higher than the GPA of non-athletes in all courses. Athletes also had fewer behavior problems. Athletes often have a code of conduct to follow. Athletic codes include refraining from smoking, drinking and using illegal drugs as well as maintaining proper behavior in class. According to a study conducted by Zaugg (1998), non-athletes were sent to the principal's office about six percent more often than athletes, and non-athletes missed more class time than the athletes did. In addition, Dobosz and Beaty (1999) revealed high school athletes outscored their non-athlete peers on a leadership ability measure.

GPA is not the only factor that may be affected by athletic participation. Through past experiences, athletes tend to have a high self-esteem and commitment to excellence. Other studies have also supported athletics, not for academics, but for a wide range of ways that athletics enhances education. Socialization, sportsmanship, citizenship skills, leadership skills, and teamwork are increased in a positive manner. Athletic involvement raises the students' sense of belonging both in the school and in society. Athletics can also develop and contribute to the personal and moral character of the student while promoting leadership and cooperation. Although athletes are more risk takers, they tend

to have considerably fewer discipline problems and run-ins with the law. Athletes tend to use drugs, alcohol and tobacco less than non-athletes.

Findings have revealed that the mean graduation percentages of athletes are almost 5 percent higher than non-athletes. Interscholastic athletics may lead to experiences, attitudes, self-perceptions, and treatment that enhance the academic role. Reasons may include an increased interest in school, motivation to perform, heightened sense of self-worth, membership in elite peer groups, and interest in student by coaches, teachers, and parents (Whitley, 1999). Sports activity provides a context for personal assessment and growth (Steiner, McQuivey, Pavelski, Pitts, & Kraemer, 2000). The result of this study showed that athletics had a positive impact on the students' health.

There have also been reports of a negative correlation between athletics and academic achievement. Many believe that athletics in schools is contrary to the values that promote learning and academic performance (Zaugg, 1998). Athletics in urban schools may in fact reduce the academic performance of the school. Instead of graduating and boasting of strong community and business leaders, the school now boasts of students who have been drafted and play in professional sports (Zaugg, 1998). As reported by Zaugg (1998), athletes in revenue sports (basketball and football) do not, on the average, perform as well in the classroom as their non-athlete peers. Athletes may sometimes think they are above the law. Athletes, especially male athletes, may often try to intimidate other students. Athletes may also alienate certain groups within the school (McNeal, 1998). According to Goldman (1991), coaches may try to influence teachers to pass student athletes or encourage teachers to change grades of students who had failed.

Currently there are eighteen interscholastic sports that are offered to students during three athletic seasons at Medford Area Senior High. Medford's policy on student-athletes is the modified no pass, no play rule. Students can fail one class and still remain eligible. If a student fails two classes during the quarter or semester, the student is ineligible to participate in athletics until after the next grading period.

A review of literature shows that students participating in athletics tend to be more successful in the school, in the community, and in their own personal lives. This study will focus on one effect of participation in athletics. The research hypothesis for this study is that students in athletics will have a higher self-concept than those who do not participate in athletics.

Purpose of the Study

The purpose of this research was to determine if differences existed in the self-concept of athletes and non-athletes at the sophomore level as measured by the Piers-Harris Children's Self-Concept Scale.

Null Hypotheses

Null hypothesis #1: There is no significant difference in the areas of behavior, intellectual and school status, physical appearance and attributes, anxiety, popularity, happiness and satisfaction and the total self-concept of students who participate in athletics and students who do not participate in athletics, as measured by the Piers-Harris Children's Self Concept Scale.

Null hypothesis #2: There is no significant difference in the areas of behavior, intellectual and school status, physical appearance and attributes, anxiety, popularity, happiness and satisfaction and the total self-concept of male students who participate in

athletics and male students who do not participate in athletics, as measured by the Piers-Harris Children's Self Concept Scale.

Null hypothesis #3: There is no significant difference in the areas of behavior, intellectual and school status, physical appearance and attributes, anxiety, popularity, happiness and satisfaction and the total self-concept of female students who participate in athletics and female students who do not participate in athletics, as measured by the Piers-Harris Children's Self Concept Scale.

Definition of Terms

Terminology used throughout this paper is defined in the following list.

Athlete – any student who is participating in a WIAA and school sponsored sport.

Non-athlete – any student who is not participating in a WIAA and school sponsored sport.

Self-Concept – a relatively stable set of self-attitudes reflecting both a description and an evaluation of one's own behavior and attributes.

Self-Esteem – evaluation one makes of the self-concept description and more specifically to the degree to which one is satisfied or dissatisfied with it in whole or in part.

WIAA – Wisconsin Interscholastic Athletic Association

Assumptions and Limitations

The study assumes the 2001 spring semester provides an ample representative group of students who are actively involved in sports. The research also assumes the data provided by the Guidance and Student Record's Office at Medford Area Senior High to

be accurate and up to date. Additionally, the researcher assumes that the students truthfully answered all survey questions.

The data that was collected for this research paper was limited to information from the 2000-2001 academic year at Medford Area Senior High and may not be generalized to other high schools.

CHAPTER 2

Literature Review

Introduction

In this chapter, the relationship between athletics and the student in terms of self-concept will be discussed. The chapter will focus on studies that have been conducted regarding the self-esteem in students and athletes in the following categories: behavior; intellectual and school status; physical appearance and attributes; anxiety; popularity; happiness and satisfaction.

Behavior

Generally, research has indicated students who are out for athletics tend to behave better than non-athletes in the secondary schools. Student-athletes often must follow a code of conduct. This code of conduct can include refraining from drinking and smoking, following appropriate behaviors, and maintaining minimum grades in order to maintain eligibility (Medford School Policy Handbook, 2000).

