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SELF-EFFICACY DIFFERENCES IN HIGH SCHOOL ATHLETES AND NON-ATHLETES AND BY GENDER

A Chapter Style Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Education Specialist in School Psychology

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SELF-EFFICACY DIFFERENCES IN HIGH SCHOOL ATHLETES AND NON-ATHLETES AND BY GENDER

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We recommend acceptance of this thesis in partial fulfillment of the candidate's requirements for the degree of Education Specialist in School Psychology

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ABSTRACT


Educational development is important for the success of society. Self-efficacy, or the belief that one can complete an activity successfully, has become an important attribute in the drive for successful students. This concept has broadened to look at the generalized effects of self-efficacy on the development of students. This study examined if generalized self-efficacy ratings differed between high school athletes and non-athletes and/or by gender. Previous research has indicated that participation in high school athletics has multiple benefits for students. In addition, the relationship between gender and self-efficacy has been the focus of many researchers and typically significant differences are found. This study was designed to expand the research base on generalized self-efficacy and how it varies depending on high school athletic status and gender. Data was collected from 516 students in the 11th and 12th grade utilizing self-report measures. Results showed a significant effect of athletic status on generalized self-efficacy. High school athletes reported a significantly higher generalized self-efficacy rating than non-athletes. There was also a main effect of athletic status shown on subscale of talent on the MJSES of participation in athletics. Together with results of previous research, this study suggests school psychologists may play a crucial role evaluating general self-efficacy, and developing and monitoring interventions designed to increase self-efficacy.
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CHAPTER I

INTRODUCTION

Statement of the Problem

According to a National Federation of State High School Associations (NFHS) Survey, high school athletic participation set an all-time high of 7,536,753 in the 2008-2009 school year. In addition, boys and girls participation figures reached all-time highs, with 3,114,091 girls and 4,422,662 boys participating in 2008-09; the girls figure increased by 56,825, while the boys figure increased by 50,547 from the previous school year (NFHS). Based on the NFHS survey, it was also determined that 55.2 percent of students enrolled in high school participated in athletics, a slight increase from the previous year's 54.8 percent. With this high percentage of high school students being involved in athletics, there is a need to evaluate the effects high school athletics has on its participants.

The National Federation of State High School Associations (2009) claimed that participation in high school activities is a valuable part of the overall high school experience. Additionally, a variety of studies have examined the positive relationships of high school athletics on a variety of factors, such as leadership skills, self-esteem, advanced academic goals, and academic achievement (Eide & Ronan, 2001; National Federation of State High School Athletics, 2009; Snyder & Spreitzer, 1981). Student athletes also report healthier eating habits, increased parental support, and decreased
anxiety and depression (Action for Healthy Kids, 2004; Harrison & Narayan, 2003). However, the specific effect of high school athletic participation on generalized self-efficacy ratings has yet to be extensively researched.

Albert Bandura (1986), a leading theorist in the area of self-efficacy, hypothesized that individuals possess a self-system allowing them to maintain a measure of control over their thoughts, feelings, and actions. In a similar vein, Pajares (1996) conceptualized self-efficacy as “defined in terms of individuals’ perceived capabilities to attain designated types of performances and achieve specific results” (p. 546). The aspect of attaining definite outcomes through one’s own aptitudes is what differentiates self-efficacy from other theories regarding perception of self.

Within the past few decades, researchers such as Sherer, Maddux, Mercandate, Prentice-Dunn, Jacobs, & Rodger (1982), have extended Bandura’s concept of task-specific self-efficacy to include the concept of generalized self-efficacy. Generalized self-efficacy is the expectancy that one will succeed in a variety of situations (Sherer et al.). Low levels of self-efficacy may lead an individual to think that things are tougher than they actually are. These beliefs and thoughts may lead to stress, depression, and a “narrow vision of how best to solve a problem” (Pajares, 1996, p. 545). On the other hand, high self-efficacy may aide in an individual feeling capable and confident when confronted with difficult activities.

Purpose and Significance of the Study

The concept of generalized self-efficacy is still underdeveloped in terms of the amount of research conducted on this issue especially among adolescents. Thus, an initial
function of this research will be to provide further support for the construct of generalized self-efficacy. The main purpose of this study will be to evaluate the relationship between high school adolescents’ participation in high school athletics and their level of generalized self-efficacy. Specifically, the study will examine the differences in generalized self-efficacy levels among males and females participating in Varsity athletics and those not involved with Varsity athletics.

Although hundreds of studies have been conducted with high school adolescents and athletes, the main focus of this research will be on Varsity athletic participation and its effect on generalized self-efficacy. The current educational shift is to look at self-perceptions (e.g., self-efficacy, self-concept) within an educational context (Appleton, Christensen, & Furlong, 2008; Pajares & Schunk, 2001). In addition, current education practitioners are looking at direct forms of assessment to better understand influences on students’ behaviors and student self-efficacy and how to link those to effective interventions and progress monitoring (Church, Elliot, & Gable, 2001; Cleary, 2009; Eccles & Wigfield, 2002; Schunk, 1981; Tilly, 2008; Urdan & Midgley, 2003). This gives additional support for research on self-efficacy and possible differences between groups of students as research could provide possible links to intervention.

This is imperative to school psychologists as they have connections to students within the schools, and school psychologists are often seen as the liaison between different systems (e.g., family, community) and different professionals (e.g., child psychologists, medical doctors). Thus it is important for school psychologists to remain
up to date on current issues, as they are vital advocates within the educational system as well as outside the school.

Additionally, this focus on a student's sense of self as a principle component of academic motivation is grounded on the assumption that the beliefs that students create, develop, and hold to be true about themselves are vital forces in their success or failure in school. In important ways, however, current conceptions of academic self-beliefs (e.g., self-efficacy) represent a marked departure from previous ones related to self-esteem (Pajares & Schunk, 2001).

Furthermore, as an increasing number of students participate in high school athletics, it is important to understand the benefits athletics potentially create for the student. Currently there is research suggesting a variety of benefits of athletics such as increased leadership skills, self-esteem, and academic achievement (Eide & Ronan, 2001; National Federation of State High School Athletics, 2003). Due to little to no information on the relationship between self-efficacy and high school athletics there is a need to determine the relationship between these variables. Therefore, the results of this study may shed light on generalized self-efficacy and its connection to participation in high school athletics.

**Research Questions**

Given the purposes of this study, the following research questions will be addressed:

R1: Are there significant differences in self-efficacy ratings between high school athletes/non-athletes and/or by gender?
R2: Will differences be found in self-efficacy ratings in the three major subscales operating within the scale (talent, context, and effort) across athletic status and/or gender?

Definition of Terms

Several terms that are important in the consideration of this topic include *self-efficacy*, *generalized self-efficacy*, and *athletic participation*.

*Self-efficacy* refers to “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p.3). For the purpose of this study, *generalized self-efficacy* is defined as the expectancy that one will succeed in a variety of situations (Sherer et al., 1982).

For the purpose of this study, *athletic participation* will be defined as participation in a high school Varsity level sport (e.g., football, volleyball, soccer). Students participating in athletics outside of school as well as students participating in athletics on the Junior Varsity level are excluded from the definition of *athletic participation* to keep the sample population homogeneous. This will be done since athletics outside of school, such as club sports, are not affiliated with the school thus not requiring the upholding of academic grades that Varsity sport participation requires. This reflects the result of a study by Owens, Morris, and Lieberman (2001), on high school dropouts, which found that participation in high school athletics significantly decreased the frequency of dropping out of high school, suggesting that athletic participation increases the level of academic motivation for participants.
CHAPTER II

LITERATURE REVIEW

Introduction

The following discussion describes the past and recent theoretical positions salient to the topic of self-efficacy. Also explored are recent studies and data on participation in Varsity level high school athletics. This review of literature begins with a short introduction where the development of the self-efficacy theory is explored via a discussion of recent psychology and education interactions. Next is an in-depth discussion on the topic of self-efficacy, starting with Bandura's theory of self-efficacy, followed by the development of self-efficacy (e.g., sources of self-efficacy). Following this is a review of recent research looking at self-efficacy, with a specific emphasis on generalized self-efficacy. Finally, there is a discussion on current issues involving high school athletics as well as on the benefits of high school athletics. Throughout the discussions on self-efficacy and high school athletics, gender differences will also be discussed.

