Bullying prevention program: Possible impact on academic performance

by William Stone

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Abstract

William Stone. BULLYING PREVENTION PROGRAM: POSSIBLE IMPACT ON ACADEMIC PERFORMANCE. (Under the direction of Dr. Clarence Holland) School of Education, April, 2009.

The research conducted sought to find the effect of the implementation of the Olweus Bullying Prevention Program on the academic performance of students in the third through eighth grade. The study examined the relationship between the implementation of the Olweus Bullying Prevention Program and the change in academic performance, as measured by the Measures of Academic Progress (MAP) assessment. The post-test scores of third through fifth grade students from one elementary school which had implemented the prevention program were compared with the post-test scores for the same grade levels at an elementary school that had not implemented a bullying prevention program. The same comparison was made between a middle school that had implemented the Olweus program and a middle school that had not implemented a prevention program. The surveys from the two schools that had implemented the Olweus program demonstrated that both of the schools had experienced a significant decrease in the intensity and frequency of reported bullying behavior at the conclusion of the first year of the program. The reduction was most significant in the elementary school. A one-way analysis of covariance (ANCOVA) was conducted and the difference in adjusted means of the post assessment scores between the control and experimental groups was found to be significant. For the students that had not been involved in the bullying prevention program, the adjusted mean score was 215.64, while those involved in the prevention program had an adjusted mean score of 217.01.
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1. Introduction to the Study

The quest for a safe school environment has increasingly been the focus of many administrators and teachers over the past decade, partially as a result of widely publicized acts of violence within our public schools. Within this quest, many educators have begun to address the prevalence of bullying within the school. Dan Olweus (1993), a leading researcher on the prevalence of bullying, uses the following to define bullying: “A student is being bullied or victimized when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other students” (p. 9). One study conducted by the National Institute of Health on the problem of bullying revealed that as many as one in seven students report that they have been victimized by bullying (U. S. Department of Health & Human Services, 2003). Another study conducted in 2002 for the American Medical Association found that almost 11% of students in the United Stated in grades 6 through 10 reported that they were frequent victims of bullying. Also troubling, 13% reported that they frequently bullied others (Davis, 2007). According to the National Center for Education Statistics, nearly 50 million students are enrolled in schools in the United States, which means more than 5 million students in our nation are frequently bullied. Over 6 million students are frequently the instigators of bullying acts. These numbers make bullying the most common form of violence in our society (Davis, 2007).

As a result of this research, many programs have been developed to address the bullying issue. Several of these programs have been researched to determine their effectiveness in reducing the occurrence of bullying activity. One program that has
emerged as one of the leaders in reducing these occurrences is the Olweus Bullying Prevention Program. This researched based program has been shown to result in a 30% to 70% reduction in student reports of bullying activity. The Olweus program was originally introduced in the early to mid 1980’s and involved approximately 2,500 children from 42 elementary and junior high schools in Bergen, Norway. Using a quasi-experimental design, Olweus (1993) found:

- Substantial reductions (50% or more for most comparisons by student age and grade) in self-reported bullying and bully victimization.
- Significant reductions in self-reported vandalism, fighting, theft, alcohol use, and truancy.
- Significant improvements in the social climate of the classroom (as reflected in students’ reports of increased satisfaction with school life and school work, improved order and discipline at school, and more positive social relationships)
- A dosage-response relationship at the classroom level, such that those classrooms that implemented essential components to the program saw greater reductions in bully/victim problems.

The presence of bullying behavior has been shown to have adverse effects on many areas of the child’s life. In their publication entitled *Youth Bullying*, the American Medical Association (2002) stated that “bullying may have serious effects on the psychological functioning, academic work, and physical health of children that are targeted” (p. 11). Being bullied has been found to lead to lower self-esteem (Delfabbro, et al., 2006; National Education Association, 2003), higher rates of depression (Glew,
Fan, Katon, Rivera & Keric, 2005; Nansel, Graig, Overpeck, Saluja & Ruan, 2004),
loneliness (Glew, et al, 2004; Nansel et al., 2001), and anxiety (Delfabbro et al., 2006).
In a 2003 article aimed at increasing the public’s awareness of the issues of bullying, the
National Education Association (2003) wrote:

Students who are the targets of repeated bullying behavior can, and often do,
experience extreme fear and stress. They may be afraid to go to school or even to
ride the bus to school. Once there, they may be afraid to be in certain places in
the building, such as bathrooms. They may exhibit physical symptoms of illness
and may not be able to concentrate on schoolwork (p. 1).

In his research, Ken Rigby (2001) found evidence that “victims of bullying are more
likely than others to experience particularly distressing mental and physical states, being
more anxious, more depressed, more socially dysfunctional, less physically well, and
more prone to suicidal ideation than other children” (p. 322). With so many troubling
behaviors linked to bullying, the need for effective prevention programs to address the
bullying dilemma is apparent.

Though the prevalence and effect of bullying behavior is most troubling, the
primary role of the school system is to educate. Many studies have demonstrated the link
between academic achievement and the child’s physical and mental health (Eisenberg,
Neumark-Sztainer, Story, 2003; Neumark-Sztainer et al., 2002; Perry, 2001; Taylor-
Seehafer & Rew, 2000). But while the overwhelming majority of the research dealing
with the Olweus Bullying Prevention Program demonstrates its effectiveness at reducing
the occurrence of bullying behaviors, little research has been done into the effect the
program has on academic performance. The purpose of this study was to examine the
correlation between the implementation of the Olweus Bullying Prevention Program and academic performance.

Background of the Study

Acts of violence within the nation’s school system have gained increasing attention from the community over the past decade due to highly publicized horrific acts of violence on school campuses. As research into the causes and contributors of these acts of violence has been conducted, a common thread has emerged from most of these senseless acts of aggression. For years, many of the perpetrators have themselves been victims of excessive and cruel acts of bullying. Through this focused lens, even adults that once believed bullying was a normal passage of childhood began to recognize its long term effects. These collective acts have changed how society views school violence and bullying. The inaction of administrators, teachers, and students to prevent the acts of emotional and physical bullying that precipitated these outbursts of violence weighed heavily on the minds of all. With these images of violence fresh on the public’s mind, significant effort and resources were poured into the development and implementation of programs designed to address the issue of bullying.

In more recent years, the focus of school systems has been to ensure that all children make academic advances toward the state determined standard. With the continued development of the global economy and the global competition that comes with it, a concerted effort to raise national test scores has been launched. It is no longer acceptable for schools to produce students that are only capable of competing with students from nearby schools within the same district. With the advances of technology and the “flattening of the world,” American graduates are now forced to compete with
people from around the world (Friedman, 2005). With this pressure on school systems to improve, many state lawmakers have generated pressure through legislation to improve the condition of the public school system through higher standards reflected through improved test scores. These demands have put a strain on both the time and financial resources of both administrators and teachers.

In even more recent times, many of the nation’s local districts have felt the effect of an economic slow down in their states. In December 2007, the National Governors Association (NGA, 2007), along with the National Association of State Budget Officers, released a report entitled, *The Fiscal Survey of States*. In the report for the year 2006, an increase in state revenues of 2.5 billion dollars is shown. In the year 2007, however, a decrease in revenue for the states is shown to be 2.1 billion and another 0.1 billion is expected in the current year (NGA, 2007). All states spent an average of 21.4% on education (NGA, 2007). Considering these figures, the cut in funding for public education from the year 2006 to 2008 will be close to 500 million dollars. With less money comes the difficult task of deciding what programs and expenses are worth keeping and what must be cut. With the increased focus placed on every student meeting the standards, surviving programs will need to have demonstrated a contribution toward these academic advances.

These surviving programs will need to be researched based both on their effectiveness of reaching their desired results, as well on those desired results’ effectiveness in supporting the overall goal of the schools. While much research supports the effectiveness of the Olweus Prevention Program in meeting the stated goal of reducing the occurrence of bullying, little research has been conducted on the effect this
decreased occurrence has on academic achievement. The present study attempted to address this area of need.

Many studies have been conducted regarding the connection of school climate, school connectedness, mental health, and academic performance (American Medical Association, 2002; Delfabbro, et al., 2006; National Education Association, 2003; Glew, et al, 2004; Nansel et al., 2004). Many studies have also been done to measure the effect bullying has on the students’ perception of school climate, connectedness, and mental health (Kaplan & Maehr, 1999a; Kaplan, & Maehr 1999b; Furrer & Skinner, 2003; Meece, Anderman, & Anderman, 2006). This present study attempted to bridge the gap and measure the correlation between an effective bullying prevention program and the academic performance of students involved in that prevention program.

The Problem Statement

The evidence of bullying and its effect on the well being of the child has been well established over the past several decades. With an estimated 5 million students potentially facing the effects of being a bullying victim, many within the schools and the community sense the urgency to act. At the same time, most recognize the need for American public schools to answer the call for a greater emphasis on preparing our children for the global economy by providing them with a level of education that will allow them to compete with their peers from around the world. With the already limited resources of the school system being reduced by many state legislators, it would appear that school officials and communities will be forced to decide between effectively addressing the issue of bullying or effectively raising the standards to meet the demands of the global market place. Given the continued concern of administrators, educators,
and parents over the effects of bullying within the school setting and the continued pressure from legislators and the community for an increase in the academic performance of students, this research investigated the potential link between the two. The research conducted sought to find the effect of the implementation of the Olweus Bullying Prevention Program on the academic performance of students in the third through eighth grade.

Research Question

Does the introduction of the Olweus Bullying Prevention Program reduce the occurrence of self-reported bullying behaviors, and if so, does the reduction have an effect on the academic performance of students? The null hypothesis states that there will be no difference between the implementation of the Olweus Bullying Prevention Program and reports of bullying, and that a reduction has no effect on academic performance as measured by the Measures of Academic Progress (MAP) assessment scores.

The Professional Significance of the Study

There is little doubt that there were many factors involved in the lives of those responsible for the appalling acts of violence that have been perpetrated within the walls of our schools in the recent past. As a society, it is imperative that we address as many of these factors as is feasible to prevent these types of violent acts. One common factor linking most of these crimes is the presence of bullying in the lives of the accused. Despite the fact that this common thread in no way justifies the actions of these young people, it does provide us with a reasonable justification for addressing the issue of
bullying. Though we may never know for certain, it is quite possible that in our efforts of prevention there could be future lives that will be spared the anguish of past actions.

While these well publicized acts of aggression are tragic, the greatest impact of bullying may well be much less recognized. As Abraham Maslow attempted to synthesize research that had been conducted concerning human motivation, he created what has become known as Maslow’s Hierarchy of Needs (Slavin, 2006). Though there is question concerning some aspects of the hierarchy, one enduring truth is the need for a person to be safe and secure before the need for knowledge and understanding develops. Perhaps this need is demonstrated best by Frank Peretti (2000) in his book, No More Bullies. In a junior high school setting, having just arrived in a classroom after experiencing a rather severe case of bullying in the locker room, Mr. Peretti (2000) writes:

But now, all he could do was shed tears and wonder…Does anyone care? Does anyone even know?

In his next class, he sat at his desk, his clothes still damp, his body still aching, unable to keep his mind on the teacher’s lecture or his eyes on the text. The mocking faces and the derisive, searing comments kept playing and replaying in his mind, overpowering anything and everything else. (p. 8)

Without meeting the safety needs of the child, there is little chance of awakening any need of knowledge. With worries of physical and emotional harm consuming the student’s thoughts, it seems unlikely that he or she will have any desire to reach any academic standard.
Previous research has demonstrated the impact bullying has on the emotional and physical well being of a child (Delfabbro et al., 2006; Rolland, 2002; American Medical Association, 2002; Nansel et al., 2001). Other studies have been conducted to demonstrate a link between school climate, safety perceptions, student motivation and academic performance (Glew, et al, 2005; Nansel et al., 2004; National Education Association, 2003). This research sought to establish a direct correlation between the reduction of bullying behaviors within the school and the improvement of academic performance by the students of the school. With the correlation established, more efficient decisions regarding the limited resources of a school system may be attained.

**Overview of Methodology**

Though explained in more detail later in the dissertation, the research conducted was a quasi-experimental study. The researcher compared the change in reports of bullying behaviors in the experimental schools. The researcher also compared the change in Measures of Academic Progress (MAP) scores from two experimental schools that had implemented the Olweus Bullying Prevention Program, with the change in scores from two control schools that had not implemented any bullying prevention programs. From the two schools that had implemented the program, one was an elementary school and one was a middle school. Likewise, from the two schools that had not implemented the program, one was an elementary school and one was a middle school. The schools that had not implemented the program served as the control group and offered the researcher a standard by which to compare the scores from the other two schools. The two schools that had implemented the Olweus Prevention Program represented the experimental
group. Both of the schools used as the experimental group started the Olweus Bullying Prevention Program at the beginning of the 2007-2008 school year.

The Olweus Bullying Prevention Program began with a survey concerning the prevalence and issues related to the bullying problem at the two individual schools. The results from the survey were then used to develop a plan of action to address the bullying dilemma. The plan for both schools included components that dealt with both education and prevention. The education component for both schools included lessons and activities designed to raise awareness of the bullying issue and to offer tools for both the bullying victim and the bystander to more effectively handle a bullying incident. The prevention component of the plan used the results from the survey to place adults in the areas where the bullying most frequently occurred.