The findings of Zaugg (1998) support the idea that athletes have fewer behavioral problems than non-athletes. This is usually a result of school policies that state if an athlete misses classes (unexcused) they do not play or practice with the team that day. Furthermore, students with detentions or suspensions miss practice and games until the detention is served. Many coaches will often suspend players who have misbehaved during school. Individual coaching philosophy could have the student missing part or all of the game or meets. This is a strong motivation for athletes to exhibit proper conduct. The finding also supports earlier studies that reported lower behavioral problems among athletes. According to a study by Whitley (1999), there is a definite connection

between athletic participation and lower incidences of delinquent behavior. Lower problems in discipline by athletes could be based on athletes' acceptance of authority as demanded by coaches, other school personnel, and game officials.

According to (Whitley, 1999), class attendance was higher in athletes than non-athletes. Athletes, on the average, missed six fewer classes than non-athletes. Zaugg (1998) reported that there were no significant differences in athletes than non-athletes in discipline. However, athletes were absent significantly in fewer classes than non-athletes. Whitley also noted in his study that athletes were sent to the office for discipline less often than non-athletes.

Burnett's study (2001) clearly supports the arguments for the benefits of extracurricular activities. Half the participants had no unexcused absences from school and most never skipped a class, compared to over one-third of non-participants, respectively. Whitley (1999) showed that the average absences, the average number of days missed per year per student in each group, was significantly lower for the athlete group than the non-athlete group.

However, the role of athletes as perpetrators of domestic unrest has increasingly come into question with each new media report of an athlete involved in a legal infraction. (Chandler, Johnson & Carroll, 1999) Chandler, Johnson, and Carroll also reported that several studies have demonstrated that athletes were more often involved than non-athletes in incidents associated with other forms of abusive behavior in the college environment.

Intellectual and School Status

Educators have long acknowledged that children learn best when they are interested. Motivating students in the classroom can be difficult, especially if students are not interested in school. Extracurricular activities are the driving force behind many students' interest in attending school and their feelings of being a community member. These elements are essential to conducting a productive learning environment (Burnett, 2001). Student's need ownership in the classroom to excel and extracurricular activities gives students ownership of the school. There is a sense of belonging which some may not receive outside of the school.

In addition to enhancing the entire school community, athletics provide more direct educational benefits to students. Athletics address the issues of relevance and engagement in learning. Athletes can more easily associate the relevance of instructive information to an ultimate goal. Since high school athletes generally have goals, whether it is completing a season or being a state champion, they become actively engaged in the learning process, rather than a product of the lecture and regurgitation of information often experienced in the classroom. Athletes must take information, directly apply it to a situation, receive feedback from their coaches and peers, and evaluate the information's effectiveness under real-life circumstances (Burnett, 2001). This process during practice and games may often be used in the classroom setting as well.

The result of application and engagement of the learning process can help athletes to attain a higher GPA in school than non-athletes. Whitley (1999) reported that several studies indicated that athlete GPA's were consistently higher than those of non-athletes. Stegman (2000) also concluded that athletes outperformed their non-athletic counterparts

in almost every aspect of academics. Students who participated in extracurricular activities were three times as likely to achieve a 3.0 grade point average and were more likely to aspire to higher education (Burnett, 2001).

Males who participated in both athletic and social activities had higher academic achievement and educational attainment when compared with males who participated only in athletics. However, males who did not participate in any high school activities had the lowest educational performances. Zaugg (1998) reported that athletes were significantly higher than non-athletes in the sciences. In addition, Whitley (1999) reinforced Zaugg's study by indicating that the athletes' average GPA was almost 23% higher than non-athletes' average GPA. Stegman (2000) concurred with Whitley. Stegman found that both male and female athletes outperformed their non-athletic counterparts with respect to GPA and class rank. A study done by Mixon (1995), provided statistical evidence of positive role played by athletics within the mission of higher education. Statistical evidence demonstrates that participants in sports and other extracurricular activities earn better grades than non-participants and record better attendance in school.

Athletes often are more outspoken then non-athletes. Research has indicated leadership skills of students were statistically higher in athletes than non-athletes. This could be the result of the demands of the sport. Athletes in team sports are required to lead and communicate as well as follow directions. Studies reported by Dobosz and Beaty (1999) indicate that students who held both scholar and athlete roles stood out in regard to positive attributes including leadership. Athletes also have higher levels of self-

esteem in conjunction with leadership roles. Participation in athletics appears to increase the potential ability to lead.

Physical Appearance and Attributes

It has been reported in the sport and exercise literature that physical activity has potential benefit both psychologically and physically. It has also been theorized that the perception of physical prowess and increase in level of fitness are related to the development of self-esteem. (Boyd and Hrycaiko, 1997) According to a study children with higher percentage of body fat tend to have lower perceptions in the area of physical appearance (Corbin, Corbin, Pangrazi, Peterson, and Pangrazi, 1997). Perceptions of body attractiveness are very powerful in affecting physical self-esteem and overall self-esteem. Low self-esteem is often associated with some problems identified with overweight adults such as loneliness, lower acceptance, lower earnings and lower marriage rates (Corbin, Corbin, Pangrazi, Peterson, and Pangrazi, 1997).

Another undisputed benefit of athletics is the character-building element of team sports. Educators continue to struggle over how to instill morals and character in children without forcing these critical elements of education into the curriculum. Unfortunately, many educators fail to realize the instrument is already in place. Athletic participation helps develop basic values such as self-confidence, self-respect, self-esteem and competitive spirit. These human elements, unarguably, will aid children in the post-education world. However, the current trend misplaces the value of these traits below the academic development of the child (Burnett, 2001). Denying a student the opportunity to participate in athletics is basically denying the student an invaluable educational opportunity.