Self-Efficacy

Educational Implications for Perceptions of Self

Throughout the years, American schools have followed the direction of psychologists (Pajares & Schunk, 2001). According to Pajares and Schunk, there are educational implications for focusing on either self-esteem or self-efficacy within the educational system. Around the 1960s and 1970s interest was lost in looking at
implications of self-esteem on American education (Pajares & Schunk, 2001). This loss of interest was due to misguided efforts to nurture the self-esteem of children within the education system (Beane, 1991; Kohn, 1994). Specifically, research was either inconclusive or provided unsettling results on the relationship between self-esteem and academic achievement (Hansford & Hattie, 1982). One analysis of self-esteem studies revealed that correlations between self-esteem and academic achievement ranged from a positive .96 to a negative .77 (Hansford & Hattie), which means that in some studies low self-esteem was actually associated with higher achievement. What followed was not only a reduced interest in research on the concept of self in education but a backlash against the "self-esteem movement" itself (McMillan, Singh, & Simonetta, 1994).

During the 1980s, psychologists and educators shifted their interest in motivation toward cognitive processes and information-processing views of human functioning (Beane, 1991). At this time, research on students' self-beliefs in education did not merely wane, it was perceived as adverse to educational understandings (Beane). Additionally, in this back to basics national mood, students' self-beliefs were regarded as unrelated to their academic achievement, and reforms were accompanied by an effort to dictate curricular practices according to their success in raising achievement test results (Berliner & Biddle, 1995; Bracey, 1994).

Within the past two decades, the idea of building healthy self-perceptions in individuals has been mired in "the self-esteem controversy" that has been the subject of intense dialogue and much ridicule (McMillan et al., 1994). Moreover, prominent voices in educational psychology have signaled a shift in focus in regards to critical issues of
human functioning. Due to this shift, students' self-beliefs have once again become the subject of research on academic motivation. This shift has been quite prevailing, and after a comprehensive analysis of the state of knowledge related to theories and principles of academic motivation for the 1996 *Handbook of Educational Psychology*, Graham and Weiner observed "the self is on the verge of dominating the field of motivation" (p. 77). This focus on a student's sense of self as a primary component of academic motivation is grounded on the assumption that the beliefs that students create, develop, and hold to be true about themselves are vital forces in their success or failure in school (Margolis & McCabe, 2003). In important ways, however, current conceptions of academic self-beliefs represent a marked departure from previous ones related to self-esteem (Pajares & Schunk, 2001).

In addition, current education practitioners are looking at direct forms of assessment to better understand influences on students' behaviors and student self-efficacy and how to link those to effective interventions and progress monitoring (Church, Elliot, & Gable, 2001; Cleary, 2009; Eccles & Wigfield, 2002; Schunk, 1981; Tilly, 2008; Urdan & Midgley, 2003). This gives additional support for research on self-efficacy and possible differences between groups of students as research could provide possible links to intervention.

Self-efficacy has several distinct differences from self-esteem. Self-efficacy concerns an individual's beliefs that he/she can do something, whereas self-esteem involves individuals' emotional reactions to their actual accomplishments (Linnenbrink & Pintrinch, 2003). If an individual does not believe he/she can succeed at a task, the
individual is less likely to attempt the task, or perform to the highest level possible due to his/her low self-efficacy. Consequently, self-esteem will be low as self-esteem is related to an individual’s feelings about his/her accomplishments (Linnenbrink & Pintrich). In addition if a person is not engaging in behaviors leading to success, he/she will accomplish very little. Following this reasoning, it is essential to evaluate how self-efficacy develops within individuals.

Currently, two types of self-beliefs prevail in motivation research, self-efficacy and self-concept beliefs. For the purpose of this study, the effects of self-efficacy within the educational system will be discussed, as will factors believed to increase self-efficacy within students, such as high school athletics.

**Development of Self-Efficacy Theory**

The degree to which an individual possesses and employs the skills necessary to accomplish a certain task is called efficacy (McCabe, 2003). Self-efficacy refers to “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p.3). Albert Bandura is a leading theorist in self-efficacy, and Bandura’s (1986, 1997) self-efficacy theory lies in the broader framework of the social-cognitive theory. This theory states “individuals operate within a mutually dependent causal structure involving triadic reciprocal causation between personal factors, external environment, and behavior” (Gernigon & Delloye, 2003). In other words, an individual’s achievement is dependent upon interactions between his/her behaviors, personal factors (e.g., thoughts, beliefs), and environmental conditions (Bandura, 1986, 1997).
As aforementioned, self-efficacy is considered one type of motivational process. Pajares (1996) stated, “self-efficacy is defined in terms of individuals’ perceived capabilities to attain designated types of performances and achieve specific results” (p. 546). The aspect of achieving specific results through one’s own capabilities is what differentiates self-efficacy from other theories regarding perception of self. Furthermore, much research suggests that self-efficacy influences academic motivation, learning, and achievement (Margolis & McCabe, 2003).

**Sources of Self-Efficacy Beliefs**

According to Bandura (1997) self-efficacy beliefs arise from four principle sources, including (a) past mastery experiences; (b) vicarious experiences (comparisons); (c) verbal persuasions and allied types of social influences; and (d) physiological and affective states. When compared with students who doubt their learning potential and ability, those with high self-efficacy feel capable to learn or perform a task more readily, work harder, persist longer when they come across difficulties, and achieve at a higher level (Schunk & Pajares, 2002).

First of all, past mastery experiences are the most influential sources of self-efficacy (Bandura 1997). These refer to the personal history of previous successes and failures encountered in a given situation. Successes help build a strong sense of efficacy as well as favoring future achievement, whereas, failures undermine efforts to build self-efficacy. This is especially true if a failure occurs before a firm sense of efficacy is developed.
Secondly, vicarious experiences correspond to the appraisal of one’s capabilities to achieve, based on the observation of others. In other words, “vicarious experiences impact self-efficacy through modeling” (Bandura, 1997, p. 86). Modeling is an effective way to build self-efficacy because individuals often measure their own capabilities in relation to the capabilities of others. Vicarious experiences provide feedback attesting to an individual’s level of competence, allowing the individual to determine the degree to which a particular skill is possessed (McCabe, 2003). For example, Gould and Weiss (1981) found that college females’ performance and self-efficacy on a muscular endurance task were significantly enhanced after viewing a model they perceived as similar in age, sex, and athletic ability. In a sense, viewing the similar model seems to instill the attitude of “If he/she can do it, so can I.”

The third source of self-efficacy, verbal persuasion, refers to verbal feedback used to convince the student that he/she has been successful. When a coach congratulates a player for succeeding on a task because he/she practiced, self-efficacy is likely to be enhanced for the player. “Persuasory efficacy attributions have their greatest impact on people who have some reasons to believe that they can produce effects through their actions” (Bandura, 1997, p. 101), and to be most effective verbal feedback should heighten this awareness. Along with successful mastery experiences, verbal persuasion can bolster feelings of self-efficacy in an individual (McCabe, 2003).

Lastly, physiological and affective states such as tension, fatigue, or mood can have an effect on self-efficacy. Bandura (1997) stated “affective states can have generalized effects on personal efficacy in diverse spheres of functioning” (p. 106).
Consequently, the fourth major way of altering efficacy beliefs is by enhancing physical status, reducing stress levels, and correcting misinterpretations of bodily states (Bandura, 1997).