At the conclusion of the school year, the survey was administered again. The results from the second administration were used to determine the effectiveness of the strategies implemented during the school year. This provided the researcher with the information needed to determine if the incidences of bullying had actually been affected by the prevention program. The questions from the first and second survey were compared and analyzed, and the change in the bullying behaviors for the students for each school was documented.

The instrument chosen to measure change in academic performance was the Measures of Academic Progress (MAP) assessment. The MAP assessment is a computer adaptive test already utilized by each of the participating schools. The assessment is administered in the areas of mathematics, science, reading and language usage. The MAP assessment was created by the Northwest Evaluation Association and is
administered three times throughout the school year. The researcher used the results from the assessment offered in the fall of 2007 and the spring of 2008. Since the fall administration was given early in the school year, the scores were considered to be a reflection of knowledge already possessed at the beginning of the school year. The spring administration of the MAP assessment was used to determine the change in academic performance throughout the school year.

The control and experimental schools’ MAP assessment scores from the spring of 2008 were compared using the one-way analysis of covariance (ANCOVA) to account for statistical differences demonstrated by the pre-test. The comparison was made between schools that had implemented the Olweus Bullying Prevention Program and the schools that had not implemented the program. The schools were compared as whole groups, as well as by grade level and gender. In addition to the ANCOVA, several tables and graphs were used to compare the experimental and control groups.
2. Review of the Literature

There is a large body of literature and research that has emerged in the past couple of decades that covers several aspects of bullying and its effect on the individuals involved. This information provides the basis for the present study. This chapter will examine much of the theoretical literature and empirical studies that relate to the aspects of the study.

*Theoretical Framework*

Many different attempts to understand the optimal learning environment have been pursued in previous research. Even back in the 1950s, Maslow attempted to explain the levels through which a person must progress in order to be in a position to grow cognitively and emotionally. In his theory, known as Maslow’s Hierarchy of Needs, Maslow lists four steps that he asserted must be met before a person is ready to move on to the fifth level of having a need to know and understand. The first level put forth by Maslow is for the needs of hunger, thirst, and bodily comforts to be met before one is ready to progress to the second level. The second level is the need for safety and security. Bullying activity within our schools can be a direct assault on a child’s ability to progress through this second level of need. Once an individual feels safe and out of danger, the person is able to attempt to satisfy his/her need for acceptance and love. Again it is obvious that children threatened with bullying activity will have difficulty feeling accepted and loved in a hostile environment. The fourth level involves the individuals need to gain approval and recognition, another area that is under assault in an environment where bullying is left unchecked. It is only after having had each of these
areas of needs met that a child is able to progress to the fifth level of having a need to know and understand.

In a perfect world, the teacher would find every child at this point at the start of every school day. Unfortunately, many barriers stand between where the child is and where the teacher needs him/her to be, and bullying is one of these obstacles. The present study attempts to build a link between the theories concerning the best practices in reducing bullying activity with existing theories about the advantages of safe learning environments.

The following areas emerged as the literature was reviewed:

1. The literature on bullying prevalence showed evidence of a clear problem with the existence of bullying in schools.
2. The literature on the effects bullying has on the participants found several negative consequences.
3. The literature on these consequences reveals that many of the effects of bullying are detrimental to the learning environment.

From this review, the research question was developed that asked if the issue of bullying is effectively addressed will academic performance rise as bullying behaviors decrease?
Theoretical Literature

Countless numbers of books and articles have been written in recent years to address the growing concern of parents and educators over the issues of bullying and its
effects. Through this text, a picture of the extent and consequence of bullying has emerged. Many of the authors recount stories from their own childhood and provide details of the stories of other adults that have been impacted by the occurrence of bullying in their lifetimes (Peretti, 2000; Davis, 2007; Prothrow-Stith, & Spivak, 2005). This literature is used in the following section to take a closer look at the background of bullying, the participants of bullying, and the reported consequences associated with bullying behaviors.

Background

Perhaps one of the earliest outcries from the public over a concern for the issues related to bullying can be found in the mid 1800’s (Rigby, Smith & Pepler, 2004). After the publication of Hughes’ famous novel, Tom Brown’s School Days (1857), which dealt with bullying issues in English private schools, there was an “animated public discussion of bullying” (Rigby et al., 2004, p. 1). From these discussions, the practice and tolerance of bullying received strong condemnation, and a variety of suggestions were made about how it could be countered (Rigby et al., 2004). Modern approaches and concern for the issue of bullying, however, has its roots in the northern part of Norway.

In late 1982, a Norwegian newspaper reported that three 10 through 14 year old boys had committed suicide, possibly as a result of being the victims of severe bullying by their peers (Olweus, 1993). These three tragic events sparked an outcry from the public that led the Norwegian Ministry of Education to commission a national campaign to combat the issue of bullying. With the nation’s interest in bullying at an all time high, a national study was launched that obtained data from 140,000 students in 715 schools (Beaty & Alexeyev, 2008). The results suggested that 15% of children in Norwegian
schools were involved in bullying either occasionally or frequently. Of those included, around 94% were classified as victims, while 6% were classified as bullies (Olweus, 1991). As a result of this study, a program was piloted in Bergen by professor Dan Olweus. Results from the program demonstrated significant reductions in the reported incidences of bullying in the participating schools (Rigby et al., 2004; Olweus, 1993). The intervention program, which was tested on more than 2,500 students, demonstrated a drop in reported bullying activity of over 50% after only two years (Davis, 2007). With such unprecedented success, the program was adopted for use in many other countries, including England, Germany, and more recently the United States (Davis, 2007).

Beginning in the late 1980’s and early 1990’s, the phenomenon of bullying was recognized as a serious threat to the quality of school life for children in the United States. Perry, Kusel, and Perry (1988) observed the rate of bullying and peer victimization to be about 10%. In 1998, another study that involved a national sample of more than 15,000 students in grades 6 through 10 found that about 30% reported either moderate or frequent involvement in bullying as either a bully, a victim, or both (Substance Abuse and Mental Health Services Administration [SAMHSA], 2003). A third study conducted in rural South Carolina involved more than 6,000 middle school students and found similar results. About 23% reported that they had been victims of bullying several times in the previous three months (SAMHSA, 2003).

With these surveys revealing an alarming rate of bullying activity within American schools, the focus turned to a need to counter with an effective response. In the early stages of the nation’s bullying awareness, many programs were developed and implemented on local levels (Limber, 2004). Although these programs were likely well
intentioned, most of them either failed to document any positive results or were not
subjected to a systematic study. In 1999, this became evident when the Institute for
Behavior Science under the leadership of Delbert Elliot (1999), a respected criminologist,
made a systematic evaluation of more than 400 violence preventing programs in the
United States. Mr. Elliot (1999) was looking for these programs to fulfill the following
minimum-level criteria:

- the program had to have positive effects in the students in a relatively rigorous
  scientific evaluation;
- these positive effects had to last for at least one year; and,
- the positive effects had to have been produced in at least two sites.

The study only found 10 of the original 400 satisfied these basic criteria (Elliott, 1999).

A similar study conducted in Norway by “an officially appointed, departmental
committee” (Olweus, 2004, p. 13) investigated 56 programs designed to address the
issues of problem behavior. From this study, only one program was recommended for
use without any reservations. The recommended program was the Olweus Bullying
Prevention Program (Olweus, 2004).

Participants

Having previously defined bullying as “a student is exposed, repeatedly and over
time to negative actions on the part of one or more other students” (Olweus, 2003, p. 8),
it would be beneficial to look at what the literature has to say concerning the different
participants in the act of bullying. While there are various degrees to which a student
may be involved in the bullying process, and some participants may actually take on
more than one role, those involved can be placed in the three general categories of bully, victim, or bystander.

**Bully.** Early in the history of prevention programs, there was a great deal of emphasis put on the need to reform the bully (Elias & Zins, 2003). Much research was conducted into the reasons and motivation for the bullying behaviors. Theories concerning the reason a child might exhibit bullying behaviors ranged from a need for attention to low self esteem (Espelage, Mebane, & Adams, 2004). Bullies are, however, more difficult to recognize than these misconceived stereotypes would suggest (Olweus, 2003). Though there are a number of common features in children that exhibit bullying behaviors, research has shown that a need for attention and low self esteem are not prevalent among the majority of these students (SAMHSA, 2003). According to the U.S. Department of Health and Human Services (SAMHSA, 2003) the following is true of most children that bully:

- They view violence more favorably than most students do.
- They are often aggressive toward adults, both parents and teachers.
- They have a marked need to dominate and suppress other students, to assert themselves by means of force and threats, and to get their own way.
- Boys in this group are often stronger than their peers and, in particular, their victims.
- They are often hot-tempered, impulsive, and not very tolerant of obstacles and delays.
- They find it difficult to abide by the rules.
They appear to be tough and show little sympathy toward students who are bullied.

They are good at talking their way out of difficult situations.

In addition to these commonalities, a bully will usually have a group of two or three who provide him/her with support, and often these will join in the bullying. Though a bully may be popular in the younger grades, his/her popularity seems to lessen in higher grade levels (SAMHSA, 2003, p. 10).

Victim. The other main player in the bullying drama is the victim, also known as the target (Davis, 2007). The broader category of victims has been subdivided by the literature as either “passive victims” or “bully-victims” (Nansel et al., 2001). Although there is some variance in the estimates, bully-victims seem to comprise a smaller subset than do passive victims (Espelage & Swearer, 2003). One well known study from 2001 conducted by Nansel and colleagues (2001) found, from the sample, that 6% were bully-victims while 11% were passive victims.

Passive victims tend to be socially maladjusted. They are usually cautious, overly sensitive, insecure, and often have difficulty asserting themselves among their peer group (Olweus, 1993). Passive victims tend to be isolated (Olweus, 1993) and often report feeling lonely (Nansel et al., 2001). Isolation tends to put these children at a greater risk of being a victim of bullying because the presence of friends often helps to buffer children from bullies (Demaray & Malecki, 2003). Boys that are passive victims are most often physically weaker than their peers (Olweus, 1993; Espelage, et al., 2004). A final common characteristic in the life of passive victims is the frequent occurrence of
child mistreatment in the form of neglect, physical abuse, or sexual abuse (Espelage & Swearer, 2003).

It is worth noting that many of these characteristics of the passive victim may be seen as both a contributor to, as well as a result of, victimization (Olweus, 2003). The social inadequacies that the passive victim exhibits may well lead the child that bullies to consider him/her an easy target. On the other hand, being a constant victim of bullying behavior can also lead to the child having a greater sense of isolation and insecurities, which will in turn lead to him/her again appearing to be an easy target for the bully (Espelage, et al., 2004).

Bully-victims also share many distinguishing characteristics with the passive victim, with the added complications of being hyperactive (Kumpulainen & Rasanen, 2000; Kumpulainen, Rasanen, & Puura, 2001) and having difficulty concentrating (Buhs & Ladd, 2001). These victims tend to be quick tempered and will attempt to fight back when they feel isolated or attacked. Often when these students are bullied, many students are involved in the abuse. Although these bully-victims are often the target of bullying abuse, they are also often involved in bullying younger and weaker children themselves (Schwartz, Proctor, & Chien, 2001).

The literature seems to suggest that there is a growing need to be concerned about the bully-victim (Anderson et al., 2001; Haynie et al., 2001; Kumpulainen & Rasanen, 2000; Nansel et al., 2001; Schwartz, et al., 2001). Bully-victims often show not only the social-emotional problems of a victim, but also the behavioral problems of bullies. A study of middle and high school students conducted by Nansel and his colleagues (2001) found that the bully-victim reported high rates of loneliness and isolation from
classmates, while at the same time reported lower academic performance and more frequent use of alcohol and tobacco. In a survey concerning school violence and death, Anderson and colleagues (2001) speculated that the violent youth element in their survey that had been bullied likely represent the bully-victim who often retaliates in an aggressive manner when victimized.

**Bystander.** The third group associated with bullying behavior is the bystander, also called passive bullies, or henchmen. These students may be involved in the bullying in an indirect manner, but would not usually take the initiative themselves. This group is widely mixed and often ranges from students that verbally support the bullying behavior to students that would like to step in for the victim but are uncertain or anxious about how to do so (SAMHSA, 2003). It is from this group that many authors seem to believe that the greatest impact on bullying frequency can take place (Olweus, 2003; Pellegrini & Long, 2004; Rodkin, 2004; Davis, 2007). Since bullying requires an imbalance of power (Olweus, 2003), it stands to reason that if these bystanders were persuaded to lend more of their power and support to the victim and less to the bully, the balance would shift and the bully would be less powerful.

**Consequences**

The consequences associated with bullying have an impact on the bully, the victim, and the bully-victim. The victim may experience impaired physical and mental health (Rigby, 2001), isolation (Swearer, Song, Cary, Eagle, & Mickelson, 2001), and psychosomatic problems (Swearer, Haye, Cary, Brey, & Frazier-Koontz, 2002). On the other end of the spectrum, bullies often report feelings of depression related to the act of bullying (Swearer et al., 2002). Perhaps the greatest at risk for adverse behaviors and
consequences is the bully-victim. The bully-victim experiences psychological distress, anxiety, loneliness, and depression (Swearer et al., 2002; Elias & Zin, 2003).