Anxiety

Sports teach students that bad calls and good calls even out in sports as in life. (Dickinson, 1999) Officials are humans and can make mistakes. Coaches often try to instill in athletes the internal locus of control towards competition. Athletes can only control their aspect of the game. They are often taught not to worry about things they cannot control. In games, athletes learn to deal with the calls whether they are good or bad. Sports help the athletes to make decisions that they feel is right and to believe in these decisions. "Sports builds character" is an acceptable slogan for many sports advocates. One of the objectives of secondary school athletic programs is to instill social values such as sportsmanship in our students (Green and Gabbard, 1999).

Many students experience anxiety in many ways, such as being sad, shy, nervous, and unhappy about certain aspects of their life. Continued feelings of anxiety over time could lead to depression. “Depression is associated with low levels of norepinephrine and regular exercise increases this neurotransmitter” (Akande, VanWyk, & Osagie, 2000, p. 5). Sports and exercise can be valuable resources for combating some of these stresses in the students. Exercise could also be used to enhance the body image and increase the feelings of self-worth. When students feel physically fit, they feel better about themselves, thus possibly reducing their levels of depression.

A moderate level of sports involvement (three to six hours per week) was associated with less depression as compared with a low level of sports involvement (two hours or less per week). As to the relationship between low sports involvement and depression, low levels of exercise are associated with low levels of serotonin, a neurotransmitter that may play a role in depression. Further research is needed to identify factors that help

explain the relationship between sports involvement and depression (Sanders, Field, Diego, & Kaplan, 2000).

Investigations involving male and female athletes of all ages and in a variety of sports indicated that self-esteem influences feeling of physical self-efficacy, self-efficacy, self-confidence, anxiety levels and perceptions of control (Boyd & Yin, 1996).

Popularity

Athletes tend to be more popular than the rest of the students. Schools tend to report more on these extracurricular activities and thus athletes are more "well known". Sport participation for males continues as a primary determinant of popularity among peers and as an important basis for self-identity (Holland & Thomas, 1995). Males selected the role of star athlete most frequently than other roles in the school.

Extracurricular activities play key roles in developing a school culture. Schools generate internal cultures that revolve around groups that students form. These groups are partially dependent on membership status in school-sponsored activities (McNeal, 1998). Sports are a way of life for many students in schools. In research done by Holland and Andre (1999), students preferred to be remembered after high school as athletic stars over brilliant student, leader in activities, and most popular. As reported by Holland and Andre (1999), a study was found that showed a slight, but statistically significant, positive relationship between total activity participation and academic achievement, educational aspiration, college attendance, social and academic self-concept, taking advanced courses, and time spent on homework. Participation in extra curricular activities typically facilitated academic and social outcomes rather than detracted from them (Holland and Andre, 1999).

Happiness and Satisfaction

According to Serbu (1997), there is a belief that the experiences gained in athletic participation influences athletes in many areas of life including job satisfaction and life satisfaction. Athletics have usually been thought of as a way to teach youth skills necessary for success in later life. Athletes are taught skills and processes as well as coping strategies.

Social recognition of sport participation and competition are external sources of enjoyment for many. Student-athletes often enjoy being rewarded for their work and dedication. In many schools, athletes are recognized through announcements, assemblies, and newspapers. This drive to be popular especially in males is often the motivating force for their performance in the athletic field. In a study by Serbu (1997), Athletes believed that there was a positive relationship between their level of competitiveness in college athletics and later success and satisfaction. Experiences gained through athletic participation often influence athletes in many areas of life, including job satisfaction and life satisfaction. According to several coaches, "a sport imitates life". Sports often have been thought of as the method of teaching youth skills necessary for success later in life. Moderately successful athletes often enjoy the fellowship with other athletes. According to Sanders, Field, Diego, & Kaplan, it was found that moderate sports participants had lower depression scores than low participants.

Conclusion

According to Sharpe, Brown, & Crider (1995) it has been hypothesized that promoting good sportsmanship in the context of sports-related activities facilitates the development of social. This hypothesis stems from the highly interactive, competitive,

and inherently conflict-oriented character of team sports and the resulting need for either participant or external sources of resolution. Sharpe, Brown, & Crider further explained that the social character of team sport settings may be measured by increases in students' independent leadership and conflict-resolution behaviors, greater percentages of time spent in the activity to be played, efficient organization, and reduced incidences of off-task behaviors.

Recent studies have also shown that athletes outscored their non-athlete peers on the leadership ability measure. (Dobosz and Beaty, 1999) The theory that the type of personal and social behavior associated with athletic training and participation may increase or at least strengthen high school students' leadership potential.

Many believe that high school athletic and non-athletic activities are not only supportive of the academic mission of schools but are inherently educational and vital to the total development of students. These educators further argue that athletic participation develops many basic values such as self-esteem and self-respect and denying the opportunity to participate in extracurricular activities is effectively denying a valid educational opportunity (Burnett, 2001).

Participation in athletics takes a considerable amount of dedication by athletes, especially to make choices regarding athletic, academic, and personal commitments. Athletes are matching or exceeding non-athletes' academic and behavioral performance while participating in a competitive level of athletics (Zaugg, 1998).

There are those in the public that believe that athletics and academics cannot go together. Based on research, there is a need to balance academics and athletics in schools. In order to balance academics and athletics, we first must understand the impact

athletics have on the student's self-perception and community involvement as well as performance in school. As schools try to deal with the limited budgets, extra curricular activities tend to be the first ones cut.

CHAPTER 3

Methodology

This research examined if differences exist in the self-concepts of students who participated in athletics and those who do not. This chapter contains description of the subjects, the instrument, the procedures and the data analysis used.

Population

The school district in which this study was conducted consists of a large, rural population, predominantly Caucasian. This study focused on the students in the tenth grade at the Medford Area Senior High. Athletes are those that have or are currently out for a WIAA affiliated sport during the 2000-2001 school year.