Development of Self-Efficacy within the Academic Context

The exact point when an individual begins to develop self-efficacy is still a point of contention in current research. Harter (1981) contends that from the ages of nine to fourteen, children increasingly begin to make their own judgments about their performance on tasks within the classroom environments.

Additionally, Harter (1978) has suggested a sequence involving three steps that lead to an individual’s perceived internal locus of control. The first step in this sequence is when the teacher gives praise and approval, which acts as a reinforcer for the student’s desired behavior. This is parallel to Bandura’s emphasis on verbal feedback, which is utilized to convince the learner that he/she has been successful. The second step in the sequence involves the praise and approval becoming secondary as the student achieves mastery over the desired behavior. The final step is achieved when the student is able to control, maintain, and reward his/her behavior.

There is also evidence of when self-efficacy beliefs within students begin to decline. According to Pintrich and Schunk (1996), self-efficacy beliefs tend to decline as students advance through school, and this has been attributed to a variety of factors, including more norm-referenced grading, less teacher attention, stress with school transitions, and greater competition. These school practices can weaken academic self-
efficacy, especially with students who are less academically prepared to manage increasingly challenging academic tasks (Schunk & Pajares, 2002).

Students’ involvement and school participation levels depend partly on how much the school environment adds to their perceptions of independence and relatedness, which in turn influence both self-efficacy and academic achievement (Schunk & Pajares, 2002). In addition, a study by Gore (2006) examined the relationship between students’ self-efficacy beliefs for academic tasks and milestones and their academic performance. Results suggest that academic self-efficacy beliefs predict college outcomes but that this relationship is dependent on when efficacy beliefs are measured, the types of efficacy beliefs measured, and the nature of the criteria used.

Furthermore, although parents and teachers contribute to a student’s feelings and independence, peers become increasingly important, especially during middle and high school ages. Peer groups can either enhance or diminish a student’s feelings of belonging and affiliation with the school (Hymel, Comfort, Schoenert-Reichl, & McDougall, 1996).

**Gender Differences in Self-Efficacy**

The relationship between gender and self-efficacy has been the focus of many researchers (e.g., Eisenberg, Martin, & Fabes, 1996; Meece, 1991; Wigfield, Eccles, & Pintrich, 1996). Generally, findings suggest males are more confident than females in mathematics, technology, and science (Meece, 1991; Wigfield et al., 1996), although achievement differences in these academic areas have almost disappeared (Eisenberg et al., 1996). In areas related to language arts, female and male students exhibit similar confidence despite the fact that female achievement level is generally higher in these
areas (Pajares, 2002). Also, it is important to note that as women close the gap on academic achievement a need arises for current research on the relationship between gender and self-efficacy.

Positive and Negative Effects of Self-Efficacy

In general, high self-efficacy can help a person feel calm and relaxed when approaching difficult tasks and activities. On the other hand, low self-efficacy may lead to a person believing things are tougher than they really are. This is a belief that could foster stress, depression, and a “narrow vision of how best to solve a problem” (Pajares, 1996, p. 545).

Crucial to understanding the true meaning of self-efficacy is the grasping of the idea that the definition of self-efficacy does not stop with the notion that one believes he/she is capable of accomplishing a desired behavior. Bandura (1997) suggested that a person’s perception of self-efficacy would determine whether that person engages in a certain behavior. For example, a person whom believes he/she will be successful in completing a math assignment is more likely to attempt the math assignment.

Additionally, in an academic context, an individual who believes that he/she will be successful in school is more likely to be motivated in school and put forth effort on assignments. Research looking at the relationship between self-efficacy and student engagement and learning has shown that students with higher self-efficacy are (a) more motivated to attempt tasks; (b) will use more cognitive strategies while attempting the tasks; and (c) will persist longer at the task (Linnenbrink & Pintrich, 2003; Pintrich & Schrauben, 1992).
What this research is lacking though is the relative causal ordering of self-efficacy and other motivational constructs, such as personal interest, utility/importance, and affect (Linnenbrink et al., 2003). In other words, it is unclear whether students with high self-efficacy ratings are more motivated because they feel they will succeed, or if interest in an area comes first and consequently self-efficacy in a given area increases. However, in looking at how Bandura suggests self-efficacy develops, one would believe if an individual is exposed to a variety of situations, and receives positive feedback, modeling, etc; the individual’s self-efficacy would consequently increase.

**Generalized Self-Efficacy**

According to Sherer, Maddux, Mercandate, Prentice-Dunn, Jacobs, & Rodger (1982), individuals with histories of various and frequent experiences of success, due to the aforementioned variables, may be expected to have positive self-efficacy expectancies in a greater variety of situations than individuals with experiences of limited success.

This suggestion of Sherer and colleagues (1982) deviates from Bandura’s emphasis on the domain specific characteristics of self-efficacy. Sherer and colleagues suggest that a generalized self-efficacy is present within each individual. Specifically, general self-efficacy (GSE) refers to a global confidence in one's coping ability across a wide range of demanding or novel situations. General self-efficacy aims at a broad and stable sense of personal competence to deal effectively with a variety of stressful situations (Scherer et al., 1982; Schwarzer, 1994). Research reported that GSE was related to physical and mental health (Wang, & Liu, 2000).
This is different from Bandura’s definition as he suggests self-efficacy is a very specific concept, such as “I will succeed at completing this algebraic equation” whereas Sherer and colleagues suggest a generalized self-efficacy, such as “I will be successful in Algebra this year.”

Other researchers have examined general self-efficacy. Researchers such as Baker, Yardley, & Montelpare (1998), Mittag & Schwarzer (1993), Miyake & Matsuda (2002), and Solberg (2001) all used variations of general self-efficacy scales in their research and have found conclusive results.

Specifically, Mittag & Schwarzer (1993) examined stress-related alcohol consumption in a sample of 270 migrants and refugees who left East Germany before or immediately after the fall of the Berlin wall in 1989. Many of them experienced unemployment as a very stressful life circumstance. At two points in time, alcohol consumption, employment status, and perceived self-efficacy were measured. It was expected that positive self-beliefs would be associated with less risk behavior and that these beliefs would moderate the relationship between stress and coping. This was found, however, for men (n=165) only. Their alcohol consumption was not only higher than that of women (n=105), it also was interactively related to employment status and perceived self-efficacy. Confidence in one's coping competence turned out to be a buffer of stress-induced alcohol consumption.

Another study using general self-efficacy as a variable was by Miyake & Matsuda (2002). The effects of social comparison feedback on specific self-efficacy and performance of high generalized self-efficacy participants and low generalized self-
efficacy participants were examined with the help of 20 participants with high
generalized self-efficacy and 20 participants with low generalized self-efficacy. Half of
the participants in each generalized self-efficacy group received negative social
comparison feedback after each of four trials of an experimental task while the other half
received no feedback. Two kinds of specific self-efficacy-performance-based and
normative-based were measured once before the task and four times after the trials of the
task. After the task, the high generalized self-efficacy/feedback group rated performance-
based specific self-efficacy higher and performed better than the low generalized self-
efficacy/feedback group. No significant difference was observed between the high
generalized self-efficacy/no feedback group and low generalized self-efficacy/no
feedback group.

Although these researchers found conclusive results with generalized self-efficacy
as a variable, generalized self-efficacy is still an underdeveloped research field in
comparison to Bandura’s task-specific self-efficacy.