**Empirical Studies**

Over the past decade, a large number of empirical studies have been conducted concerning bullying and peer harassment. A great percentage of these studies have focused on three elements of the bullying phenomenon: prevalence of bullying, characteristics of bullying, and bullying prevention.

**Prevalence**

In the early stages of research into the issues of bullying, many researchers focused on measuring the prevalence of bullying. As mentioned earlier, awareness of the effects of bullying has been a relatively new area of concern. This concern, and the research that followed, has its roots in Norway. From the research and information gathered in that country, the concern spread quickly to neighboring Europe. The concern and research did not reach many American educators until the 1990’s. After years of bullying awareness, the extent of the problem is still being documented around the world as well as in the United States.

**Global.** With little question, the original modern-day study of the prevalence of bullying was generated in Norway during the 1983-1984 school year by professor Dan Olweus. The questionnaire developed by Olweus for the purpose of identifying the extent of the bullying problem was sent to all primary and secondary/junior high schools in Norway (Olweus, 1993). It was estimated that approximately 85% of the nation’s student body participated (Olweus, 1993). From this population, he chose a representative sample of approximately 130,000 students. The sample was representative
of almost one fourth of the total population in the relevant age group (Olweus, 1993). The relevant age group was generally ages 8 to 16. Younger students did not participate in the study because of insufficient ability to read and write (Olweus, 1993). In addition to the broader Norwegian study, Olweus also conducted a parallel study using the same questionnaire with 17,000 students from three cities in Sweden. The purpose of the parallel study was to provide the researcher with the data with which to compare the three Norwegian cities.

In order to provide the researcher with even more detailed information on the various aspects of bully/victim problems and on the effect and extent a prevention program may have, Olweus also conducted a smaller scale project in the city of Bergen, Norway. In that study, 2,500 students in the grades 4 through 7 from 42 different schools provided specific data about various aspects of the bully/victim relationship. In addition to the 2,500 students, around 300 teachers and close to 1,000 parents also provided data for the Bergen project (Olweus, 1993).

The results of the questionnaire found that approximately 15% of the students were experiencing bully/victim problems with some level of regularity, either as bullies, victims, or as bully-victims (Olweus, 1993). This 15% represented about 568,000 students reporting that they had been involved in bullying with either moderate or frequent regularity (Olweus, 1993). For that particular school year this number represented about one in seven students. Of this number, about 9%, or 52,000 students, reported they had been the victims of bullying, about 7%, or 41,000 students, reported they had bullied another student(s), and about 1.6%, or 9,000 students, reported they had been both a victim and a bully (Olweus, 1993).
When considering the data, looking at the number of students that reported being bullied or bullying “about once a week” or more frequently, the numbers were also troubling. Slightly more than 3%, or 18,000 students, reported that they were victims of bullying at this high rate of frequency (Olweus, 1993). Nearly 2%, or 10,000 students, self reported bullying others at least once a week (Olweus, 1993). Using a minimum of once a week as the cut off, 1,000 students reported they were both a victim and a bully with that level of regularity. These numbers suggested that close to 5%, or about 27,000 students, in Norway at the time of the study were involved in bullying at what could be considered an alarming rate.

The teacher and parent surveys collected as part of Olweus’ research provided information that collaborated with the results of the student questionnaires. The information, which represented approximately 90 classes, “suggested that the reported results do not give an exaggerated picture of the frequency of bully/victim problems” (Olweus, 1993, p14). Olweus concluded that “against this background, it can be stated that bullying is a considerable problem in Norwegian schools, a problem that affects a very large number of students” (Olweus, 1993, p14).

A large scale follow up survey conducted in 2001 by Olweus and Solberg involved approximately 11,000 students from 54 elementary and junior high schools and used the same questions that were used in 1983 (Olweus, 2003). From this study two alarming trends were noted. First, the percentage of students that reported they were victims of bullying rose by close to 50% from 1983. A second disturbing trend revealed that the percentage of students reporting being involved either as victims, bullies, or
bully-victims, in frequent and serious bullying problems, increased by approximately 65% (Olweus, 2003).

While these surveys showed that bullying was a serious issue in the Scandinavian schools, data from other countries demonstrated similar problems. A study published in 2004 from Germany consisted of 14,788 pupils (Hanewinkel, 2004). The study defined bullying activity as only being present if there is an imbalance of power. A struggle between two students of approximately the same size and social status did not constitute a bullying situation. The study involved students from the third through twelfth grade (Hanewinkel, 2004). While the primary focus of the study was to measure the effectiveness of a prevention program, it offers a glimpse at the prevalence of bullying in German schools. The study’s preliminary survey found that approximately 20% of the participants reported a low level problem with bullying in their own lives. Slightly more than 8% indicated that bullying was a high level problem in their lives. The two combined showed that for the students surveyed, close to 30% had dealt with the issue of bullying at some level in their lives (Hanewinkel, 2004). With the results broken down by grade level, the study also revealed that the trend for bullying activity peaked around 8th or 9th grade (Hanewinkel, 2004). Starting with the third grade, the percentage for any level of involvement in bullying was 14.5%. In fourth grade it rose to 23%, in fifth grade it was still about 23%, in sixth grade it was 30.5%, in seventh grade it was 38.7%, in eighth grade it was 39.6%, and it peaked in ninth grade at 40.5%. From that point it began to descend to 36.9% in tenth grade, 25.2% in eleventh grade, and it fell to 17.7% in twelfth grade (Hanewinkel, 2004). This peak has significant impact on anyone interpreting the results of a study that incorporates various grade levels. While the
overall percentage of students that had been affected by the issue of bullying was close to 30%, a ninth grade student had a significantly higher chance of being involved with bullying.

A 2006 study conducted in southern Australia questioned 1,284 students about the prevalence of bullying/victimization both in school and outside of school (Delfabbro et al., 2006). The study broke the bullying behaviors into ten different forms of victimization. Five of the forms addressed in school behaviors, and five of the forms addressed out of school behaviors. The five forms for the in school and out of school were identical but sought to identify where the behavior was occurring. The five forms of victimization were being picked on by kids, being made fun of by kids, being pushed around by kids, being called name by kids, and being picked on by teachers. The results from the study revealed that as many as 54% of the boys felt that they had been picked on by other children at some point. For the girls, as many as 50% felt they had been picked on by others. If only the category of “often” is considered, 15% the boys and 8% of the girls reported they were often made fun of by other children (Delfabbro et al., 2006). The study also revealed how much more prevalent bullying behaviors are in the lives of children at school as opposed to away from school. An average of only 56% reported that they had not been the victim of each of the five identified forms of victimization. Away from school the average rose to nearly 82% (Delfabbro et al., 2006). This marked difference between at school and away from school victimization is a clear indicator of the bullying issue being predominantly a school issue.

In 2002, another study was published that demonstrated the same types of issues in schools in Northern Ireland. The study was conducted from a sample of both sixth and
ninth grade students. The sixth grade primary pupils consisted of a sample size of 1,079 students, while the post-primary ninth graders consisted of 1,353 students (Collins, McAleavy & Adamson, 2004). The study, which was reportedly the first of its kind in Northern Ireland, found that 40% of the sixth grade students reported being bullied at school. Also, 30% of the ninth grade students reported having been bullied. More frequent occurrences of bullying were reported to have happened less often. Nearly 6% reported being bullied two or three times a month, while 5% reported being bullied about once a week, and 4% reported being bullied several times a week (Collons et al., 2004).

In the same study, 25% of the sixth grade primary pupils reported they themselves had bullied others, while 28% of the ninth grade post-primary pupils admitted bullying others (Collins et al., 2004).

United States. While numerous other studies exist that demonstrate the prevalence of bullying in other countries around the globe, there is a substantial amount of data that has been gathered in the United States over the past decade. Perhaps the earliest national study done on the prevalence of bullying activities in the United States was published in the Journal of American Medical Association in 2001. The study consisted of a representative sample of 15,686 students in grades 6 through 10 in both public and private schools throughout the United States (Nansel et al., 2001). The study utilized information from the self-reporting survey entitled, The World Health Organization’s Health Behavior in School-aged Children Survey, which is administered every four years. The results demonstrated a total of 29.9% of the sample reporting that they had been either moderately or frequently involved in bullying. The study found nearly 13% reported they had been the perpetrator of bullying behavior, while 10.6%
reported being the victim of bullying, and 6.3% reported they had been both bully and victim at some point (Nansel et al., 2001).

Of the students that reported that they had themselves bullied other students, 10.6% reported that they bullied others moderately, while 8.8% admitted that they bullied others at least once a week. Nansel and colleagues (2001) estimated these numbers to represent a national average of 2,027,254 students involved in moderate bullying as bullies and 1,681,030 students involved in frequent bullying as bullies. When separated by the sexes, 13% of the males reported that they bullied others at a moderate level and 8.5% reported that they bullied others on a frequent basis. The girls reported lower rates of bullying activity, with 8.5% reporting that they were involved as bullies at a moderate level and 5.2% reporting being frequent bullies (Nansel et al., 2001).

Similar frequency levels were seen for students that reported they were victims of bullying. The total percentage of the sample that reported they were bullied “sometimes” was 8.5%. The total that reported they were bullied “frequently” was 8.4%. Again Nansel and colleagues (2001) estimated the total number of students in the United States that had been bullying victims based on the sample percentages. They stated that 1,634,095 students were victims of bullying at a moderate level, while 1,611,809 students were frequent victims of bullying behaviors. Just as boys were more likely to be bullies than girls, the study showed that boys also were more likely to be victims of bullying activity. From the sample, Nansel and colleagues (2001) found that 9.9% of the boys surveyed were moderate victims of bullying, while 10.8% were frequent victims. For the females, 7.3% were moderate victims and 6.4% were frequent victims (Nansel et al.,
2001). The study demonstrated that the issues and problems associated with bullying activity are a significant dilemma in American schools.

Similar results were found from a study conducted of more than 6,000 middle school students in a rural part of South Carolina. In this study, about 23% or around 1,400 students reported they had been bullied by other students either “several times” or “frequently.” Around 20%, or about 1,200 students, reported they had bullied other students with the same frequency (Limber, 2004).

Seals and Young (2003) gathered data addressing the prevalence of bullying among students in grades seven and eight. The 454 participating students represented urban, suburban, and rural school districts, and most were African American and white. Twenty-four percent of students reported either bullying or being bullied. Males were involved in bullying significantly more than females, and seventh graders were more significantly involved than eighth graders. Most incidents of bullying occurred at lunch or recess, but many also occurred on the way from or to school, as well as in the classroom. (Seals, & Young, 2003)

In 2005, the US Department of Education released its report entitled Student Reports of Bullying, which was based on the result of the 2001 School Crime Supplement to the National Crime Victimization Survey. This report found that 14% of students age 12 through 18 reported they had been bullied at school at some point in the previous 6 months that preceded the interview (National Center for Education Statistics [NCES], 2005). The two broad categories of bullying that were studied were direct and indirect bullying. Direct bullying was defined as any bullying that takes the form of overt, physical contact in which the victim is openly attacked. Indirect bullying was
defined as acts of bullying that take the form of social isolation and intentional exclusion of the victim from activities. The report found that of the 14% of students age 12 through 18 that had reported being a victim of bullying, 3% indicated that they had been bullied through direct or physical means, 7% reported being bullied only indirectly through social exclusion or rejection, and approximately 5% reported they had been bullied by both direct and indirect means (NCES, 2005).

The US Department of Education Report (NCES, 2005) broke the results of the interviews down into individual student characteristics. The report found that the reported incidences of bullying were highest with the youngest group surveyed. A total of 24.3% of sixth grade students reported having been a victim of bullying. From the 6th grade, the rate of bullying victimization drops until it reaches a level of 7.4% in the 12th grade. The report found that males were slightly more likely to report they had been victims of bullying in the previous six months. A total of 15% of males surveyed reported they had been bullying victims in the previous six months, as opposed to 13.7% of females. White, non-Hispanic students were more likely than any other ethnicity to be bullying victims. Nearly 15.4% of the white, non-Hispanic students reported they had been bullying victims, while 13% of the Hispanic students and 12.3% of the African-American, non-Hispanic students reported the same. Household income seems to have very little impact on the likelihood of being a victim of bullying. Of the students surveyed from families that earn less than $7,500, 15% were bullying victims, while 12.9% of the children from families earning $75,000 or more reported they had been a victim. At 17.5%, students from families earning between $15,000 and $24,999 indicated the highest percentage. Likewise, a student’s place of residence seemed to have
little effect on his/her chances of being a bullying victim. Of the total number of urban students reporting, 13.2% reported they had been victimized by bullying. In the same study, 14.9% of the suburban students and 14.7% of the rural students reported the same (NCES, 2005).

Characteristics

Having now reviewed the research concerning the prevalence of the bullying phenomenon around the world, a concern over the effect it has on those involved arises. The effects of being involved with bullying and the characteristics of those involved with bullying are difficult to distinguish. For example, being timid and withdrawn may lead to a bully identifying a child as a target, or the bullying acts may lead to that child being timid and withdrawn. The following sections will look at the research related to the perceived effects of bullying behavior for the individuals involved and for the school as a whole.