Data was collected from coaches' rosters during the spring of 2001 to determine athletes and non-athletes. A survey was conducted in the spring semester of 2001 of 80 students in the tenth grade at Medford Area Senior High to determine the students' self-esteem.

Selection of Sample

Sophomores were asked to voluntarily complete a survey regarding self-esteem. There are 205 students in the sophomore class and about 50 percent of the sophomore population is out for a sport. Of the students that are out for a sport, 50 percent are males and 50 percent are females. Therefore a sample of 40 athletes and 40 non-athletes will be tested. Of the 40 in each category, 50 percent will be females and 50 percent will be males.

Instrumentation

The researcher received written permission from the students and parents for the students to complete a survey. The researcher identified athletes and non-athletes from fall, winter and spring coaches' roster for the 2000-2001 school year.

The Piers-Harris Children's Self-Concept Scale was administered to randomly selected students between May 16 and May 21 in the morning by the researcher in a designated room in the high school. The scale measures 1) physical appearance and attributes, 2) anxiety, 3) intellectual and school status, 4) behavior, 5) happiness and satisfaction, 6) popularity, and 7) total self-concept.

The Piers-Harris Children's Self-Concept Scale is a highly reliable and valid instrument. Internal consistency estimates for the total score range from .88 - .93 and the test – retest reliability coefficients range from .62 - .96 (Piers, 1984). Information on the validity and reliability of the specific subscales is lacking.

Data collection and analysis procedures

Data was obtained through a two-step process. First, coaches' rosters were used to identify athletes and non-athletes. Second, the Piers-Harris Children Scales was administered. The resulting data were grouped into four major categories, 1) female athletes, 2) male athletes, 3) female non-athletes and 4) male non-athletes. Data was compiled and self-concepts were evaluated.

CHAPTER 4

Results and Discussion

Introduction

The purpose of this research was to determine if differences existed in the self-concept of athletes and non-athletes at the sophomore level as measured by the Piers-Harris Children's Self-Concept Scale. Self-concept and self-esteem play important roles in children's decisions to engage in health behavior such as athletics and extra curricular activity. (King, 1997) Evidence from a study (Filozof, Albertin, Jones, Steme, Myers, & McDermott, 1998) suggests students' academic performance has at least a modest influence on the students' self-esteem both at school and in the home. "The child who masters a difficult problem not only feels good, but develops something more powerful – confidence!" (McGerald and Nidds, 1996)

The results of this study are based on a survey of 80 out of 165 members of the class 2003. Students were divided into 4 separate groups: male athletes, female athletes, male non-athletes, and female non-athletes. The first 20 in each group were administered the Piers-Harris Children's Self-Concept Scale.

Piers-Harris Children's Self-Concept Scale was the instrument used to aide in the assessment of the self-concept of the students. Items are scored in either a positive or negative direction to reflect the student's self-evaluation. A high score on the scale suggests a positive self-evaluation while a low score suggests a negative self-evaluation. The self-evaluation was designed to assess how students feel about themselves. The Piers-Harris Self-Concept Scale provided six "cluster scales" which were developed and

refined using several factor analyses and include most but not all of the 80 items of the total scale (Piers, 1996).

The Response Bias Index and Inconsistency Index were useful in determining the validity of a particular student. The Response Bias Index measures the degree to which a child responded independently to the individual items. This index helps to prevent the positive or negative response tendencies. The Inconsistency Index measures the extent to which the student's responses are internally consistent across the individual item. The Piers-Harris Self-Concept Scale measures an individual student's self-evaluative attitudes and behaviors, which have a bearing on self-concept. The six clusters and the total self-concept scores are reviewed and the three null hypotheses are evaluated.

Behavior

Table 1

Comparison of Behavior Scores

	M	SD	t stat	t critical
Athletes	54.28	9.27	3.42	1.99
Non-Athletes	48.85	10.36		
Male Athletes	53.15	10.80	1.45	2.02
Male Non-Athletes	46.25	10.23		
Female Athletes	55.40	7.56	0.66	2.02
Female Non-Athletes	51.45	10.07		

The behavior scores of all groups are shown in Table 1. On observation, the mean behavior score was higher in the athletes groups than the non-athletes group. Female athletes averaged almost 4 points better than their counterparts, whereas male athletes

averaged almost 7 points better than their counterparts. Overall the athletes averaged about 5 ½ points higher than non-athletes for the mean behavior score. A t-test was run and the results indicated a statistically significant difference at the .05 levels between athletes and non-athletes. However, when separating into gender groups, the t-test showed no significant differences at the .05 between male athletes and male non-athletes or female athletes and female non-athletes. The null hypothesis #1 stating that there is no significant difference in the area of behavior of students who participated in athletics and those that did not participate in athletics is rejected. Null hypotheses #2 and #3 are both accepted since the results do not show significant differences.

Intellectual and School Status

Table 2

Comparison of Intellectual and School Status Scores

	M	SD	t stat	t critical
Athletes	53.85	8.24	3.13	1.99
Non-Athletes	47.88	8.96		
Male Athletes	51.50	6.86	1.39	2.02
Male Non-Athletes	46.00	8.50		
Female Athletes	56.20	8.99	1.51	2.02
Female Non-Athletes	49.75	9.23		

The intellectual and school status scores of all groups are shown in Table 2. On observation, the mean intellectual and school status score was higher in the athletes groups than the non-athletes group. Female athletes averaged almost 6 ½ points better than their counterparts, whereas male athletes averaged almost 5 ½ points better than

their counterparts. Overall the athletes averaged about 6 points higher than non-athletes for the mean intellectual and school status score. A t-test was run and the results indicated a statistically significant difference at the .05 levels between athletes and non-athletes. However, when separating the groups, the t-test showed no significant differences at the .05 between male athletes and male non-athletes or female athletes and female non-athletes. The null hypothesis #1 stating that there is no significant difference in the area of behavior of students who participated in athletics and those that did not participate in athletics is rejected. Null hypotheses #2 and #3 are both accepted since the results do not show significant differences.