Additionally, Morgan and Jinks (1999), suggest, that “once established, enhanced
self-efficacy generalizes to other situations, with the strongest effects occurring in
activities that are most similar to those in which self-efficacy has been improved” (p.
225). Furthermore, Morgan and Jinks have created a scale, the Morgan-Jinks Student
Efficacy Scale (MJSES) to gain information about how students’ generalized self-
efficacy beliefs may relate to their student success. This scale utilizes the idea of general
self-efficacy influencing academic success; however, there is little to no research done
with this scale comparing different groups of high school adolescents. As such, this is a
prime area for research, and schools may benefit by becoming more aware on what is influencing students' self-efficacy ratings (Morgan & Jinks, 1999).

**High School Athletics**

An increasing number of high school students are participating in high school athletics. According to a recent survey the number of high school students participating in athletics has increased every year since 1980-1981 when athletic participation was over 5 million students to the present day around 7.5 million students (National Federation of State High School Associations, 2009).

In a similar vein, the National Federation of State High School Associations (NFHS) reports that boys and girls participation figures reached all-time highs, with 3,114,091 girls and 4,422,662 boys participating in 2008-09. This data suggests females are less likely than males to participate in high school athletics; however, the gender gap is currently decreasing as the girls figure increased by 56,825 in the 2008-2009 school year, while the boys figure increased by 50,547.

Several reports suggest that the involvement of adolescents in athletics has multiple benefits. Specifically, reports suggest athletic programs encourage conscientious social behaviors and increased academic success, as well as confidence in one’s physical abilities, an awareness of personal health and fitness, and strong social affiliations with individuals and institutions (National Federation of State High School Associations, 2009; National Federation of State High School Athletics, 2003). Teachers attribute these results to the discipline and work ethic that sports require.
Additionally, a study by Owens, Morris, and Lieberman (2001), on high school dropouts, found that participation in high school athletics significantly decreased the chance of dropping out of high school, suggesting that athletic participation increases level of school engagement and motivation for participants. Additionally, their findings suggested that high school athletics increases motivation to attend school as well as motivation to achieve high academically, as participation in athletics requires both variables.

The suggested benefits of high school athletics by Owens and colleagues (2001) study are essential to keep in mind as it has been suggested that the lack of school engagement among adolescents in this country remains a problem that has very serious consequences including increased risk for school dropout, teenage pregnancy, substance use, and criminal activity (Caraway, Tucker, Reinke, & Hall, 2003). Furthermore, many contextual and self-variables either enhance or impede school engagement (Caraway et al.). Contextual variables refer to outside influences in a teenager’s life such as family support, peer relationships, school environment, or neighborhood characteristics. Self-variables refer to characteristics of an adolescent such as level of self-efficacy or autonomy (Caraway et al.). Therefore, with research findings supporting a positive correlation between high school athletics and school engagement (Owens et al., 2001), and a positive correlation between self-efficacy and school engagement (Caraway et al.), the research question of whether there is a difference in self-efficacy ratings between high school athletes/non-athletes and/or by gender exists.
Effects of High School Athletics

There are numerous studies demonstrating that participation in athletics has several effects on the participants, and that male and female participants are affected differently (National Federation of State High School Athletics, 2003). Specifically, a study of males by Wright and Cote (2003) suggested that maintaining healthy peer relationships was found as a common theme throughout male participants in their study of athlete development.

Some individuals believe schools and competitive sports teach boys how to express themselves physically, how to impose themselves forcefully, how to mask pain, and how to release anxiety (Hickey & Fitzclarence, 1999). Similarly, popular western beliefs tie traditional views of masculinity to sports prowess and athletic ability; however, it is important to note that data have suggested that not all males who watch or participate in traditional sports will engage in violent or aggressive behavior (Burgess, Edwards, & Skinner, 2003). Furthermore, research conducted by Dane suggests the ratio for males who participate in sports and do well in school is two to one, and these males have a lower drop-out rate and have a better chance to attend college (National Federation of State High School Athletics, 2003).

In addition, a study by Eide and Ronan (2001), on participation in high school athletics found mixed results on the benefits of participation in varsity sports. Researchers found that sports participation negatively affected Caucasian male students’ educational attainment, but positively affected both Caucasian female and Black male students’ educational attainment. Although this study provides evidence both for and
against participation in varsity sports, Eide and Ronan reported the evidence in favor of participation outweighed the evidence against participation.

Furthermore, results of studies looking at young women participating in physical activities have a theme with young women being influenced by popular media giving attention to physical activity, health, and fitness (Flintoff & Scraton, 2001). This influence may be what initially involves women in athletics; however, research conducted by Dane suggests the ratio for females who participate in sports and do well in school is three to one (National Federation of State High School Athletics, 2003). So, although popular media may initially influence young women, they are still attaining positive lifestyle results.

Additionally, research by the Women’s Sport Foundation (1999) suggests multiple benefits for females participating in athletics. These benefits include a more positive body image than non-athletes; higher self-esteem; decreased amount of symptoms of stress and depression; an increase in goal-setting, strategic thinking and the pursuit of excellence in performance and other achievement-oriented behaviors; development of leadership skills; reduced risk for obesity; and a decrease in cigarette smoking (Women’s Sport Foundation).

**Self-Efficacy and Athletics**

There have been few studies that have examined the relationship between athletics and self-efficacy. One such study examined the effectiveness of mental practice techniques ("paper freestyle drawing" and "walk through on floor") for improving figure skating performance, self-efficacy, and self-confidence (Garza & Feltz, 1998). Results
indicated that the “walk through on floor” mental practice group increased their figure skater spinning self-efficacy beliefs significantly. This study indicates that self-efficacy in athletes can be raised through implementation of training techniques. What this study did not look at was whether or not the increased self-efficacy ratings for the figure skaters generalized into increased self-efficacy levels in other areas of the figure skaters lives. So while there has been some research done on self-efficacy within a specific sport, there has been little to no research on whether there is a difference in self-efficacy ratings and high school athletics.

Summary of the Literature

Educational development is important for the success of society. Self-efficacy, or the belief that one can complete an activity successfully, has become an important attribute in the drive for successful students. This concept has broadened to look at the generalized effects of self-efficacy on the development of students.

Athletics is an area that contributes to the educational success of students. While numerous studies have documented the academic achievement of athletes (e.g., Eide & Ronan, 2001; National Federation of State High School Athletics, 2003; Snyder & Spreitzer, 1981) no study has looked at the evolution of this change. Generalized self-efficacy may be the key to understanding athletes’ success in the classroom.
CHAPTER III

METHODOLOGY

The primary purpose of this study was to determine whether participation in Varsity high school athletics had a significant impact on ratings of generalized self-efficacy within the academic context for high school students. A between groups design was utilized to determine the differences in self-efficacy ratings between the athlete and non-athlete populations and gender.

Participants

Participants were from a public high school within a middle class community located in central Wisconsin. The school contained an approximate total student population of 1,200 students (from grades 10-12). A sample of 516 high school juniors and seniors participated in the study. In order to qualify as an athlete, an individual needed to be of varsity standing on an athletic team in their school during the current academic school year. It did not include athletes who were competing in a community or other outside club sport.

All students were targeted to have the opportunity to participate in the study during their homeroom period except for students with cognitive disabilities. Students with cognitive disabilities were excluded from the study because they may lack the necessary introspection skills to accurately complete the survey. These students did not
attend homeroom with the normal student population; therefore they were not visibly excluded in front of others who participated.

Students whose parents requested that their child be excluded from this study were directed to a different room to complete homework or have free time during the time the other students were completing the survey. The researcher and a school counselor immediately debriefed students experiencing discomfort while completing the survey. A follow-up meeting with the students who experienced discomfort during the survey was to be conducted two to three days after survey administration; however, there was no need for this meeting as no students reported feeling discomfort.

The self-report measures were given to the teachers to be distributed at the beginning of homeroom period in all 11th and 12th grade classrooms. All of the students in the classrooms had the opportunity to become a participant through assent procedures.