Victim. Over recent years, many studies have been conducted that reveal the greater risk for students that are identified as victims of bullying (Saluja et al., 2004; Arseneault, et al., 2008; Fekkes, Pijpers, & Verloove-Vanhorick, 2006). From these studies, it becomes apparent that bullying is significantly correlated with a wide spectrum of negative effects on the lives of children. For the victim, studies have shown the bullying activity to be associated with mental health problems (Nansel el at., 2001; Saluja el at., 2004; Arseneault el at., 2008; Fekkes el at., 2006), physical health problems (Nansel el at., 2001; Fekkes el at., 2006), as well as social adjustment problems (Arseneault el at., 2008). The research on the effect bullying has on the victim in these three areas will be discussed in the following sections.
Bullying seems to have an impact on the mental health of victims. A 2006 study reported in The British Educational Journal was conducted using 1,284 students from 25 South Australian government and private schools (Nansel et al., 2001). The study found that being a victim of bullying is associated with a wide range of negative psychological outcomes. Students that reported they were frequent victims of bullying behaviors scored significantly higher on a wide range of indicators for psychological problems. Of the students reporting they were often victims of bullying 8.6% stated their moods were predominately negative, compared with just 2.5% of those reporting they were never the victim of bullying. When asked about poor self esteem, only 7.4% of those reporting no bullying victimization indicated this was true, while 18.2% of the students that were often bullied indicated they had a poor self esteem. Those often bullied also felt socially alienated at nearly four times the rate of those that were never bullied. Perhaps the most troubling, students that reported they were frequent victims of bullying were almost ten times more likely to have had suicidal thoughts than their peers that were never victimized (Nansel et al., 2001).

Poor emotional adjustment and depression have been closely tied to bullying victimization (Fekkes et al., 2006; Saluja et al., 2004). A study conducted by Nansel and colleagues and published in 2004 sampled a total of 113,200 students from 25 different countries (Nansel et al., 2004). Though the level of bullying activity varied widely between countries, the correlation with those that were identified as bullying victims and certain problems were significantly consistent. When compared with students not involved in bullying on any level, students that were victims scored significantly higher with emotional adjustment problems in all 25 countries (Nansel et al., 2004). Another
study involving 9,863 students in the United States sought to determine the risk factors associated with depression among young adolescents. The researchers found that young people frequently involved in bullying were more than twice as likely to report symptoms of depression as young people not involved in bullying. Another study that involved 47 elementary schools in the Netherlands, found that as the number of self reported victims of bullying decreased, the reported cases of depression also showed a decline (Fekkes et al., 2006).

Arseneault and colleagues (2008) conducted a study to investigate the role bullying has as a contributing factor to children internalizing problems. Internalizing problems has been found to be a contributing factor to many mental health issues such as depression (Hawker, & Boulton, 2000; Arseneault et al., 2005), elevated anxiety (Hawker, & Boulton, 2000), social isolation (Veenstra et al., 2005), and suicidal thoughts (Kim, Koh, & Leventhal, 2005). These can be difficult circumstances for any normal healthy child, but for children that already face physical challenges, the effects of bullying can be multiplied. The study utilized 1,116 twin pairs from the United Kingdom between 7 and 9 years of age. The researchers found that twin pairs in which both twins had been victimized by bullying had significantly more internalizing of problems than did twin pairs in which both twins had not been bullied. The study also found that an individual twin that had been bullied had more internalizing symptoms than their co-twin who had not been a victim of bullying (Arseneault et al., 2008). The researchers concluded that being bullied at a young age is a contributing factor to children internalizing problems (Arseneault et al., 2008).
Another troubling revelation from recent studies is the relationship between bullying victims and physical health problems. The previously mentioned study conducted by Nansel and colleagues (2004), which surveyed a sampling of students from 25 different countries, also found that students that had been bullied consistently reported poorer health conditions than those students that had not been the victim of bullying (Nansel et al., 2004). In all countries included in the study, the victims of bullying had a significantly higher rate of reported health problems than those not involved in bullying. The researchers concluded that involvement in bullying as a victim significantly increases a child’s chances of having greater and more frequent health problems (Nansel et al., 2004).

A study conducted to evaluate the health status of adolescent females measured by the occurrence of headache, stomachache, backache and morning fatigue found a relationship between these symptoms and the presence of bullying (Ghandour, Overpeck, Huang, Kogan, & Scheidt, 2004)). The study found that girls that experienced bullying at least once a week were more likely to experience health problems than girls who had not been bullied during the school term (Ghandour et al., 2004). In another study, students that had been identified as bullying victims were asked to rate their own health. When compared to their peers, students that had been victims of bullying behaviors consistently rated themselves as less healthy (Nansel et al., 2001). In the same study bullied students also rated themselves as less physically healthy and attractive, less extroverted, and less popular among their peers (Nansel et al., 2001).

**Social effects.** In a study published in 2005, victims of bullying were found to have significantly more problems in dealing with and responding to social situations
The study included 3,530 participants from an urban west coast school district. The purpose of the study was “to determine the prevalence of bullying during elementary school and its association with school attendance, academic achievement, disciplinary actions, and self-reported feelings of sadness, safety, and belonging” (Glew, et al., 2005, p. 1027). Of those surveyed, 22% of the children were involved in bullying either as a victim, a bully, or a bully/victim. The researchers found that 37% of the respondents that identified themselves as bullying victims felt as if they did not belong with their peers at school. This compares to only 9% of the indentified bystanders that felt the same way (Glew, et al., 2005). Of the bullied respondents to the survey, 72% also indicated that they felt sad on most days while only 49% of the bystanders responded the same. When asked about whether they felt safe at school, 15% of the victims stated they did not feel safe, while only 3% of the bystanders did not feel safe at school (Glew, et al., 2005).

In another study published in 2003 (Paul, & Cillessen, 2003), the perceived results of bullying were researched from the view point of both the victim and the teacher. The research, which was a four-year longitudinal study, found that the teacher consistently rated the students that self identified themselves as bullies low in the category of peer sociability. Teacher’s rating for peer sociability decreased throughout the duration of the study, meaning that the teacher’s perception of the victim’s social status was that the child was more socially maladjusted as the child progressed through grade levels. The same study found that the bullied child viewed himself as significantly less sociable than the non-victim child. Interestingly, as the years progressed, the victims’ self-rating for peer sociability increased, meaning that at least some of the
identified victims’ perceptions of their social status grew more positive over the four years covered by the study. One last major emphasis of the study found that for grades 4 through 7, the stability of victimization was high across all years of the study. A victim that self-identified in fourth grade was likely to still identify him/herself as a victim throughout the duration of the study.

Bully. Several of the previously mentioned studies, as well as many others, have investigated the effects and characteristics of the perpetrator in the bullying continuum. Though bullies and victims vary widely, many of the studies demonstrated some common attributes that can be seen in many children that are identified as students who bully. Some of the symptoms reported and researched that are attributed to the victim have also been true for the bully, but there are notable differences among those bullied and bullies. The following sections will look at some of the research related to the characteristics of the bully.

One trait that the bullies seem to share with their victims is an increased risk of both mental and physical health problems. Bullies are more than twice as likely as those not involved with bullying to report depressive symptoms (Saluja, et al., 2004). A study published in 2005 found that 58% of the students that identified themselves as bullies reported they felt sad most days, which compared to only 49% of the students identified as bystanders (Glew, et al. 2005). In the study conducted by Nansel and colleagues (2004), the researchers looked at the issue of health problems for the bully by utilizing data from 25 countries from around the world. Though it was at a lower rate than their victims, the study found that bullies had a greater risk of physical health problems than their noninvolved peers. Some research has demonstrated an increase in the level of
anxiety in the identified bully, but overall, the research findings have been inconsistent. For instance, studies by Kaltiala-Heino and colleagues (Kaltiala-Heino, Rimpela, Rantanen, & Rimpela, 2000) as well as by Duncan (1999) revealed similar elevated rates of anxiety in bullies and victims when compared to noninvolved students. In contrast to these studies, however, others have demonstrated no evidence of increased anxiety levels in bullies (Olweus, 2003; Salmon, James, Cassidy, & Javaloyes, 2000).

Bullies have also demonstrated an increased tendency toward violence and violent acts. A 2003 study that involved 15,686 US students in grades 6 through 10 sought to investigate the relationship between bullying and violence (Nansel, Overpeck, Haynie, Ruan, & Scheidt, 2003). The study found that for boys in particular, being identified as a bully greatly increases the child’s chances of being involved in other violent activities. For example, as many as 10% of the boys that identified themselves as perpetrators of bullying only once or twice were also involved in frequent fighting. As the frequency of bullying activity increased so did the percentage involved in fighting. Slightly more than 15% of the students that stated they were sometimes guilty of bullying other students were frequent fighters. A total of nearly 39% of the boys that stated they bullied weekly also stated they were frequently involved in fighting (Nansel et al., 2003).

Another even more disturbing trend was found for the boys identified as bullies and their tendency to carry a weapon both away from school and in school. Of those responding to the survey, there were 13.4% that stated they had never been a bully but had carried a weapon away from school. This compares to 52.2% of the students that stated they were frequently involved as bullies. While the percentage was lower for students that were not as frequently involved in bullying, having only bullied once or
twice still increased the percentage of carrying a weapon away from school to over 23%.
Though fewer bullies carry weapons to school than they do other places, the numbers are still significantly higher than non bullying students. Of the students surveyed, 7.9% of those that stated they had never bullied another student indicated they had at some point carried a weapon to school. Of the students that were frequent bullies, 43.1% reported they had carried a weapon with them to school. Perhaps the percentage appears to be so high because the definition of a weapon could be considered so broad. When Glew and colleagues (2005) surveyed students about their opinions on carrying guns to school, they found no significant difference in victims and bullies opinion. From both groups, 8% of the respondents indicated a favorable response. In the same survey only 5% of the bystanders had the same favorable response about taking guns to school.

Studies have also shown that students that are bullying others are more inclined to be involved with risk taking and criminal behaviors. In their groundbreaking research, Nansel and colleagues (2001) investigated both the prevalence of bullying and its effects on students in the United States (Nansel, et al. 2001). They found that persons who bullied others were more likely to be involved with other problem behaviors such as drinking alcohol and smoking. Bullies were found to be twice as likely as their victims to smoke cigarettes at least once a week (Nansel, et al. 2001). Bullies also were over 2.5 times more likely to use alcohol at least monthly than the victims of bullying. The same study investigated the students’ parents’ attitude toward teen drinking and found little difference between parental attitudes of students that are bullied or parental attitudes of students that are bullies (Nansel, et al. 2001). In their study, Glew and colleagues (2005) found that bullies responded more than both the victims and the bystanders for
several risk taking activities. Around 8% of the bullies represented in the study endorsed the use of cigarettes, compared to only 5% of the bystanders. Twice as many bullies endorsed the practice of cheating than did the bystanders. Nearly 8% thought that picking fights was acceptable, compared to only 5% of the bystanders.

Criminal activity is also prevalent among those professing to be bullies. In the study by Glew et al. (2005), it was found that nearly 7% of the bullies identified thought that stealing was an acceptable practice. A surprising 21% of the surveyed bullies endorsed the practice of beating other people. This compares to only 7 percent of the bystanders. A study published in 2007 followed 2,551 boys from age 8 years to ages 16 to 20 years. The longitudinal study surveyed the participants at age 8 to identify the presence of bullying and victimization. The purpose of the study was to investigate criminal activity among all participants of bullying later in life. During the 4-year study period, the average number of crimes among children who did not frequently bully or were not frequently victimized was 0.8. The average number of crimes among frequent bullies was 4.7. When looking specifically at violent crimes, the numbers are even more revealing. Of those involved in the research that committed a crime during the study period, only 6% are represented by those that reported no frequent bullying or victimization. Those identified as frequent bullies were responsible for 17% of the total number of violent crimes (Sourander et al., 2007).

As previously mentioned, much research includes another group in the bullying continuum (Olweus, 1993; Rigby, 2001; Smith 2004; Hawker, & Boulton, 2000), the bully/victim or the provocative victim. The submissive victim is the most common bullying victim and was discussed in more detail previously as just the victim. These
victims are generally the students that are anxious, insecure, and unlikely to retaliate if attacked. The passive/submissive victim often withdraws or cries when bullied by others (Olweus, 1993; Rigby, 2001; Smith 2004; Hawker, & Boulton, 2000). The submissive victim is likely to experience emotional distress such as loneliness, anxiety, and depression (Paul & Cillessen, 2003; Kochenderfer-Ladd & Wardrop, 2001). In addition, this victim type is likely to experience maladjustment in the form of low self-confidence, low self-esteem, and poor social skills (Paul & Cillessen, 2003; Kochenderfer-Ladd & Wardrop, 2001). In studies of 12 to 16 year olds, researchers in both England (Mynard & Joesph, 1997) and South Australia (Rigby, 2001) found victimization to be correlated with increased psychological distress and diminished self worth.