Physical Appearance and Attributes

Table 3

Comparison of Physical Appearance and Attribute Scores

	M	SD	t stat	t critical
Athletes	57.48	9.67	3.13	1.99
Non-Athletes	53.05	8.95		
Male Athletes	56.80	8.28	0.83	2.02
Male Non-Athletes	52.30	9.89		
Female Athletes	58.15	9.75	0.74	2.02
Female Non-Athletes	53.80	9.65		

The physical appearance and attributes scores of all groups are shown in Table 3. On observation, the mean physical appearance and attributes score was higher in the athletes groups than the non-athletes group. Female athletes averaged over 4 ½ points better than their counterparts, whereas male athletes averaged almost 4 ½ points better than their

counterparts. Overall the athletes averaged about 4 ½ points higher than non-athletes for the mean physical appearance and attributes score. A t-test was run and the results indicated a statistically significant difference at the .05 levels between athletes and non-athletes. However, when separating into gender groups, the t-test showed no significant differences at the .05 between male athletes and male non-athletes or female athletes and female non-athletes. The null hypothesis #1 stating that there is no significant difference in the area of behavior of students who participated in athletics and those that did not participate in athletics is rejected. Null hypotheses #2 and #3 are both accepted since the results do not show significant differences.

Anxiety

Table 4

Comparison of Anxiety Scores

	M	SD	t	p
Athletes	56.38	9.19	2.13	1.99
Non-Athletes	53.78	10.65		
Male Athletes	57.40	8.89	0.46	2.02
Male Non-Athletes	56.85	12.09		
Female Athletes	55.35	9.59	0.94	2.02
Female Non-Athletes	50.60	8.13		

The anxiety scores of all groups are shown in Table 4. On observation, the mean anxiety score was higher in the athletes groups than the non-athletes group. Female athletes averaged almost 5 points better than their counterparts, whereas male athletes averaged just over ½ point better than their counterparts. Overall the athletes averaged

about 2 ½ points higher than non-athletes for the mean anxiety. A t-test was run and the results indicated a statistically significant difference at the .05 levels between athletes and non-athletes. However, when separating the groups, the t-test showed no significant differences at the .05 between male athletes and male non-athletes or female athletes and female non-athletes. The null hypothesis #1 stating that there is no significant difference in the area of behavior of students who participated in athletics and those that did not participate in athletics is rejected. Null hypotheses #2 and #3 are both accepted since the results do not show significant differences.

Popularity

Table 5

Comparison of Popularity Scores

	M	SD	t stat	t critical
Athletes	53.13	8.92	3.14	1.99
Non-Athletes	49.83	9.12		
Male Athletes	52.20	5.54	0.59	2.02
Male Non-Athletes	51.50	8.96		
Female Athletes	54.05	6.29	1.53	2.02
Female Non-Athletes	48.15	9.20		

The popularity of all groups is shown in Table 5. On observation, the mean popularity score was higher in the athletes groups than the non-athletes group. Female athletes averaged almost 6 points better than their counterparts, whereas male athletes averaged just over ½ point better than their counterparts. Overall the athletes averaged over 3 ½ points higher than non-athletes for the mean popularity score. A t-test was run

and the results indicated a statistically significant difference at the .05 levels between athletes and non-athletes. However, when separating the groups, the t-test showed no significant differences at the .05 between male athletes and male non-athletes or female athletes and female non-athletes. The null hypothesis #1 stating that there is no significant difference in the area of behavior of students who participated in athletics and those that did not participate in athletics is rejected. Null hypotheses #2 and #3 are both accepted since the results do not show significant differences.

Happiness and Satisfaction

Table 6

Comparison of Happiness and Satisfaction Scores

	M	SD	t stat	t critical
Athletes	55.18	5.71	3.10	1.99
Non-Athletes	51.70	9.82		
Male Athletes	53.15	5.84	0. 55	2.02
Male Non-Athletes	52.55	10.53		
Female Athletes	57.20	4.92	1.82	2.02
Female Non-Athletes	50.85	9.24		

The happiness and satisfaction scores of all groups are shown in Table 6. On observation, the mean happiness and satisfaction score was higher in the athletes groups than the non-athletes group. Female athletes averaged almost 6 ½ points better than their counterparts, whereas male athletes averaged about ½ point better than their counterparts. Overall the athletes averaged just about 3 ½ points higher than non-athletes for the mean happiness and satisfaction score. A t-test was run and the results indicated a statistically

significant difference at the .05 levels between athletes and non-athletes. However, when separating the groups, the t-test showed no significant differences at the .05 between male athletes and male non-athletes or female athletes and female non-athletes. The null hypothesis #1 stating that there is no significant difference in the area of behavior of students who participated in athletics and those that did not participate in athletics is rejected. Null hypotheses #2 and #3 are both accepted since the results do not show significant differences.