**Procedures**

Clearance was obtained from the University of Wisconsin-La Crosse Institutional Review Board (IRB). In addition, the administration in the school district where data was collected provided written support of this project.

An informant notification procedure was utilized. Letters were sent home to all homes of 11th and 12th graders in the selected school (see Appendix A). Parents were informed that their son/daughter would have the opportunity to complete a questionnaire related to self-efficacy. If parents did not want their child to participate in this study, they were instructed to sign the sheet and return it to the school. They were also told that if the sheet was not returned, it would be assumed that parental consent has been given. A letter
of support from the principal was also sent home with the notification form (see Appendix B).

Before distributing the surveys, teachers read aloud written instructions to the students explaining that their participation was anonymous and voluntary (see Appendix C). If they did not wish to complete the survey, they had the opportunity to withdraw at this time. All students were given an assent form to complete. If they wished to participate in the survey they had to check the Yes box (see Appendix D). If they did not want to participate they could check the No box and their packet was picked up. Because the survey was distributed in a setting of other 11th or 12th graders, all members of the class had the opportunity to complete the measure at the same time. The teachers were instructed to bring the surveys to the researchers in the office immediately following homeroom period.

**Instruments**

As a part of a survey packet, students were administered the Morgan-Jinks (1999) student self-efficacy scale. Other information such as age, gender, GPA, grade level, and Varsity sport participation was collected with a demographic form.

**Morgan-Jinks Student Efficacy Scale**

The dependent variable, self-efficacy, was measured using the Morgan-Jinks Student Efficacy Scale (MJSES) (Morgan & Jinks, 1999). The 34-item self-report instrument is based on Bandura’s model of self-efficacy. The scale was developed to gain information about student efficacy beliefs that might relate to school success. MJSES
utilizes a Likert-scale with a four-interval scale of really agree, kind of agree, kind of disagree, and really disagree.

There are three major subscales operating within the scale: talent items, context items, and effort items. The talent subscale consists of items which were statements designed to obtain information about students' perceptions of their own innate talent or ability. Example items in this subscale include: 1) I am smart, 2) I am a good science student, 3) I am one of the best students in my class. The context subscale consisted of items which were statements designed to obtain information about students' perceptions of their environment. Example items in this subscale include: 1) I go to a good school, 2) I would get better grades if my teacher liked me more, 3) Teachers like kids even if they do not always make good grades. The effort subscale consisted of items which were statements designed to obtain information about students' perceptions of the role of their effort in completing a task. Example items in this subscale include: 1) Most of my classmates work harder than I do, 2) I always get good grades when I try hard, 3) I work hard in school.

Item analysis was conducted for the MJSES from the original study of approximately 800 students from grades K-8, and an overall reliability coefficient of .82 was shown for the MJSES. Reliability coefficients for the subscales were .78 for talent, .70 for context, and .66 for effort (Jinks & Morgan, 1999). The scale makes use of self-reported grades as a variable. Students were asked what their approximate grade point average was, as reported on their last report card, to obtain an idea of the academic achievement of the participants. Furthermore, gender differences were examined, and as
such, differences in male and female ratings of self-efficacy will be analyzed to
determine whether a difference exists between genders.

**Hypotheses and Data Analysis**

The dependent variable used in this study is level of generalized self-efficacy. The
two independent variables utilized in the study are gender and Varsity athletic status. A 2
x 2 analysis of variance (ANOVA) was used as a statistical procedure to analyze the data
and test the null hypothesis, with a .05 level of statistical significance. The dependent
variable in this hypothesis is self-efficacy ratings in the three subscales. The two
independent variables utilized in the study are gender and Varsity athletic status. A 2 x 2
MANOVA was used as a statistical procedure to analyze the data and test the null
hypothesis, with a .05 level of statistical significance.

\[ H_{01} \]: No significant difference will be found in self-efficacy across athletic
status and/or gender.

\[ H_{02} \]: No significant differences will be found in self-efficacy ratings in the
three major subscales operating within the scale (talent, context, and
effort) across athletic status and/or gender.
CHAPTER IV

RESULTS

The primary purpose of this study was to determine whether participation in Varsity high school athletics had a significant impact on ratings of self-efficacy within the academic context for high school students.

Demographics

There were 438 11th grade students and 427 12th grade students enrolled at the central Wisconsin high school where this study occurred. This was a sample of convenience. Six parents denied consent for their child to participate in the study. Out of the 859 possible participants there were 565 returned surveys. This was an overall 60% participation rate for the total enrollment of the high school juniors and seniors. It is important to note that seniors had a graduation meeting scheduled during the same homeroom period as the survey distribution. Several teachers mentioned they had allowed their students to postpone their surveys in order to make it to the graduation meeting on time. A time was arranged to pick up the remaining surveys a few days later, however, it is clear that not all surveys were returned which factored into the 60% overall response rate.

Of the 565 returned surveys, 49 students did not give assent or only partially completed the survey. This was a 91% participation rate out of the returned surveys. Two hundred eleven of the participants were 11th graders (41%) and 305 were 12th
graders (59%). Two hundred sixty of the participants were male (50.3%) and 255 were female (49.3%). The participants ranged in age from 16 to 18 years with a mean age of 17.06 (SD = .70). The number of participants who participated in athletics by gender is recorded in Table 1.

Table 1. Gender and Athletic Participation

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athletes</td>
<td>113</td>
<td>95</td>
<td>208</td>
</tr>
<tr>
<td>Non-Athletes</td>
<td>147</td>
<td>159</td>
<td>306</td>
</tr>
<tr>
<td>Total</td>
<td>260</td>
<td>254</td>
<td>514</td>
</tr>
</tbody>
</table>

Note. Two participants did not indicate their gender.

The majority (N = 436) of the participants reported their ethnicity as Caucasian (86%). The next largest population represented was Asian-American with 53 participants (10%) followed by Hispanic (1%), Native American (.6%), African-American (.2%), and Other (2.3%). Six participants did not report their ethnicity.

Some participants (n = 414) reported their GPA on a four-point scale (M = 3.30, SD = .56). Results indicated a significant difference in reported GPA on a four-point scale between athletes (M = 3.42, SD = .56) and non-athletes (M = 3.21, SD = .54); t(411) = 3.76, p < .01. These results suggest that participation in high school athletics does have an effect on grade point average.

Results also indicated a positive correlation between GPA and the effort subscale of the MJSES, r = .52, n = 403, p < .01. There was also a positive correlation between GPA and the talent subscale of the MJSES, r = .48, n = 401, p < .01 and between GPA and the context subscale of the MJSES, r = .30, n = 396, p < .01. Lastly, there was a
positive correlation between GPA and the overall rating on the MJSES, $r = .52$, $n = 387$, $p < .01$. These results suggest that students reporting a higher GPA also have higher ratings of self-efficacy.

**Results**

Item analysis was conducted for the MJSES using the Cronbach’s Alpha reliability test, and an overall reliability coefficient of .81 was shown for the MJSES. Reliability coefficients for the subscales were .73 for talent, .60 for context, and .49 for effort. The first analysis was used to determine if there would be a difference in general self-efficacy by gender (male versus female), athletic status (athlete versus non-athlete), or an interaction between gender and athletic status. A $2 \times 2$ ANOVA was utilized to address the research question looking at differences in general self-efficacy across athletic status and/or gender. The overall analysis showed a non-significant main effect of gender, $F (1, 508) = .49, p > .05$; a significant main effect for athletic status, $F (1, 508) = 14.70, p < .05$; and a non-significant main effect for an interaction of gender and athletic status, $F (1, 508) = .50, p > .05$. Results reveal that athletes reported significantly higher levels of self-efficacy (See Figure 1). The overall effect size was .36. This is considered a small effect size meaning the differences between athletes and non-athletes may not be evident without seeing specific data.
The overall results from the participants’ ratings on the MJSES indicated that the mean scores of general self-efficacy for the athletes were higher than for non-athletes. The means and standard deviations for the participant’s rating can be found in Table 2.