The provocative victim, on the other hand, tends to provoke the bullying by his/her reactions and interactions with his/her peers (Olweus, 1993; Carney & Merrell, 2001; Swearer, Grills, Haye, & Cary 2004). For the provocative victim, the experience of victimization at the hands of peers often predicts retaliatory violence by the victims (Paul & Cillessen, 2003). These children often become involved in emotionally charged conflicts and have difficulty in being able to manage their anger (Paul & Cilessem, 2003). The provocative victim is the smaller in number of the two subgroups, but between 5% and 10% of children that are the victims of peer aggression are themselves aggressive toward others (Olweus, 1993; Paul & Cillessen, 2003). Isaacs, Card, and Hodges (2003) shed further light on this subgroup by finding that students who score high on both victimization and the aggression are the most likely to carry weapons to middle school.

Much research has begun to look at the effects and characteristics of the bully/victim or provocative victim (Sourander et al., 2007; Nansel, 2003; Glew et al,
2005; Scarpaci, 2006). This group has become of great concern because they seem to often exhibit the negative consequences of being a victim of bullying, as well as the negative behaviors of being a bully. The provocative victim shares in the passive victims symptoms of poor mental health (Saluja, et al., 2004; Fekkes et al., 2006), poor physical health (Ghandaur, Overpeck, Huang, Kogan, & Scheidt, 2004), and poor social skills (Glew et al., 2005; Paul, & Cillessen, 2003). The provocative victim also shares the bully’s problems of violent tendencies (Nansel et al., 2004; Sourander et al., 2007), risk taking behaviors (Ghandour et al., 2004; Sourander et al., 2007), and criminal activity (Ghandour et al., 2004; Sourander et al., 2007).

School effects. Having now completed a review of the literature relating to the prevalence of bullying as well as the characteristics of the participants involved, a look at the literature concerning the effect bullying has on the school would be beneficial. While many of the effects of bullying may seem obvious, measuring it directly is a difficult task. There is, however, limited research from recent years that attempts to examine the effect bullying has both in the classroom as well as on the school as a whole. The following section will look specifically at the research related to the effect bullying has on student motivation, school climate, and academics.

The motivational factor, and its effect on a student’s ability to perform well academically, has been of concern and interest to educators for decades. Because of this concern, several theories about motivation and its origins have been constructed (Seifert, 2004). Four theories are most prominent in contemporary educational psychology. One of these leading theories is the self-efficacy theory, which refers to a person’s judgment about his/her capability to perform a task at a specific level of performance. Secondly,
attribution theory refers to the perceived cause of a particular outcome. For example, one student may believe he/she failed a test because he/she didn’t study the material, while another may think he/she failed the test because the teacher was in a bad mood. The next dominant theory in the area of student motivation is the self-worth theory, which simply attributes the motivation of a student to do well to his/her desire to maintain or enhance their self-worth. The final theory for motivation is achievement goal theory, which states that students’ motivation can be understood as attempts to achieve goals (Seifert, 2004). While all of these theories certainly have their merit, bullying has been shown to be associated with barriers to all four.

When the association of self-efficacy of Greek primary students and bully/victim problems was researched in 2004, a low rating was found for both bully-victims and victims involved in the study (Andreou, 2004). Similar results were found in a study published in 2005 that attempted to find correlation in the roles of self-efficacy, peer interactions, and attitudes in bully-victim incidents (Andreou, Vlachou, & Didaskalou, 2005). The lack of confidence in one’s self to complete a task is a common trait among victims of any type of crime (Cheurprakobkit & Bartsch, 2005). This lack of confidence has the effect of hampering the efforts of educators in the school (Seifert, 2004).

The effect of bullying on attribution has been developed through studies that have investigated the effect bullying has on a student’s locus of control. Locus of control refers to individuals’ belief about the causes of events in their lives (Rotter, 1966; Swearer et al. 2004). Several studies have investigated the existence of a positive relationship between external locus of control and aggression (Halloran, Doumas, John, Margolin, 1999; Osterman, et al., 1999). It appears that students involved in bullying
experience a sense of hopelessness and an external locus of control (Swearer et al., 2004). This external locus of control can lead to the child developing a sense of helplessness in the area academics (Swearer et al., 2004). From this helplessness, less effort is exerted, and academic failure becomes more likely (Swearer et al., 2004; Seifert, 2004).

The self-worth theory indicates that a child will attempt to attain achievement to improve or maintain his/her self-worth (Seifert, 2004). The theory begins by postulating that people possess a sense of self-worth, and that self-worth is a critical dimension of human functioning (Seifert, 2004). Here self-worth refers to the judgment the child makes about his/her sense of worth and dignity as a person. Seifert (2004) states, “A person who has a sense of self-worth knows that he or she is loved and respected by others and valued as a person” (p 141). A major obstacle for a person to have a healthy sense of self-worth is depression (Seifert, 2004). The research covering the greater likelihood of a child that is involved in bullying experiencing depression was covered in detail earlier. The amount of research that ties the two together is large (Saluja et al., 2004; Arseneault et al., 2008; Fekkes et al., 2006; Nansel et al., 2004).

Finally, bullying can be seen to be an assault on the motivational theory of achievement goal as well. Achievement goal theory sees motivation as the students’ attempt to reach goals. A work avoidance goal has been suggested by researchers (Seifert & O’Keefe, 2001; Jarvis & Seifert, 2002) as a likely goal for students that underachieve in any particular area. Some research seems to suggest that students pursuing work avoidance goals tend to feel less competent than students pursuing learning goals, and also may have a greater tendency to make external attributions than learning goal students (Seifert & O’Keefe, 2001). This will often encompass those
involved in the bullying process because of the depression, feeling of a loss of control and lower self esteem (Nansel et al., 2004; Saluja et al., 2004; Arseneault et al., 2008; Fekkes et al., 2005).

School climate has increasingly become an area of focus for administrators and teachers as evidence of a link between school climate and academic performance continues to emerge. A positive school climate was defined by Fenzel and O’Brennan (2007) as a “supportive and caring school environment that facilitates student learning and engagement and also contributes to academic success” (p. 4). In their research, Fenzel and O’Brennen (2007) investigated the effect school climate had on the motivation and academic achievement for at-risk urban African American children. The results showed that the level of the students’ perceptions of their school as enjoyable and its rules and discipline as fair was significantly related to their GPA (Fenzel, & O’Brennan, 2007). As other research has shown (Kaplan & Maehr, 1999a; Kaplan, & Maehr 1999b; Furrer & Skinner, 2003; Meece, Anderman, & Anderman, 2006), these students responded positively to a school environment that they perceived to be supportive, caring, and having mastery oriented classrooms (Fenzel, & O’Brennan, 2007). On the other hand, bullying in the schools is an assault of the climate of a school. The support and caring of the staff of the school has been found to have a direct link to the perception of the school’s climate (Galand, Lecocq, & Philippot, 2007).

The effect classroom management has on the occurrence of bullying has also been researched within the same school setting. Classroom management has a direct impact on the prevalence of bullying (Galand, Lecocq, & Philippot, 2007). Effective bullying intervention has an effect on school climate and the presence of bullying. At the
conclusion of a national campaign in the Netherlands, research found that there was a
decrease in pupils’ violent behavior and a greater awareness among students of their
social behavior (Mooij, 2005). Another study conducted among Arab and Jewish
elementary school children found that students’ fear of attending school due to violence
was related to experiences of personal victimization on school grounds. The research
also found that children’s judgments of their schools’ overall violence problem were
influenced directly by the school climate (Galand et al., 2007).

Other studies have found similar issues with school adjustment, school bonding,
and school bullying. Students involved in bullying were significantly less likely to reflect
high levels of school adjustment or bonding. This relationship was strongest for
bully/victims, followed by bullies, and then by victims (Haynie et al., 2001). Natvig,
Albrektsen, and Qvarnstrom (2001), who investigated the same, found school alienation
was correlated to students who bullied others, but school distress was not. Bullies were
actually over two times more likely than students not involved in bullying behavior to
feel alienated from school. Student adjustment and bonding were also linked positively
with school performance (Natvig et al., 2001).

The issue of school bullying has been shown to have a relationship with academic
competence, but the findings have not been consistent (Dake, Price, & Telljohann, 2003).
A British study (Mynard & Joseph, 1997) of children aged 8-13 found a significant
negative correlation between self-reported level of victimization and level of scholastic
competence. Though weaker, the same study found a significant negative relationship
between students that bullied others and level of scholastic competence. For the students
involved in the study, both the bullies and the victims showed poorer scholastic
competence than the children not involved with bullying, but the victims were the most affected. Juvonen, Nishina, and Graham (2000) used grade point averages and found the same relationship to be true for victimized students aged 12-15. Bullied middle school students had lower GPAs than their non victimized peers (Juvonen, Nishina, & Graham 2000).

Research conducted in 2005 investigated the connection between bullying, psychological adjustment and academic performance in elementary school students (Glew et al., 2005). Twenty-two percent of the children surveyed were involved in bullying as a bully, a victim, or both. Of the 3,530 students involved in the study, 194 children surveyed reported being bullied “always” but did not bully others, 431 said they bullied others but were not seriously bullied by others, and 51 children reported they both bullied and were bullied. Lower academic achievement, feeling unsafe, feeling as if one does not belong at school and feeling sad were all positively associated with being a victim when compared to being a bystander. Bullies had greater odds of feeling unsafe at school and being sad most days. Bully/victims had a greater risk of feeling unsafe, feeling as if they did not belong at school, and lower academic achievement than bystanders.

Prevention

Having now completed an investigation into the prevalence, characteristics, and effects of bullying, the research pertaining to its prevention will be reviewed. The primary focus of the present study is to investigate the effect prevention has on the academic performance of students. To better understand what is proven to work in prevention, and what is possibly gained by prevention, the research pertaining to the
elements of an effective prevention program, and research specifically pertaining to the Olweus Prevention Program will be discussed in the following section.

**Elements.** Many programs have been developed and implemented to address the issues of bullying over the past couple of decades. While empirical research into the effects and advantages of many of these programs is lacking, the research that has been conducted seems to support the presence of three distinct components in programs that are effective in the reduction of bullying activities. The programs that have been researched and found to be most effective at addressing the issues of bullying approach bullying at three levels: school-level, classroom-level, and individual-level.

The interventions based at the school-level are focused on educating the faculty, parents, and students (Starr, 2005). An effective learning environment is best created by adults who are supportive of students, a staff who are positive role models, consistent and firm rules, and a well-defined plan to address bullying behavior (Yoon, Barton, & Taiariol, 2004). At the school level, bullying surveys can be conducted, supervision can be increased, and communication between the school and the parent/community organizations can be improved (Starr, 2005; Bullying, n.d.). Effective prevention also requires the community to be involved. Parents need to understand that bullying behaviors are different from the normal social problems of adolescence. Education for both the parents of victims and the parents of bullies is essential. It takes a commitment from the whole school, as well as all stakeholders, to change this type of behavior (Shore, 2005).

The school-wide approach should be created with the input from all involved. The prevention of bullying is most effective when the school has clear and consistent
policies and rules that are generated through collaboration (Milson & Gallo, 2006). A written anti-bully policy ensures that the students, staff, and community are all heading in the same direction. Discipline needs to be appropriate and matched with the behavior, as well as applied equally to all students. All students should be given the opportunity to have input in writing an anti-bullying policy. This allows students to feel a sense of ownership in the policy. Clear moral standards need to be modeled. It is important that the focus not be on the consequence of bullying, but instead on the behaviors that provide a positive learning climate (Sprague & Golly, 2004).

The school should also create and/or administer a school-wide survey, such as the Olweus Bullying Questionnaire, to investigate the presence, effects, and location of bullying activity. Surveys need to be detailed enough to develop an accurate picture of the students’ bullying experiences and to identify areas where bullying is prevalent. The most widely used and effective way to measure bullying activity is through the means of a self-reporting survey (Leff, Power & Goldstein, 2004). The surveys can then be used by school personnel to identify bullying behaviors that are not being addressed effectively. In addition, they can be useful tools in identifying bullying behaviors that need to be handled in a school-wide forum (Solberg & Olweus, 2003).

While the administrator’s main focus in effective prevention will be with school-wide approaches, the training of the students involved takes place in the classroom. Teachers are standing at the front lines in the battle against bullying. Teachers are often called upon to supervise the locations where bullying is most likely to occur. They are also the ones who are able to provide students with opportunities to ask questions and then provide clarification on ambiguities that the bullying policies may include. Teachers
are a vital link in the chain of success of a bullying prevention program. At the class level, teachers work to gear curriculum toward the teaching of positive characteristics (Froschl & Gropper, 1999). Class rules against bullying should be set and followed. Immediate intervention needs to be administered upon an infraction of the bullying rules. Weekly meetings with students to check on the progression of prevention measures should be scheduled. Finally, teachers should keep the lines of communication open with parents (Smith, Schneider, Smith, & Ananiadou, 2004).

Teaching the students social skills has also been shown to be an important aspect of bullying prevention (Kidrom & Fleischman, 2006). The primary purpose of this approach is to teach the students what behavior is acceptable and expected among their peers in every school setting as well as by all staff members. The positive social behavior is not simply taught by the teacher, but should also be modeled by other students and adults in the school (Kidron & Fleischman, 2006).