Total Score

Table 7

Comparison of Total Scores between Athletes and Non-Athletes

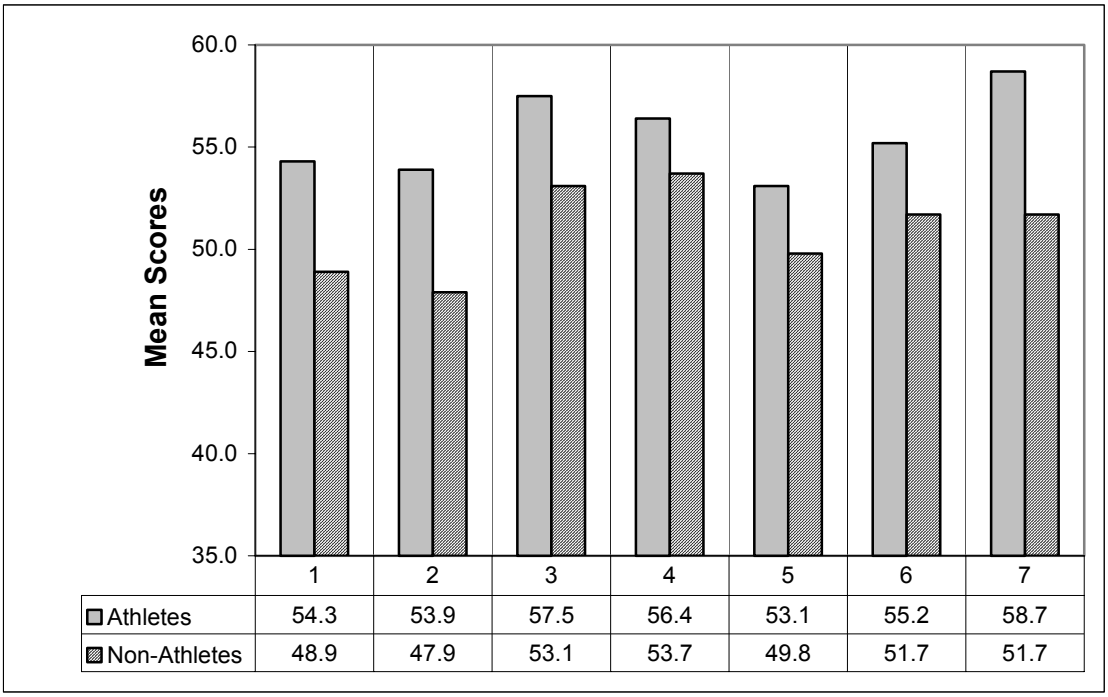
	M	SD	t stat	t critical
Athletes	58.65	8.13	5.14	1.99
Non-Athletes	51.68	7.63		
Male Athletes	57.55	7.69	1.77	2.02
Male Non-Athletes	51.20	7.47		
Female Athletes	59.75	7.59	2.10	2.02
Female Non-Athletes	52.15	8.92		

The total scores of all groups are shown in Table 7. On observation, the mean total score was higher in the athletes groups than the non-athletes group. Female athletes averaged over 7 ½ points better than their counterparts, whereas male athletes averaged almost 6 ½ points better than their counterparts. Overall the athletes averaged almost 7 points higher than non-athletes for the total score. A t-test was run and the results indicated a statistically significant difference at the .05 levels between athletes and non-

athletes. When separating the groups, the t-test showed significant differences between female athletes and female non-athletes at the .05 levels. However there was no significant difference at the .05 between male athletes and male non-athletes. The null hypothesis #1 stating that there is no significant difference in the area of behavior of students who participated in athletics and those that did not participate in athletics is rejected. Null hypothesis #2 is accepted since the results do not show significant differences. But null hypothesis #3 is rejected since there is a significant difference between the total score of female athletes and female non-athletes.

Conclusion

Figure 1: Comparison of mean scores of athletes and non-athletes



	1	2	3	4	5	6	7
Athletes	54.3	53.9	57.5	56.4	53.1	55.2	58.7
Non-Athletes	48.9	47.9	53.1	53.7	49.8	51.7	51.7

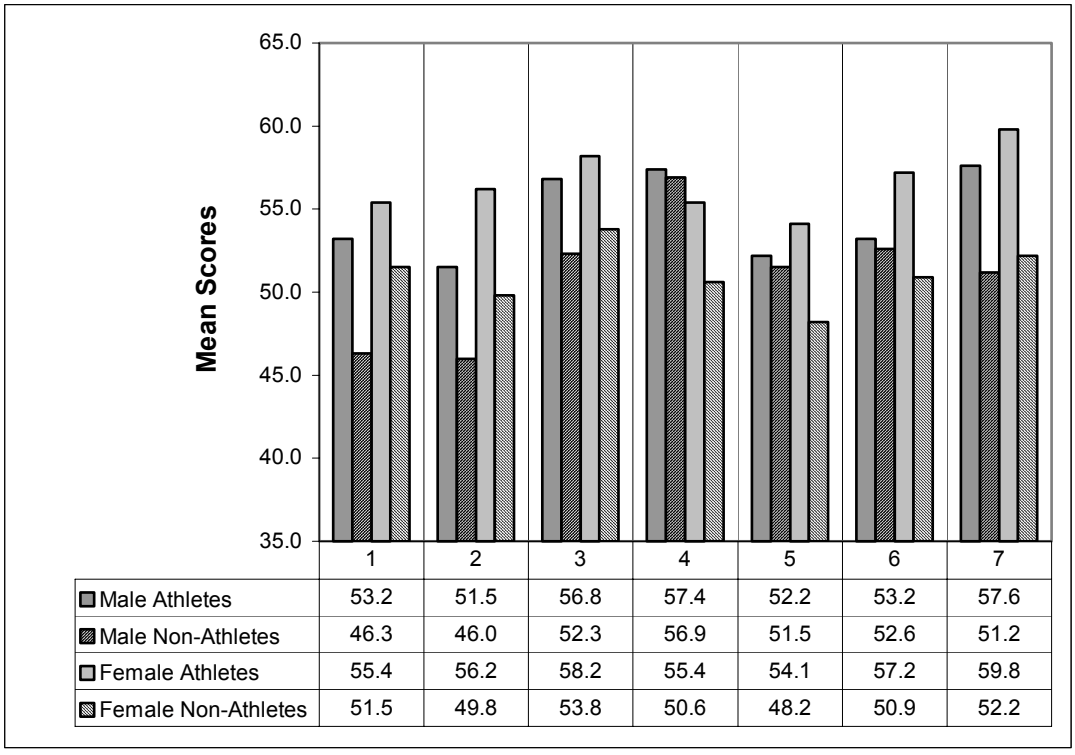
1 = Behavior, 2 = Intellectual and School Status, 3 = Physical Appearance and Attributes,

4 = Anxiety, 5 = Popularity, 6 = Happiness and Satisfaction, 7 = Total Score

Summaries of the results indicate that there are significant differences in the six clusters and the total scores between all athletes and non-athletes as measured by the

Piers-Harris Children's Self-Concept Scale. On observation of Figure 1, athletes convincingly outscored non-athletes in all areas of the self-concept scale, especially the total score.