Table 2. Mean Ratings on the MJSES.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Athletic Status</th>
<th>Mean</th>
<th>SD</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>Non-Athlete</td>
<td>2.67</td>
<td>.34</td>
<td>2.63</td>
<td>2.72</td>
</tr>
<tr>
<td>Athlete</td>
<td></td>
<td>2.78</td>
<td>.24</td>
<td>2.73</td>
<td>2.83</td>
</tr>
<tr>
<td>Female</td>
<td>Non-Athlete</td>
<td>2.67</td>
<td>.22</td>
<td>2.63</td>
<td>2.71</td>
</tr>
<tr>
<td>Athlete</td>
<td></td>
<td>2.75</td>
<td>.20</td>
<td>2.70</td>
<td>2.80</td>
</tr>
</tbody>
</table>

A second analysis was used to determine if there would be a difference within the three major subscales in the MJSES and across athletic status and gender. Specifically, a 2 x 2 MANOVA was utilized in order to address the research question looking at
differences in self-efficacy ratings in the three major subscales operating within the MJSES (talent, context, and effort) and across athletic status and/or gender. There was not a significant main effect for Gender, $F(3, 506) = 1.62, p > .05$. There was not an interaction effect for Gender by Athletic Status, $F(3, 506) = .47, p > .05$. There was a significant main effect for Athletic Status, $F(3, 506) = 5.96, p < .05$. Due to no significant interaction effects at the MANOVA level, none of the individual interaction effects will be considered significant between the factor levels. Therefore, only the main effect for Athletic Status will be considered significant at the factor level.

Within the athletic status variable, there was not a main effect of this variable on effort, $F(1, 508) = .01, p > .05$; there was no main effect on context, $F(1, 508) = 2.88, p > .05$; but there was a main effect on talent, $F(1, 508) = 16.31, p < .05$. The effect size for this is .40; this would be considered a small to medium effect size. Figure 2 demonstrates the significant difference on the talent variable.
In addition to the data collected from the MJSES, four additional questions on the demographic survey asked participants what sports they participate in and for how many years, why they participate or do not participate in sports, and if they participate in other school-based activity requiring a time commitment (See Appendix E for full list of responses).

The most common responses for the “what sports they participate in and for how many years” are found in Table 3.
Table 3. Sport Participation and Years of Participation

<table>
<thead>
<tr>
<th>Sport</th>
<th># of Participants</th>
<th>Mean Years of Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Football</td>
<td>62</td>
<td>7.0</td>
</tr>
<tr>
<td>Track</td>
<td>54</td>
<td>4.2</td>
</tr>
<tr>
<td>Baseball/Softball</td>
<td>38</td>
<td>8.5</td>
</tr>
<tr>
<td>Soccer</td>
<td>24</td>
<td>5.4</td>
</tr>
<tr>
<td>Basketball</td>
<td>18</td>
<td>7.0</td>
</tr>
<tr>
<td>Tennis</td>
<td>12</td>
<td>4.5</td>
</tr>
<tr>
<td>Swimming</td>
<td>11</td>
<td>3.3</td>
</tr>
<tr>
<td>Wrestling</td>
<td>8</td>
<td>3.2</td>
</tr>
</tbody>
</table>

The 5 most common responses to the “why they participate” question included: ‘Being with friends’ (N=80); ‘Competition’ (N=72); ‘Exercise’ (N=38); ‘Parents encourage them’ (N=12); and ‘No response’ (N=6). The 5 most common responses to the “why they don’t participate” question included: ‘Job’ (N= 75); ‘Not interested (N= 68); ‘Participate in a different school activity’ (N= 60); ‘Participate in sports outside of school’ (N=43); and ‘No response’ (N=32). Finally, the responses to the question do “they participate in other school-based activity requiring a time commitment”. Four hundred forty students reported they did not participate in another school-based activity; seventy-four students reported they participate in another school-based activity requiring a time commitment with an average time commitment of 2.5 hours per week.
CHAPTER V

DISCUSSION

The present study examined the differences in generalized self-efficacy levels among high school males and females participating in Varsity athletics and those not involved with Varsity athletics. Higher self-efficacy is associated with motivation, use of higher level cognitive strategies, and persistence at tasks (Pintrich & Schrauben, 1992; Linnenbrink & Pintrich, 2003). The results of the present study found that students who participated in Varsity athletics reported higher generalized self-efficacy ratings than those not involved in high school athletics. The results did not indicate a significant difference across gender.

In addition, the results of the current study expand upon current self-efficacy research, due to the absence of research examining the self-efficacy of athletes compared to non-athletes. The results finding higher self-efficacy ratings for Varsity athletes are similar to other studies where investigators suggested that participation in high school athletics are associated with more positive characteristics (National Federation of State High School Associations, 2009). The argument can be made that higher self-efficacy and participation in athletics represents more engagement into the school culture. More engagement is also associated with more positive outcomes (Owens, Morris, and Lieberman, 2001; Caraway, Tucker, Reinke, & Hall, 2003). This study supports those findings as athletes reported higher grade point averages than non-athletes.
The results of the current study also suggest looking at the aspects of athletics that increase self-efficacy ratings, such as past mastery experiences and on-going feedback from coaches. According to Bandura (1997) self-efficacy beliefs arise from four principle sources, including past mastery experiences and feedback, both of which frequently occur for an athlete. The results finding feedback and mastery to increase student performance are similar to other studies where investigators found that successful mastery of learning as well as teacher feedback increase student performance (Guskey & Bailey, 2001). These results have implication for practitioners designing classroom instruction, accommodations, and interventions for students.

Key focuses for classroom instruction, accommodations, and interventions for students should be on student/teacher feedback as well as creating successful mastery experiences for students. The teaching approach of mastery learning evolved from works from Bloom (1981) and Block (1974) and provides additional support for this approach being utilized within the school setting. The approach has a strong current research base and focuses on students’ mastering content in small, sequential approaches and having the teacher provide frequent and specific feedback by using diagnostic, formative tests, as well as frequently correcting mistakes students make along their learning path (Guskey & Bailey, 2001).

In addition, research shows that as students enter middle and high school the social influence of peers become increasingly important. Peer groups can either enhance or diminish a student’s feelings of belonging and affiliation with the school (Hymel, Comfort, Schoenert-Reichl, & McDougall, 1996). By nature of high school athletics being affiliated with school, students involved in high school athletics likely have an
increased feeling of belonging and affiliation with school. Another focus for student interventions should be on increasing opportunities for students to participate in school activities, such as band, musicals, student council, peer mentoring, athletics, etc. Individual schools may want to create their own survey to determine which extracurricular activities are most desirable to the students to increase the amount of student involvement in these activities.

The second overall purpose of this study was to determine if there was evidence for differences between males and females in generalized self-efficacy. As aforementioned, results of the current study showed no significant differences between the genders in their general self-efficacy ratings. The results of finding no significant difference between genders on self-efficacy ratings were unanticipated because the relationship between gender and self-efficacy has been the focus of many researchers with earlier studies higher self-efficacy ratings for males (Meece, 1991; Wigfield, Eccles, & Pintrich, 1996) and more recent studies showing an increase in female self-efficacy ratings (Bhattacharyya & Tollett, 2009). Possible reasons for the non-significant difference between genders for this study are discussed below.

At this particular high school, male and female athletes begin participating in athletics at a young age. According to the high school principal many students begin in park and recreation programs as early as age 3, and organized school athletics in 4th grade. The results of this study suggest allowing children opportunities to participate in athletic activities at a young age thus allowing them to have a history of experiences with success. This supports the concept of generalized self-efficacy as individuals with histories of various and frequent experiences of putting forth effort and having success,
due to the aforementioned variables, may be expected to have positive self-efficacy expectancies in a greater variety of situations than individuals with experiences of limited success.