A systematic approach to classroom intervention is essential. A school-wide approach is the best way for a school to incorporate social skills training, and the social context of bullying prevention has been shown to increase the effectiveness of the program (Cummings & Haggerty, 1997; Olweus, 1993; Espelage, Bosworth, & Simon, 2000). Aggression among peers may be reduced if schools teach social skills to help develop social support (Prinstein & Cillessen, 2003). Teaching social skills is suggested in much of the literature (Clarke & Kiselica, 1997; Kaiser & Rasminsny, 2003; Rigby, 2001, Roberts & Coursol, 1996; SAMSHA, 2003). Listening to others, being willing to compromise, being more creative, and other cooperative strategies, is all essential skills that should be included in a social skills program (Thompson & Cohen, 2005). Because
the students will be able to make new friends and experience less isolation, learning better social skills may decrease the level of victimization (Smith & Sharp, 1994). By encouraging respect and acceptance of others, as well as empathy for others, a social skills curriculum can likely improve the school atmosphere and therefore lead to less bullying issues (San Antonio & Salzburg, 2007; Kaiser & Rasinsky, 2003; Macklem, 2003; Sullivan, 2000).

Instruction in assertiveness as an element of a prevention program is a key component (Smith & Sharp, 1994; SAMHSA, 2003). Teaching the victim how to respond when being bullied is essential (Bullying, n.d.). The “walk, talk, and squawk” (Weir, 2001, p. 1249) method, encourages the bullying victim to walk away, to look the bully straight in the eye, and to report the incident. This type of training has been shown to decrease a child’s chances of being the target of bullies (Roberts & Coursol, 1996; Milsom & Gallo, 2006; Kaiser & Rasinsky, 2003). Leadership training has also been shown to be an effective tool in bullying prevention (Davies, 2003; Thompson & Cohen, 2005). The Safe School Ambassador program is designed to train student leaders and to increase their impact in the school. A sampling of all subgroups from within the school is invited to participate in the program. The students are taught a variety of leadership interventions and are then encouraged to begin working with their friends to implement the interventions (Community Matters, 2005).

Johnson and Johnson (1999) found that cooperative learning can have a positive impact on social skills, reduction of bullying, and the school climate as a whole. Students learn many skills including effective communication, leadership training, decision making, and trust building (Johnson & Johnson, 1999). Olweus (1991) suggests
cooperative learning activities as well as teaching about bullying through cooperative learning avenues. Some benefits of cooperative learning and working cooperatively with other students are higher self esteem, better psychological health, and better social competencies (Hanish & Guerra, 2000; Reitman & Villa, 2004). Competing and working independently do not necessarily provide these opportunities or benefits (Johnson & Johnson, 1999). Cooperative learning promotes the growth of caring and committed relationships. An important benefit is the development of interpersonal skills and small group skills which allow students to work effectively with diverse schoolmates (Rigby, Cox & Black, 1997). Cooperative learning helps students to develop friendships with peers and it gives students the chance to solve problems together (Johnson & Johnson, 1999).

The third essential component of an effective program is focused on the individual. The individual level relies heavily on the availability of adults, within the school setting, to help process the incident (Olweus, 2003). When available, the school psychologist or social worker can lead these efforts. The individual level requires intervention with bullies and victims. When possible, these interventions should include the parents of both bullies and victims. Role-playing with bullies presents a different perspective for them to think about. Likewise, role-playing with victims provides an alternate coping mechanism (Young, Boye, & Nelson, 2006).

School counselors play a role on the individual level as well. Counselors can facilitate group sessions for both bullies and victims. Support groups have often been the treatment of choice in successful interventions (Macklem, 2003, Roberts & Coursol, 1996). Counselors can also be used to assist in facilitating mediation. Schools that use
mediators, such as the counselor, demonstrated a reduction of 60% to 80% in the frequency of conflict requiring teacher interventions (Root, 2006). Bystanders are also an important component in the mediation process. Peer mediation often ties bullying behaviors and the results of these behaviors together and assists in opening meaningful dialog about the issues of bullying (Clarke & Kiselica, 1997; Milsom & Gallo, 2006).

It is through mediation that bullies are often faced with the victim and must hear the results of their actions. The bully needs help identifying appropriate ways of dealing with their aggression. Counselors or school personnel need to assist the bully in the process of learning about himself and to create various opportunities to change (Roberts & Morotti, 2000).

As for the victims, mediation can be used to convey the message that the victim is not responsible for the bullying; it is the bully who is wrong (Roberts & Morotti, 2000). Addressing the needs of the victim is just as important as interviewing the bully (Bishop et al., 2004). Employees of the school need to assist the bullied child in regaining control and in providing the help needed by the victim (Health Resources and Service Administration, n.d.). It is important to follow up with the student who was the victim and provide support if necessary (Cole, Cornell, & Sheras, 2006).

A successful intervention program makes special efforts to persuade student leaders to become involved in the prevention of bullying. By reaching these leaders, a desire to eliminate the bullying problem can become contagious. Encouraging students to stop giving power away to the bully and to look towards each other for support can deter bullying activity (Rigby & Johnson, 2007). Much research has found that bullies are empowered by bystanders (Craig, Pepler, & Atlas, 2002; Smith et al., 2004). A key
element to bully prevention at the school level is to reach and empower the bystanders (CSPV, 2007; Frey et al., 2005; Labi, 2001). Increasing bystanders’ socially responsible behavior, and encouraging the bystander to support the victim, may help reduce school bullying (Frey et al., 2005). School personnel can use several mediums to show children bullying situations, and then pose the question of what they, as bystanders, could do about it (Rigby & Johnson, 2006-2007). Bystanders need to be a part of the conversation and then given guidance as to how to intervene in bullying situations (Olweus, n.d., as cited in H.R.S.A, n.d.). It is important to recognize that children’s behavior can be greatly affected by what their peers think of them. With this information, we can begin to develop ways that positive peer influence can address the issue of bullying (Lumsden, 2002).

*Olweus Prevention Program.* As previously discussed, the Olweus Bullying Prevention Program was first introduced in Norway in the early 1980’s. The program is likely the most researched prevention program available. Having been implemented throughout Europe and most recently in the United States, when fully employed, the Olweus program has shown a consistent ability to reduce the occurrence of bullying behaviors. The program incorporates all three levels of an effective prevention program. The following section will review the literature that covers the components of the Olweus program and results from program implementation.

The Olweus Bullying Prevention Program is designed for all students. It is meant to be a prevention program rather than a responsive program. The program attempts to change norms and restructures the school setting. The program is designed to be ongoing and requires a systematic effort over time. The program is researched-based and has
been recognized as a Blueprint Model Program by the Center for the Study & Prevention of Violence, a Model Program by the Substance Abuse and Mental Health Administration (SAMHSA), an Effective Program by the Office of Juvenile Justice and Delinquency Prevention (OJJDP), and a Level 2 Program by the US Department of Education (Limber, 2007). The stated goals of the Olweus Program is to reduce existing bullying problems among students, prevent the development of new bullying problems, and to achieve better peer relations at school (Limber, 2007).

For effective implementation, the program has set forth four principles that are needed. First the program requires that the adults in the school have warmth, positive interest, and involvement. Next, the adults in the school need to set firm limits to unacceptable behaviors. Thirdly, the school needs to consistently use nonphysical, non-hostile negative consequences when rules are broken. Lastly, the adults in the school should act as authorities and positive role models. The practical implications of these key principles require that the school recognizes that it is the adults that are responsible for what happens in the school building. Also required is a clear and consistent message to the student body that bullying behaviors are not acceptable. The focus of the school must have both the short term goal of protecting students from the present danger of bullying, as well as the long term goal of creating a school climate that allows all the students to feel safe and accepted. Administrators, teachers, and staff must follow the model with faithfulness, and Olweus Bullying Prevention Program should become a part of everyday life at school (Limber, 2007).

The program components for the Olweus Program include a school component, a classroom component, and an individual component. The school wide component begins
with the formation of a bullying prevention committee. The committee is responsible for staff training and administering the Olweus Bullying Survey. The committee should be represented by all stakeholders. The committee will organize the school kick-off event that launches the program. The classroom component will be spearheaded by the classroom teacher. It is the teacher’s responsibility to post and enforce school wide rules against bullying. The teacher will also hold regular class meetings. The meeting will be designed to teach the children about bullying, the rules against it, and about related topics. The class meeting will also serve to help the students learn more about themselves and to build a sense of community within the student body. The individual-level component covers the supervision of students’ activities and ensures that all staff will intervene immediately when bullying occurs. A meeting will be held with students involved in bullying and an individual intervention plan will be developed for involved students (Limber, 2007). When the Olweus Prevention Program was originally implemented, the measured effects were impressive. The original subjects of the study were approximately 2,500 boys and girls who originally belonged to 112 different classes from grades 4 through grade 7. There were 28 elementary schools and 14 junior high schools. Data was collected approximately four months before introduction of the program, at the end of the first year of implementation, and at the end of the second year of implementation (Olweus, 1993). The major parts of the original program were a teacher booklet, a parent folder, a videocassette, and the Bully/Victim Questionnaire.

Olweus (1993) found several marked improvements after the program was implemented. During the two years after the program was introduced, there were drastic reductions in bully/victim problems by 50% or more. The reductions were seen for
direct bullying, indirect bullying, and for bullying others. The results were seen across all grade levels and pertained to both boys and girls (Olweus, 1993). The results were greater after the second year than after the first (Olweus, 1993). Bullying that took place going to and from school was either reduced or unchanged, so that there was no “displacement” of bullying activity being shifted away from school to other areas. Interestingly, there was also a reduction in behaviors considered to be antisocial, such as vandalism, fighting, theft, drunkenness, and truancy. There was a marked improvement in regards to various aspects of the school climate. Improved order and discipline, more positive social relationships and a more positive attitude to school and schoolwork were also attributed as beneficial effects of the program. Not only were the existing victimization problems reduced, there was also a marked reduction in the number and percentage of new victims. Finally, there was an increase in student satisfaction with school life.

After other successful implementations throughout Europe, the Olweus Program was introduced in South Carolina. Eighteen schools in all were selected to take part in the intervention. All the schools were middle schools, and most included grades 6 through 8 (approximately ages 11, 12 and 13 years). Only schools that had a minimum of 50 students rated at each of the time points of interest were considered in the final analysis. This left twelve schools that were part of the final analysis sample. The researchers found a large decrease in students’ reports of bullying others from the start to the conclusion of year one. At the conclusion of year two, there was a less significant decrease than at the end of year one, possibly attributed to a decrease in consultation provide by the schools and a difficulty in maintaining the program over time. At the
conclusion of year one, there was a large significant decrease in boys’ reports of having been bullied. There was no significant change in girls’ reports. Reports of isolation among boys were significantly lower from the start to the end of year one, while the reports of isolation from the girls were close to unchanged. Reports of bullying to parents by the boys showed a large decrease, and the girls showed a moderate decrease. While the researchers voiced a concern about the lack of universal support for the programs implementation from administrators and teachers, the findings were cause for guarded optimism (Limber, 2007).

A study conducted in Philadelphia focused on observations conducted to evaluate the effectives of the implementation of the Prevention Program. The purpose was to determine if the Olweus Bullying Prevention Program would be effective for urban students from diverse ethnic backgrounds. The research included 319 observation sets in a total of 7,589 minutes. At the baseline of the study, incident density was reported at 65 incidents per 100 student hours. After four years, incident density decreased to 36 incidents per 100 student hours. This represented a 45% decrease in the incident density over the four years. In some schools, the reduction was as much as 65%. The study was based on the Olweus model and incorporated the components of posting the rules, consistent enforcement of positive and negative consequences and training adult monitors to engage students in activities (Black & Jackson, 2007).
3. Methodology

The purpose of the study was to investigate the correlation between bullying prevention and academic success. This chapter discusses the steps used to carry out the research project, including the steps used in the analysis of the data. It is worth observing that the methodology in large part was an ever changing process. As the study progressed the methodology began to take a definite form.

Research Question

Does the introduction of the Olweus Bullying Prevention Program reduce the occurrence of self-reported bullying behaviors, and if so, does the reduction have an effect on the academic performance of students?

Hypothesis

The null hypothesis states that there will be no difference between the implementation of the Olweus Bullying Prevention Program and reports of bullying, and that a reduction has no effect on academic performance as measured by the Measures of Academic Progress (MAP) assessment scores.

The General Perspective

The research conducted was a quasi-experimental study with treatment and control groups. The researcher compared the pre and post test surveys for the two experimental schools. The researcher also compared the academic progress of students at the two experimental schools with the progress of students at the two control schools. Academic progress was measured by the Measures of Academic Progress (MAP) assessment. The schools participating included two elementary schools and two middle schools. One of the elementary schools and one of the middle schools implemented the
Olweus Bullying Prevention Program at the beginning of the academic year. These two schools served as the experimental group. The other elementary and middle school had not implemented the program or any other program for the purpose of addressing the issues of bullying. These schools served as the control group for the purpose of the study.

The Research Context

The study took place in a school district located in the southeastern United States. The district has experienced tremendous growth over the past decade; hence, what was once known as a semi-rural community now has the reputation of a major suburban area. The district currently has approximately 170,000 residents which equates to a 189% increase in population since 1991. The community is comprised of four rapidly growing cities. While more than 70% of the district’s residents live within these cities, the other 30% reside in unincorporated areas of the county. The average household income is $58,397.