Figure 2: Comparison of mean scores by subgroups



	1	2	3	4	5	6	7
Male Athletes	53.2	51.5	56.8	57.4	52.2	53.2	57.6
Male Non-Athletes	46.3	46.0	52.3	56.9	51.5	52.6	51.2
Female Athletes	55.4	56.2	58.2	55.4	54.1	57.2	59.8
Female Non-Athletes	51.5	49.8	53.8	50.6	48.2	50.9	52.2

1 = Behavior, 2 = Intellectual and School Status, 3 = Physical Appearance and Attributes,

4 = Anxiety, 5 = Popularity, 6 = Happiness and Satisfaction, 7 = Total Score

Although it was not significant, Figure 2 easily shows that male athletes and female athletes outscore their counterparts by a considerable margin. Female athletes tend to score the highest on the self-concept scale. Male non-athletes tend to score the lowest on behavior, intellectual & school status, and physical appearance & attributes where as female non-athletes scored the lowest on anxiety, popularity, and happiness & satisfaction.

Appendices A, B, C, and D show the raw t-scores from the survey group into four categories: male athletes, male non-athletes, female athletes, and female non-athletes.

CHAPTER 5

Summary, Conclusions, and Recommendations

Introduction

This final chapter contains a review of the study of the effects of athletics on student's self-concept among tenth graders. This chapter summarizes the purpose of the study, methods and procedures followed, and the data analysis used. Results of the study are reviewed, and conclusions are stated. Educational implications, research limitations, and recommendations for further study conclude the chapter.

Summary of the Study

The purpose of this study was to determine if differences existed in the self-concept of athletes and non-athletes at the sophomore level as measured by the Piers-Harris Children's Self-Concept Scale. The question had been raised as to whether or not athletics are important or necessary in schools for the development of the student as a whole. Tenth grade students attending Medford Area Senior High were asked to take the Piers-Harris Children's Self-Concept Scale. A total of 80 students took the Piers-Harris Children's Self-Concept Scale.

Students included in this study were grouped according to their gender and whether or not they were in athletics. The distribution of the students was relatively proportional to the entire tenth grade student body. There were 20 male athletes and 20 male non-athletes as well as 20 female athletes and 20 female non-athletes. A t-test was utilized to statistically analyze the data at the .05 confidence level.

Results and Conclusions

Upon examination of the six clusters and the total score, it was determined that the only significant result at the .05 level was that athletes in general had a higher self-concept than non-athletes. When comparing the results of male athletes to male non-athletes or female athletes to female non-athletes, it was not significant at the .05 level.

Using Figure 1 and Figure 2, it is observed that students participating in athletics, whether male or female, outscored their counterparts on the self-concept scale. All of the mean scores of the athletes were higher when compared to their non-athletic counterparts. The biggest difference in mean scores for males was in the area of behavior. Male athletes averaged almost seven points higher than male non-athletes in the area of behavior. The biggest differences in mean scores for females were in the areas of happiness & satisfaction and intellectual & school status. Female athletes averaged over six points higher than the female non-athletes in these areas.

Female athletes scored the highest on the self-concept scale while male non-athletes scored the lowest. In fact female athletes scored higher in every category including total score. Male non-athletes scored the lowest in behavior and intellectual & school status. These scores were below the average.

Educational Implications

Although there may not be significant differences between male athletes and male non-athletes or female athletes and female non-athletes, there is a significant difference between athletes and non-athletes in the self-concept of students. Therefore, the results suggest that educational policy makers should view athletics as an essential part of the child's education.

Limitations of the Study

As in any research study, there are limiting factors to be considered when evaluating the information presented. This study is no exception. The first factor to consider is the size of the study. This was a small study conducted in a rural school district over a span of one year. In the education profession, it is not uncommon to have a class of students with higher abilities and self-concepts than another class the next year. It is quite possible that the results of this study would be different if it were to be repeated in the same school in another year.

Another limitation of this study is the fact that the study assumes the 2001 spring semester provides an ample representative group of students who are actively involved in sports. Approximately 50 percent of the tenth grade was males and 50 percent of both males and females were athletes.

One final limitation may be truthfulness of the students in answering the survey questions. Students may try to answer what the researcher wants them to answer. However, the Piers-Harris Self-Concept Scale has a certain measure of reliability.

Recommendations for Further Study

The results of the study were based on a small, rural, school district. The population for the study was also small. It is recommended that the study be conducted in several other districts before generalizations are made.

It is also recommended that the study be expanded throughout more grade levels. It would be interesting to examine the progress of students throughout high school to see if athletic participation correlates to their self-concept as the students take on more jobs and

responsibilities. Perhaps even tracking the self-concept of the students starting in seventh grade through twelfth grade.

A final recommendation for further study would be to explore the role gender plays in the student's self-concept. Researchers have determined that girls mature faster than boys. Perhaps taking a closer look at the ages of males and females participating in athletics. A comparison of males versus females both athletes and non-athletes could be researched which could give us a clearer idea of the effects of participation in athletics has on the student's self-concept.