Another point would be to look at the developmental trajectory because while it is impossible to determine if participation is athletics at an early age is what led to higher generalized self-efficacy, the unique aspect of looking at the developmental trajectory of athletic participation may be beneficial for other students as well, and would warrant further research and investigation.

Also, due to the experience level of athletes by the time they enter their junior and senior years it is unknown if the particular sports culture of this school had an unique impact on minimizing the difference of male and female athletes on general self-efficacy. The results at this particular high school suggest the possibility that females are closing the “gender gap” with males in generalized self-efficacy. The results of this study are supported by research indicating that females have closed the gender gap with males in other areas such as school enrollment, achievement, and coping self-efficacy (Colodro, Godoy-Izquierdo, & Godoy, 2010; Schwab & Zahidi, 2009).

In addition, results from the current study indicate that athletes were significantly higher in general self-efficacy on the talent subscale of the Morgan-Jinks Student Efficacy Scale (MJSES) than non-athletes. This was an unanticipated result of the study. The talent subscale consisted of statements designed to obtain information about students' perceptions of their own innate talent or ability (Jinks & Morgan, 1999). The talent subscale relates to self-efficacy as it plays into if students believe in their innate ability,
which impacts how they approach situations. These results are in contrast to research that says to focus on the effort of the student (Marzano, Pickering & Pollock, 2001).

**Limitations**

There are some limitations to this study that need to be taken into consideration when future studies are designed to examine general self-efficacy in athletes. The first consideration relates to the development of general self-efficacy. In the present study, in order to be considered an athlete, the student had to be a junior or senior participating in a high school sponsored sport at the varsity level. Athletes competing at the varsity level are those athletes who have had the most success throughout their years. It is possible that the combination of their general self-efficacy and past success has made them the successful athletes that they must be in order to compete on the varsity team. In addition, athletics consist of activities that demand that the participant be able to perform well at all times – or risk playing time. Therefore, it is logical that those who are high in self-efficacy participate in athletics. Consequently, it is uncertain if participation in sports has made these athletes have higher self-efficacy or if their general self-efficacy is what has made them successful in athletics. Also, high school athletic participation at this particular high school is competitive in nature and only those who are top performers typically make the Varsity team. Thus consideration should be given that these athletes are the “cream of the crop” at their school, and that may make the results less generalizable to a school where athletic competition is not as competitive.

Second, the definition of an athlete was arbitrarily defined for the purpose of this study. It was necessary to put limits on the athlete category in order to be able to compare results to previous research and also to be able to assure that the athlete has to meet
certain standards. It is possible that top-quality athletes who participate in competitive sports outside of school were excluded from the athlete population due to this definition. It is also possible that there are some varsity sports at the school that are not as competitive and time-demanding as others, thus creating differences in expectations and standards.

Third, participants completed the demographic questions prior to completion of the survey. It is possible that the questions on the demographic questionnaire (such as the questions regarding athletic participation) may have influenced how students completed the MJSES. In addition, this was a high achieving high school that may also have influenced how students completed the survey. More high schools need to participate in these studies in order to determine if the results can be generalized or if there are differences due to the performance history of the school. More high schools also need to participate in this study as the school utilized (the MJSES) was originally normed on a K-8 population and data on the high school population is minimal in nature. Also, one of the subscales (effort) of the MJSES did not make the reliability cut-off benchmark. It would be interesting to give this assessment to additional high school students to determine if the questions on the scale were unreliable with high school students or if those results were school/study specific.

Finally, it was not possible for the researcher to be with the participants as they completed the survey so it cannot be certain that standardized procedures were followed in all of the classrooms. In addition, an assembly for all seniors was held during the same homeroom period that the surveys were administered. Some teachers of seniors reported that students did not have enough time to finish the surveys. Some students rushed
through and finished the surveys while other teachers allowed the students to take the surveys with them to finish later. The researchers collected surveys that had been turned in late to teachers or the office later in the week, but it was clear that not all surveys were returned suggesting that the results may not be an accurate representation of the generalized self-efficacy of the juniors and seniors in this high school.

**Implications**

Overall, the results of this study have implications for both researchers and practitioners. For researchers, the results broaden the field of general self-efficacy research and also expand upon the positive characteristics that differentiate the athlete population from the non-athlete population. This knowledge can also better prepare practitioners (i.e., educators, coaches, school psychologists and administrators) by providing a better understanding of differences in students’ self-efficacy and how it impacts them both academically and athletically. This information can also help prepare school professionals to develop interventions focused on increasing student self-efficacy.

School psychologists are in position to play an integral part in using self-efficacy measures to design and monitor the effectiveness of specific interventions as they are trained in the psychometric properties of assessments and are often school leaders in response to intervention and part of problem-solving team (Fuchs & Fuchs, 2006; Tilly, 2008). School psychologists have the background to recommend research-based interventions to increase self-efficacy, and according to Cleary (2009) self-efficacy measures “have been shown to be excellent indicators of students’ academic skills motivated behaviors, and self regulation processes.” By positively impacting self-efficacy educators can increase student motivation, the use of higher level cognitive strategies,
and persistence at tasks (Pintrich & Schrauben, 1992; Linnenbrink & Pintrich, 2003) all of which are integral for student success.

The current study expanded upon current self-efficacy research and research related to athletes by examining differences between the athlete and non-athlete populations. Due to the absence of previous research in this area and the limitations that exist in the current study, more research needs to be conducted in this area in order to determine if the findings are replicable. Many more schools need to participate in these studies in order to determine if the results can be generalized or if there are differences due to location, size, sports climates, or other characteristics.

Additional research should also examine the social implications that peers play on participation in athletics. According to the qualitative data collected as part of this study participants listed peers as the number one reason they participate in sports. Studies have found that peers become increasingly important, especially during middle and high school ages. Peer groups can either enhance or diminish a student’s feelings of belonging and affiliation with the school (Hymel, Comfort, Schoenert-Reichl, & McDougall, 1996). Focusing on the social influence peers play in athletic participation and the effect that may have on their self-efficacy ratings is an area for additional research.

Future research should also examine whether self-efficacy can be positively shaped in the high school years by coaches, educators, school psychologists or other school professionals who are actively attempting to influence a student’s level of self-efficacy. These results would have important implications for all educators. High school educators may have the opportunity, if properly trained and educated, to create classrooms, specific interventions, and playing fields that encourage all students to
stretch their limits thereby graduating harder working, more successful individuals into society.

Conclusion

Educational development is important for the success of society. Self-efficacy, or the belief that one can complete an activity successfully, has become an important attribute in the drive for successful students. This concept has broadened to look at the generalized effects of self-efficacy on the development of students. Together with results of previous research, this study suggests school psychologists may play a crucial role evaluating general self-efficacy, and developing and monitoring interventions designed to increase self-efficacy.
REFERENCES


Bracey, G. (1991). Why can't they be like we were. *Phi Delta Kappan, October*, 104-117.


High school sports: When times are tough, it's pay to play. (1995). *Congressional Quarterly, 11.*


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APPENDIX A

PARENT/GUARDIAN CONSENT FORM
Hello, our names are Michelle Vissers and Kristin Raether, and we are graduate students from the University of Wisconsin-La Crosse. As part of our graduate program we are doing a research study to learn more about the lives of high school juniors and seniors. We are contacting you to ask you to allow your child to participate in our study by filling out a questionnaire.