As the district’s population has increased, it is reflected in the increase of the number of students, climbing annually at a rate of more than 8%. The district’s student population reflects the community’s changing ethnicity: 55% Caucasian, 35% African American, 5% Hispanic, 2% Asian and 3% Interracial. Since 2000, the Caucasian enrollment has dropped 21%, while the African American population has grown 16% along with a 5% increase in the enrollment of other ethnic groups. The district is currently home to 36 schools – 21 elementary schools, 7 middle schools, 6 high schools, 1 alternative middle/high school, and one evening high school, with a total enrollment of over 35,000 students.
The two schools participating in the study that were implementing the Olweus Bullying Prevention Program were part of approximately twelve schools that had already received the training necessary for program implementation. The experimental elementary school will be referred to with the fictitious name of Washington Elementary School for the purpose of confidentiality. The experimental middle school will be referred to as Adams Middle School. The two control schools will be referred to as Jefferson Elementary and Madison Middle Schools.

The Research Participants

The participants in the study were all students enrolled in the participating schools in grades 3 through 8, which approximately represented the ages of 8 through 14. The approximate number of students represented in the study was 3,554. In Washington Elementary School the students enrolled in 3rd through 5th grade were 468. In Adams Middle School there were 1,595 students enrolled. In Jefferson Elementary School there were 484 students in grades 3 through 5. And finally, in Madison Middle School there were 1,007 enrolled. The Washington Elementary School population consists of 65.7% African American, 23.7% Caucasian, 4.8% Multiracial, 4.6% Hispanic, and 0.2% other. The population at Adams Middle School is 47.1% Caucasian, 41.9% African American, 6.1% Hispanic, 3.3% Multiracial and 0.1% other. Jefferson Elementary School has a population of 73% African American, 21.8% Caucasian, 2.1% Hispanic, 1.4% Multiracial, and 0% other. For Madison Middle School the population is 46.3% African American, 36.6% Caucasian, 7.4% Hispanic, 5.7% Multiracial, 3.8% Asian, and 0.1% other.
Washington Elementary School was able to meet the Adequate Yearly Progress (AYP) set forth by the state. The school had 81.91% of the students either meet or exceed the standards for each of the content areas. This represented a 1.7% increase over the previous year. This rate of increase was either at or greater than 68.42% of the other elementary schools in the state. The school has 13.6% of the student body that receives special education services at some level. There is 2.2% enrolled in the English Speakers of Other Languages (ESOL) program, and 3.7% of the student body are enrolled in the gifted program. Washington Elementary is a Title One school, meaning that it has met the threshold of having a large percent of socio-economically disadvantaged students and had therefore been allotted funding for various programs to address the needs of the student body.

Adams Middle School was the only one of the four schools included in the study that did not meet AYP for the previous school year. The school met the AYP criteria in 13 out of 14 categories. The one category the school failed to meet the standard was in the area of mathematics for students with disabilities. As a whole, 82.78% of the students either met or exceeded the standard. This represented an increase of 1.37%, which was at or better than the increase of 51.78% of the rest of the middle schools in the state. Enrolled in special education is 12.3% of the student body, while 1.6% is served by the ESOL program. The gifted program at Adams Middle School serves 14.8% of the school’s children. Adams Middle School is not a Title One school.

Jefferson Elementary School did meet AYP the previous school year, with 86.63% of the students meeting or exceeding the standard. This represented an increase of 1.1% from the year before. This percentage of increase was the same or better than
59.38% of the rest of the elementary schools in the state. Special education serves 12.4% of the pupils, while 1.1% are enrolled in ESOL services. The gifted program includes 5.7% of the student body. As is Washington Elementary, Jefferson Elementary is a Title One school.

Finally, Madison Middle School met AYP with 84.83% of the students meeting or exceeding the minimum level of proficiency. This represented an increase of 1.87% from the previous year. This increase was the same or better than 60.44% of the other middle schools in the state. There are 11.8% enrolled in special education services, and 2.5% in ESOL. There is 11.4% of the student body at Madison Middle School being served in the gifted program. Just as Adams Middle School was not, Madison Middle School is not a Title One School.

*Instruments Used in Data Collection*

For the purpose of the present study, two instruments were utilized. First the researcher used the Olweus Bullying Questionnaire (OBQ). The OBQ is the survey component of the Olweus Bullying Prevention Program. Permission to use the report is given to the district as part of the implementation of the prevention program. The OBQ is a standardized, validated, multiple-choice questionnaire designed to measure a number of aspects of bullying problems within a school. The questionnaire consists of 42 questions, many of which are sub-questions. The OBQ is designed to be used with students in grades 3 through 12. It is designed to be completely anonymous. The questionnaire provides a detailed definition of bullying so that students will have a clear understanding of how they should respond when answering the questions. Most of the survey refers to the specific time or reference period of “the past couple of months (after
summer/winter holiday vacation).” This is thought to be a reasonable amount of time for
the student to be able to effectively recall. The response choices for most questions are,
“it hasn’t happened to me in the past couple of months, only once or twice, 2 or 3 times a
month, about once a week, and several times a week.” These choices are designed to
avoid the vagueness that can be attributed to responses of often or fairly often (Olweus,
2007 – standard school report). The OBQ also asks nine specific questions pertaining to
various forms of bullying activity, both about being bullied and about bullying other
students. Finally, the OBQ asks several questions about the reactions of others to
bullying, as perceived by those completing the questionnaire. These questions
investigate the student’s perceptions about the behaviors and attitudes of peers, teachers,
and parents.

Validity and reliability of OBQ

Using the Rasch measurement model, Kyriakides, Kaloyirou, and Lindsay (2006)
found the OBQ to be an instrument that has “satisfactory psychometric properties;
namely construct validity and reliability” (p. 781). Construct validity focused on the idea
that the recorded performances are reflections of a single underlying construct. Rasch
analysis provides indicators for how well each item fits within the indicated construct,
therefore allowing for the examination of the construct validity of the instrument
(Kyriakides et al., 2006). The two scales the OBQ examined were the extent to which
children are being victimized and the extent to which children are bullying others. The
study compared the correlation between the two scales of being a victim and being a
bully. It was expected that there would be a strong negative correlation between pupils’
scores on each scale. The Pearson correlation coefficient for the relationship between the
two scales was statistically significant and negative, each higher than 0.85 and was
therefore seen as relatively satisfactory” (Kyriakides et al., 2006, p. 791). “By
comparing the difficulties of the items of the two scales measuring the extent to which
the same negative activity occurs in the school, a very high correlation was found which
reveals a high internal consistency in the pupils’ responses to the questionnaire”
(Kyriakides et al., 2006, p. 796). The study provided substantial support for the validity
and reliability of the Olweus Bullying Questionnaire.

The means by which academic achievement will be measured is through the use
of the Measures of Academic Progress (MAP) assessment. MAP is an assessment
product of the Northwestern Evaluation Association (NWEA). The MAP assessment is a
computer adaptive assessment designed to accurately reflect the instructional level of
each student and measure growth over time. MAP testing is used to identify the skill and
concepts that individual students have learned and to monitor the attainment of new
skills. The assessment is unique in the way that it adapts itself to the student’s ability.
As a child is in the process of taking the test, the test itself increases or decreases in
difficulty based on if the previous answer was right or wrong. The present study was
concerned with the growth over time aspect of the MAP assessment.

The MAP assessment places all of the test items on the Rasch Unit (RIT) scale.
The RIT scale divides the knowledge continuum on a scale divided into equal parts. It is
compared to a meter stick measuring the change in a student’s physical height. RIT
scores are designed to measure the student academic growth over time. This test theory
aligns student achievement levels with item difficulties on the same scale. Each
increasing RIT is assigned a RIT score that indicates a greater level of difficulty. Once
the computer is able to determine the difficulty level at which a student can perform, the student is assigned an overall RIT score. The assignment is grade-independent, meaning that a 6th grader receiving a RIT score of 215 and a 7th grader receiving a score of 215 indicates that both students are learning at the same level, regardless of grade level.

*The reliability of the MAP assessment*

The MAP assessment has been found to be a reliable instrument by research investigating its reliability across time and its reliability across forms. One test of instrument reliability is the test-retest, which yields results on the assessment’s reliability across time. What the researcher is addressing with test-retest is whether the test will yield the same results when administered twice to the same students. Generally, the minimum acceptable correlation is considered to be .80, when stated in terms of the Pearson product-moment correlation coefficient. The NWEA’s approach to the test-retest is “more accurately a mix between test-retest reliability and a type of parallel forms reliability” (NWEA, 2004). The test-retest is given several months apart, typically 7 to 12 months. Because of computer adaptation, the second test is not identical to the first but is rather comparable to the first. Given the time elapse of more than just a few weeks and the fact that the two tests are not identical, one would expect reliability to possibly drop below the .80 threshold. However, when tested with grades 2 through 10 the test-retest validity only dropped slightly below .80 twice, both times at the 2nd grade level. For the purpose of the present study, MAP is seen as a reliable instrument; since the research is only investigating MAP scores of students in the 3rd through the 8th grade.
Procedures Used

The procedures involved in the implementation of the present study began with the training of several schools within the district in the implementation of the Olweus Bullying Prevention Program. Beginning in the second semester of the year preceding the study, all of the middle and elementary school within the district were given the opportunity to volunteer to be trained in the Olweus program. The plan at the time was to train representatives from three schools at a time. The representatives would then form the Bullying Prevention Committee and would proceed with training the rest of the staff at their representative schools. The training consisted of a two day in-service and was conducted at the district adult education center. The personnel conducting the training had been trained and certified to conduct Olweus Bullying Prevention training by participating in a workshop conducted by the US Olweus team at Clemson University. Of the district’s thirty-eight middle and elementary schools, twelve had been trained in the Olweus program at the onset of the present study.

Upon approval from the district to implement the study, the researcher began the process of identifying the two schools that would serve as the experimental group. Though random assignment would have been preferred, given the nature and restraints of the research design, it was not a possibility. Instead, the district’s representative for the Olweus program was contacted and a list of the trained schools that had effectively implemented the program was requested. Of the twelve schools that had received the Olweus training, eight were identified as having followed through on the provided training. Of these eight, five were elementary schools and three were middle schools. The researcher’s desire was to investigate the effect the prevention program would have
on students in the 3rd though 8th grades. Therefore, one of the elementary schools and one of the middle schools needed to be selected. Each of the principals of the eight schools was contacted and all eight indicated their willingness to be involved in the study. From the five elementary schools, one was then randomly selected and from the three middle schools, one was randomly selected.

Now that the experimental group was established, the researcher sought to match the one elementary and one middle school with another elementary and middle school to serve as the control group. In the matching school, an effort was made to find schools that closely matched the experimental schools. The one factor excluding a school from consideration was the implementation of any bullying prevention program. Of the twenty-six schools that had not yet been trained in the Olweus Prevention Program, twenty were elementary schools and six were middle schools. None of the twenty-six had attempted any type of school wide bullying prevention. To narrow the field, the researcher looked at only schools that were within 5% of the experimental schools percentage of students that had met or exceeded the standard for AYP. This eliminator narrowed the focus to three elementary schools and two middle schools. From this point, ethnic and socio-economic factors were compared with the experimental schools and the one elementary school that was the closest match for the experimental elementary school and the one middle school that was the closest match to the experimental middle school were selected to serve as the control group.

All four of the schools administered the MAP assessment within the first six weeks of the school year. The RIT scores for this administration serve as the baseline for academic achievement for the purpose of the study. The MAP assessment is
administered over a four week period in the area of mathematics, reading, language usage, and science. The test consists of 56 questions that progressively get more difficult if the student answers correctly or easier if the student answers incorrectly. Using this information the computer zeros in on a RIT score for the student in each of the four mentioned areas. Since the interventions of the bullying prevention program at the experimental schools had not been fully implemented at the time of the first MAP administration, the test was considered the pretest for the study.

Both of the experiential schools had administered the Olweus Bullying Questionnaire (OBQ) toward the end of the previous school year. The Olweus committee then took the results of the OBQ and tailored a bullying prevention plan for their schools. The common elements of the plans consisted of a bullying prevention kickoff designed to introduce the student body to the Olweus program, weekly class meetings with teachers to address the meanings, implications, consequences and preventions of bullying, and an emphasis on involving the bystanders in addressing bullying prevention. The elements unique to the individual schools were the schools’ specific plans of how to address the bullying problems in high occurrence locations identified from the OBQ, since these problem areas are unique to each school building.

At the experimental schools, the Olweus Bullying Prevention Program began with a kickoff assembly. The kickoff occurred during the fourth week of school for both schools. This was the first exposure the students had with the Olweus program. Both assemblies were designed to have a pep rally type atmosphere. Both included balloons and streamers, as well as cheerleaders and music. The elementary school employed the services of a juggler to grab the students’ attention and then to deliver the anti bullying
message. The middle school used a local sports figure to discuss the effects of bullying on the lives of the victim. At the conclusion of both assemblies, some of the details of the school’s plan for addressing the bullying issues were disclosed to the students. Following the kickoff, teachers began holding their weekly meetings with their assigned students.