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Appendix A

Raw t-scores of male athletes

Student	1	2	3	4	5	6	7	8	9
#1	57	49	47	52	56	69	51	52	61
#2	53	39	54	41	49	52	55	52	52
#3	53	49	47	47	53	59	55	47	51
#4	53	49	47	47	53	59	55	47	51
#5	48	46	54	52	43	63	64	52	55
#6	48	59	66	58	64	55	64	52	65
#7	48	59	58	58	64	55	47	52	62
#8	48	53	58	55	69	69	55	63	68
#9	53	54	36	47	53	63	47	52	49
#10	48	51	66	58	56	52	51	56	56
#11	53	57	47	47	64	59	55	63	58
#12	48	49	66	58	64	59	55	52	74
#13	61	65	39	47	69	52	51	42	65
#14	64	65	45	47	56	47	47	52	48
#15	48	59	58	58	64	69	51	63	52
#16	48	57	47	58	64	69	55	52	60
#17	79	66	41	34	43	38	44	52	42
#18	57	53	66	55	56	55	55	63	61
#19	48	49	66	55	53	59	51	52	59
#20	68	49	36	45	53	63	47	47	51

1 = Inconsistency Index, 2 = Response Bias Index, 3 = Behavior, 4 = Intellectual an School Status

5 = Physical Appearance, 6 = Anxiety, 7 = Popularity, 8 = Happiness and Satisfaction, 9 = Total Score

Appendix B

Raw t-scores of male non-athletes

Student	1	2	3	4	5	6	7	8	9
#1	61	65	23	30	37	41	37	47	32
#2	53	49	43	43	43	52	44	56	47
#3	48	48	54	47	56	69	55	56	53
#4	53	58	66	58	53	49	37	36	54
#5	48	53	54	63	56	59	61	47	62
#6	64	54	39	45	64	69	61	63	55
#7	57	59	35	38	56	69	51	52	49
#8	48	53	41	38	53	52	55	63	48
#9	57	60	39	43	69	69	55	56	48
#10	48	49	58	58	56	55	55	63	62
#11	68	39	43	45	49	59	61	47	48
#12	48	31	39	33	29	69	55	32	46
#13	48	46	58	47	53	69	55	56	57
#14	61	44	41	43	49	69	55	63	52
#15	53	62	43	45	64	59	61	63	55
#16	48	57	58	55	60	55	41	52	60
#17	61	57	45	41	49	43	51	52	47
#18	48	59	58	55	53	55	61	56	59
#19	53	58	53	50	37	23	32	28	39
#20	61	63	45	43	60	52	47	63	51

1 = Inconsistency Index, 2 = Response Bias Index, 3 = Behavior, 4 = Intellectual an School Status

5 = Physical Appearance, 6 = Anxiety, 7 = Popularity, 8 = Happiness and Satisfaction, 9 = Total Score

Appendix C

Raw t-scores of female athletes

Student	1	2	3	4	5	6	7	8	9
#1	57	64	50	52	60	47	61	52	56
#2	48	55	47	63	64	69	61	63	61
#3	48	54	66	70	69	69	61	63	79
#4	48	48	54	58	56	55	55	56	62
#5	57	49	54	63	43	69	61	56	63
#6	57	62	45	58	60	69	55	56	55
#7	48	46	66	63	43	49	61	47	58
#8	48	66	54	58	69	41	55	56	57
#9	48	54	66	47	64	52	55	63	58
#10	57	59	39	43	43	55	39	56	48
#11	53	59	58	63	69	69	61	63	69
#12	48	54	58	37	47	47	51	56	49
#13	48	55	66	58	56	49	51	56	63
#14	53	59	54	58	69	55	55	63	65
#15	57	65	58	58	69	52	44	63	61
#16	57	59	58	45	47	38	47	52	49
#17	53	58	58	63	64	59	51	52	64
#18	48	59	45	41	60	49	47	56	51
#19	48	53	54	63	47	55	55	52	59
#20	48	55	58	63	64	59	55	63	68

1 = Inconsistency Index, 2 = Response Bias Index, 3 = Behavior, 4 = Intellectual an School Status

5 = Physical Appearance, 6 = Anxiety, 7 = Popularity, 8 = Happiness and Satisfaction, 9 = Total Score

Appendix D

Raw t-scores of female non-athletes

Student	1	2	3	4	5	6	7	8	9
#1	48	48	58	58	64	63	55	63	67
#2	53	53	66	43	46	38	47	52	48
#3	57	64	31	33	43	49	55	36	40
#4	53	51	58	45	46	47	32	47	46
#5	48	63	58	52	64	59	51	63	59
#6	79	60	39	45	53	47	44	36	45
#7	57	59	54	63	60	52	47	56	55
#8	48	53	58	58	56	59	55	52	62
#9	57	57	41	50	56	55	47	56	51
#10	48	60	50	59	64	59	61	56	61
#11	48	48	47	47	49	55	51	47	52
#12	53	60	39	34	34	33	23	36	31
#13	48	63	50	47	60	47	44	56	56
#14	53	53	58	50	56	55	55	56	57
#15	48	63	66	52	69	47	44	63	57
#16	48	48	58	50	60	59	61	56	58
#17	48	59	47	45	43	43	41	42	44
#18	57	58	35	39	37	38	44	36	40
#19	61	58	58	70	56	55	55	56	57
#20	48	65	58	55	60	52	51	52	57

1 = Inconsistency Index, 2 = Response Bias Index, 3 = Behavior, 4 = Intellectual an School Status

5 = Physical Appearance, 6 = Anxiety, 7 = Popularity, 8 = Happiness and Satisfaction, 9 = Total Score