The purpose of our study is to examine the relationship between self-efficacy, goals, high school athletics, and gender. This study is ANONYMOUS and will include no identifying information. The study will not ask for the name of your child, nor will it ask for any other information that could be used to identify your child. Your child’s participation will involve completing two two-page surveys that will be administered to the entire class during his/her homeroom period. The results of this study may be published in scientific literature or presented at professional meetings using grouped data only and will not include any identifying information of the individuals that completed the surveys.

Your child can withdraw from the study at any time for any reason without penalty. There are no rewards for participation and no negative consequences associated with nonparticipation. Students and school professionals may benefit by understanding the relationship between high school athletics and self-efficacy, and high school athletics and goals.

Questions regarding study procedures may be directed to the principal researchers, Ms. Michelle Vissers (715-252-6524) or Ms. Kristin Raether (608-385-8938). Questions may also be directed to the study advisor, Dr. Robert Dixon, Department of School Psychology, University of Wisconsin-La Crosse (608-785-8441). Questions regarding the protection of human subjects may be addressed to Dr. Ron Rada, Chair of the University of Wisconsin-La Crosse Institutional Review Board for the Protection of Human Subjects, (608-785-8124).

* Please fill out this form and return it to Student Services before ________, 2004 if you do NOT WANT your child to participate.

Student’s Name ___________________ Grade ___________ House _________

I have read the above, have been informed of the nature of this study, and DO NOT want my child to participate.

Parent /Guardian Signature ___________________ Date ________

Researcher ___________________ Date ________

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APPENDIX B

PRINCIPAL'S LETTER TO PARENTS
Dear Parent(s) or Guardian(s)

We would like to inform you about a project that our 11th and 12th grade students will participate in during the month of January. **This letter is to inform you of the project and give you the opportunity to decide if you do or do not want your student to take part.** If you DO NOT wish to have your son or daughter take part in the project, please sign and return the enclosed form to Student Services indicating your child’s name and that you do not want him or her to answer the survey. Participation in the project involves students in the 11th and 12th grades having an opportunity to be a part of a study that is being conducted by two Graduate Students from the University of Wisconsin – La Crosse, Michelle Vissers and Kristin Raether.

The goal of this study is to obtain information about whether or not participation in high school athletics influences the lives of high school students. The results will assist parents, educators, health professionals, and other key decision-makers in the development of more effective curricula and services for our students. The data will also help us explore and strengthen ways to assist young people in developing self-efficacy and goal oriented behaviors.

Students will be invited to complete two surveys that are completely anonymous and confidential. The content of the surveys deals with athletic participation at D. C. Everest, such as athletics the student is involved in and how long the student has participated in athletics. Other topics include how the students feel about their ability to be successful at given activities and what kind of goal orientation the students display.

Participation in this study is voluntary. You may decide to have your child not participate. In addition, your child will have the opportunity to decide if he or she wants to participate on the day the study is conducted. Moreover, even if a student participates, he or she may choose not to respond to particular questions.

If you would like to review and discuss the study, Michelle and Kristin will be available to answer your questions and address your concerns. In addition, copies of the surveys are available in my office. A translator and translated letter will be available for parents/guardians if needed.

We believe this study will assist us in continuing to provide quality education in a supportive environment for all of our students. If you have any questions about the project, please feel free to contact me at 715-359-6561.

Sincerely,

Thomas Johansen, Principal
D. C. Everest Senior High School
APPENDIX C

ORAL DIRECTIONS FOR SURVEY ADMINISTRATION
Hello class! Today I am going to ask you to help out with a study being done by Michelle Vissers and Kristin Raether, who are graduate students from the University of Wisconsin-La Crosse. They are doing a research study to learn more about kids your age. This study was explained to your parents/guardians and they are aware that you are being asked to participate.

As part of this study you will be given two surveys to fill out. You will be asked questions about your own behavior and attitudes as well as your interest in academic areas. These questions are about things that kids think about, things they feel, and things they do. Michelle and Kristin are inviting you to be in this study because your thoughts are important. Answering these questions is different from taking a test because there are no right or wrong answers. They just want to know what you really think and feel.

When Michelle and Kristin are finished with this study, they will write a report about what was learned. This report will not include your name or that you were in this study.

This study is ANONYMOUS, which means that you do not put your name on it and no one will know your answers. You can ask questions about this study at any time. You do not have to be in this study if you do not want to be. If you decide to stop after you begin, that’s okay. It is possible that some of the questions may make you feel uncomfortable. If you want to talk to someone about this, you may talk to either Michelle or Kristin or the school counselors who are willing to meet with you.

(Note: pass out the surveys and alternate activity worksheets at this point)

Please read the first few lines at the top of the first page. Remember, being in this study is up to you, and no one will be upset if you decide to not participate or if you decide to stop before you have answered all of the questions.

If you decide not to participate in this study, check the No box, turn the paper over, and please work quietly while your classmates are completing the surveys.
If you decide to participate in this study, check the Yes box and begin answering the questions. Remember to read the questions carefully and answer them as truthfully as you can.
APPENDIX D

ASSENT FORM AND DEMOGRAPHIC INFORMATION
I have been told about the study and I know why it is being done. I have been told that this study is **ANONYMOUS**. I also know that I do not have to do it if I do not want to. I can stop at any time. My parents/guardians know that I am being asked to be in this study.

I agree to participate in this study: Please check the appropriate box.

- [ ] Yes
- [x] No

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Grade: _____ Age: _____ Gender: Male _____ Female _____

Current Grade Point Average (GPA): _______

Ethnicity:
- [ ] Caucasian
- [ ] Hispanic
- [ ] African-American
- [ ] Asian-American
- [ ] Other

Participation in Varsity Sport at your high school during the 2004-2005 school year:
- [ ] No
- [x] Yes  How many Varsity sports? ______

What sports do you currently participate in and how many years have you participated in each sport?

<table>
<thead>
<tr>
<th>Sport</th>
<th>Number of years including this year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If you do participate in sports, why do you participate in sports at your high school?

________________________________________________________________________

If you do not participate in sports at your high school, why not?

________________________________________________________________________

Do you participate in any other school-based activity requiring a time commitment?
- [ ] No
- [x] Yes  How many hours per week? _____

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APPENDIX E

LIST OF RESPONSES TO QUALITATIVE QUESTIONS ON THE
DEMOGRAPHIC QUESTIONNAIRE
1. What sports do you currently participate in and how many years have you participated in each sport?
   - Football (N=62)
     - Average numbers of years = 7.0
   - Track (N=54)
     - Average numbers of years = 4.2
   - Baseball/Softball (N=38)
     - Average numbers of years = 8.5
   - Soccer (N=24)
     - Average numbers of years = 5.4
   - Basketball (N=18)
     - Average numbers of years = 7.0
   - Tennis (N=12)
     - Average numbers of years = 4.5
   - Swimming (N=11)
     - Average numbers of years = 3.3
   - Wrestling (N=8)
     - Average numbers of years = 5.2
   - Volleyball (N=6)
     - Average numbers of years = 3.2

2. If you do participate in sports, why do you participate in sports at your high school?
   - Friends (N=80)
   - Competition (N=72)
   - Exercise (N=38)
   - Parents (N=12)
   - No response (N=6)

3. If you do not participate in sports at your high school, why not?
   - Job (N=75)
   - Low interest level (N=68)
   - Participate in other school activity (N=60)
   - Participate in sports outside of school (N=43)
   - No response (N=32)
   - Transportation (N=19)
   - Grades (N=9)

4. Do you participate in any other school-based activity requiring a time commitment?
   ____ No

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Yes  How many hours per week?

- No (N=440)
- Yes (N=74)
  - Hours per week (M = 2.5)
APPENDIX E

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- Basketball (N=18)
  - Average numbers of years = 7.0
- Tennis (N=12)
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- Swimming (N=11)
  - Average numbers of years = 3.3
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Yes How many hours per week?

- No (N=440)
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