For all four schools, the MAP assessment was re-administered within the final six weeks of the school year. The RIT scores from this administration serve as the posttest for the present study. Because the assessment is a computer adaptive test, the post test can not be considered to be identical to the pretest. It can, however, be considered to be comparable. Though the tests are not identical, both tests seek to find the child’s RIT score, which is the measure by which the researcher is using to measure academic growth.

Data Analysis

Data used in the present study include the pre- and post-administration of the OBQ, and the pre and post administration of the MAP assessment. The results of the OBQ were provided in paper form to the researcher by the Olweus Bullying Committee chair for both experimental schools. The data for each experimental school was compared to determine if the schools had actually seen a decrease in reported bullying activity during the year. The three categories of being a victim of bullying activity, being a bully of others, and being a victim of and a bully of others was compared based on the pre-survey and the post-survey. A declining of activity in any of the three areas for the experimental schools was considered an indication that the Olweus Bullying Prevention program had been successful. Information was then presented to indicate the supposed
effectiveness of the actual implementation of the prevention program, based on the comparisons of the two test administrations.

The data from the MAP administration was made available to the researcher in electronic form by district personnel. To account for the statistical differences revealed from the pre-test, the one-way analysis of covariance (ANCOVA) was used to compare the post-test scores from the experimental and the control groups. ANCOVA was used to analyze the data given from the post-test because the pre-test demonstrated a significant difference between the control and experimental groups before the introduction of the treatment. By using the ANCOVA, the researcher was able to statistically minimize the effect that the preexisting differences had on the adjusted means of the post-test scores for both the control and experimental groups. Adjusting for the differences in the pre-test allowed the researcher to minimize the effect these differences would have on the post-test results, therefore allowing for a more accurate test for significant differences between the adjusted means of the post-test scores

Summary of Methodology

Given the restraint and complexities of the present study, this chapter has explained the methodology used to investigate the correlation between the implementation of the Olweus Bullying Prevention Program and reduction in reports of bullying behavior, as well as the analysis of post test scores of the experimental and control groups. The next chapter presents the results obtained from those methods.
4. Results

As stated in chapter 1, the present study examined the correlation between a bullying prevention program and academic performance. This chapter presents the results of the research project. The results of the measured effectiveness of the bullying prevention programs in the two experimental schools are examined first. Next, the academic performance of the two experimental schools and the two control schools are examined. Finally, the results of the correlation, or lack of correlation, between the experimental schools and the control schools are examined.

**OBQ Results**

The following section first investigates the results of the initial survey for the experimental elementary school. Next, the second survey administration, which occurs at the conclusion of the first year of implementation of the Olweus Bullying Prevention program, is discussed. Then the changes in bullying behavior at the elementary school are examined. Following this, the OQB administration for the experimental middle school is explored for the initial administration, the follow-up administration, and the changes in bullying behavior for the middle school is investigated.

**OBQ WES 2007 Results.** Before the kickoff of the Olweus Bullying Prevention Program, the Olweus Bullying Questionnaire (OBQ) was administered to all of the third through fifth grade students at Washington Elementary School (WES). The OBQ was administered during the final six weeks of the 2006-2007 school year. There were 315 students present on the day the questionnaire was administered. While the first three questions of the OBQ deal with gender and attitude toward school, questions four through
thirteen deal with the issue of bullying as a school-wide problem, and the remaining questions attempt to identify specific problem areas of bullying. For the purpose of the present study, the focus will be on questions four through thirteen.

The results of the data gathered in the initial survey provided a picture of the extent of the problem of bullying at WES without any form of systematic intervention. When asked how often “you have been bullied at school in the past couple of months” 71% of the students reported that they had not been bullied. Sixteen percent indicated they had been bullied once or twice during that period, while 13% said they were bullied at least two or three times a month. Of the 13% that said they were bullied frequently, 5% reported they were bullied two or three times a month, 3% said they were bullied about once a week, and 3% stated they were bullied several times a week. Of those participating in the questionnaire, 59 students reported they had been bullied on a regular basis.

The following nine questions on the OBQ identify various forms in of bullying in the school. The specific forms of bullying that are investigated include being called names, being excluded by other students, being physically abused, being lied about, having money stolen, being forced to do things against his/her will, and being bullied with mean names containing a sexual meaning. The most frequent forms of bullying reported by the students were being called names and being made fun of, other students telling lies and spreading rumors about him/her, and being bullied with mean names or comments about his/her race or color. Eighteen percent of those questioned reported frequently being called mean names, made fun of, or teased in a hurtful way. Seventeen percent of the children at WES stated they were frequent victims of bullying in the form
of other students telling lies or spreading false rumors. And a total of 20% reported they had been frequently bullied with mean names or comments about his/her race or color.

The form of bullying that was reported the least amount was being hit, pushed, shoved around, or locked indoors. Only 7% of the student body reported being bullied frequently by physical abuse. Seventy-eight percent indicated they had not been physically bullied at all during the previous months, while 14% stated it had happened only once or twice. The next least reported form of bullying was having money or other belongings taken or damaged. Seventy-four percent of those surveyed had not been bullied in this manner at all over the previous months, 18% reported it had happened once or twice, while only 8% said it was a regular occurrence. (See Table 1)

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Results of OBQ from Spring 2007 at WES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Question</strong></td>
<td>not at all</td>
</tr>
<tr>
<td>How often have you been bullied at school in past couple of months?</td>
<td>71%</td>
</tr>
<tr>
<td>I was called mean names, was made fun of, or teased in a hurtful way.</td>
<td>58%</td>
</tr>
<tr>
<td>Other students left me out of things on purpose, excluded me from their group of friends, or ignored me.</td>
<td>68%</td>
</tr>
<tr>
<td>I was hit, kicked, pushed, shoved around, or locked indoors.</td>
<td>78%</td>
</tr>
<tr>
<td>Other students told lies or spread false rumors about me and tried to make others dislike me.</td>
<td>57%</td>
</tr>
<tr>
<td>I had money or other things taken from me or damaged.</td>
<td>74%</td>
</tr>
<tr>
<td>I was threatened to do things I didn’t want to do.</td>
<td>73%</td>
</tr>
<tr>
<td>I was bullied with mean names or comments about my race or color.</td>
<td>57%</td>
</tr>
<tr>
<td>I was bullied with mean names, comments, or gestures with a sexual meaning.</td>
<td>67%</td>
</tr>
<tr>
<td>I was bullied in another way.</td>
<td>78%</td>
</tr>
</tbody>
</table>
The data supported earlier findings discussed in chapter two that showed the fifth grade students were more likely to be affected by bullying than the younger grade levels. Eighty-two percent of the third grade students participating in the questionnaire reported that they had not been the victims of bullying activity during the previous two months. The questionnaires completed by students in the fourth grade indicated that 76% had not been victimized by bullying during the same time period, while only 65% of the fifth grade students report no bullying victimization (see table 2). There appeared to be only slight differences between the rates of bullying reported by girls compared with boys. The girls reported that they had not been victims of bullying at a rate of 73%, while 69% of the boys reported the same. It is worth noting that twice as many girls than boys reported they were victimized as frequently as several times a week. (See Table 3)

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Results of OBQ from Spring 2007 at WES by Grade Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>not at all</td>
</tr>
<tr>
<td>How often have you been bullied at school in past couple of months?</td>
<td></td>
</tr>
<tr>
<td>3rd</td>
<td>82%</td>
</tr>
<tr>
<td>4th</td>
<td>76%</td>
</tr>
<tr>
<td>5th</td>
<td>65%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Results of OBQ from Spring 2007 at WES by Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>not at all</td>
</tr>
<tr>
<td>How often have you been bullied at school in past couple of months?</td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>73%</td>
</tr>
<tr>
<td>Boys</td>
<td>69%</td>
</tr>
</tbody>
</table>
OBQ WES 2008 Results. The follow up survey at the conclusion of the first year of implementation of the Olweus Bullying Prevention Program was administered during the last six week period of the 2007-2008 school year. Only 19% of those questioned reported having been bullied during the previous two months. At 16%, the least reported form of bully activity was the category of being “hit, kicked, pushed, shoved around, or locked indoors.” Of the 16% that reported having been effected by this type of bullying, 10% said it had only happened once or twice during the previous two months, and only 2% said it happened once a week or more. The next least reported form of bullying was having “money or other things taken from me or damaged” and being “threatened or forced to do things I didn’t want to do.” Seventy-nine percent of the respondents said they had not had any problems with bullies in these areas.

The most prevalent form of bullying was “being called mean names ... made fun of, or teased in a hurtful way” and being “bullied with mean names or comments about my race or color.” Both of these categories had 36% of the respondents reporting they had been victimized in this manner. The bullying category that was occurring with the greatest frequency was being “called mean names, [being] made fun of, or teased in a hurtful way.” A total of 8% of the students indicated that this was happening to him/her at least once a week, with 6% saying it happened about once a week, and 2% saying it happened several times a week. Seven percent of the students reported they had been bullied at least once a week by a bully telling “lies or [spreading] false rumors about me and tried to get others to dislike me.” Three percent reported this happened to them several times a week, and 4% said it happened to them “about once a week.” (See Table 4)
Table 4  Results of OBQ from Spring 2008 at WES

<table>
<thead>
<tr>
<th>Question</th>
<th>not at all</th>
<th>1-2 times</th>
<th>2-3 times a month</th>
<th>about once a week</th>
<th>several times a week</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often have you been bullied at school in past couple of months?</td>
<td>81%</td>
<td>16%</td>
<td>2%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>I was called mean names, was made fun of, or teased in a hurtful way.</td>
<td>64%</td>
<td>20%</td>
<td>7%</td>
<td>6%</td>
<td>2%</td>
</tr>
<tr>
<td>Other students left me out of things on purpose, excluded me from their group of friends, or ignored me.</td>
<td>75%</td>
<td>20%</td>
<td>3%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>I was hit, kicked, pushed, shoved around, or locked indoors.</td>
<td>84%</td>
<td>10%</td>
<td>3%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Other students told lies or spread false rumors about me and tried to make others dislike me.</td>
<td>62%</td>
<td>22%</td>
<td>9%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>I had money or other things taken from me or damaged.</td>
<td>79%</td>
<td>13%</td>
<td>3%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>I was threatened to do things I didn’t want to do.</td>
<td>79%</td>
<td>20%</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>I was bullied with mean names or comments about my race or color.</td>
<td>64%</td>
<td>24%</td>
<td>6%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>I was bullied with mean names, comments, or gestures with a sexual meaning.</td>
<td>75%</td>
<td>19%</td>
<td>2%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>I was bullied in another way.</td>
<td>82%</td>
<td>15%</td>
<td>2%</td>
<td>0%</td>
<td>1%</td>
</tr>
</tbody>
</table>

**OBQ WES results comparison.**  Data from the OBQ demonstrated an overall decrease in bullying activity at WES. When the students were asked if they had been bullied in the past two month, 81% indicated they had not been bullied during that time period. That is an increase of 10% form the previous administration of the OBQ. When asked about physical bullying behaviors such as “hitting, kicking, or shoving, “ 84% stated they had not been a victim of this type of behavior during the previous two months, which was an increase of 6% from the pre-survey administration. While the occurrence of being “lied about and having false rumors spread about me” decreased, there were still 16% of the students questioned that indicated this was a frequent problem at school, and only 62% said this had not happened to them over the previous couple of months. The
second administration of the OBQ found that close to 75% of the students had not had any issue of bullying during the previous two months. This compares to 68% the previous year. Also, while 4.1% of those participants in the first survey indicated they were frequent victims of some type of bullying behavior, only 2.5% of those participating in the second survey reported being a frequent victim. When compared to the first survey results, it is obvious that the level of self-reporting instances of bullying behavior had significantly reduced after the first year of full implementation of the Olweus Bullying Prevention Program. For every question there was a lower percentage of students reporting being a victim of bullying at the rate of several times a week. The only area that demonstrated a slight increase in frequent bullying behavior was for two questions in the frequency of about once a week. (See Table 5)

<table>
<thead>
<tr>
<th>Question</th>
<th>not at all</th>
<th>1-2 times</th>
<th>2-3 times a month</th>
<th>about once a week</th>
<th>several times a week</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often have you been bullied at school in past couple of months?</td>
<td>+10%</td>
<td>+/- 0%</td>
<td>-3%</td>
<td>-3%</td>
<td>-4%</td>
</tr>
<tr>
<td>I was called mean names, was made fun of, or teased in a hurtful way.</td>
<td>+6%</td>
<td>-4%</td>
<td>+/-0%</td>
<td>+1%</td>
<td>-4%</td>
</tr>
<tr>
<td>Other students left me out of things on purpose, excluded me from their group of friends, or ignored me.</td>
<td>+7%</td>
<td>+/-0%</td>
<td>-3%</td>
<td>-2%</td>
<td>-2%</td>
</tr>
<tr>
<td>I was hit, kicked, pushed, shoved around, or locked indoors.</td>
<td>+6%</td>
<td>-4%</td>
<td>+/-0%</td>
<td>+/-0%</td>
<td>-2%</td>
</tr>
<tr>
<td>Other students told lies or spread false rumors about me and tried to make others dislike me.</td>
<td>+5%</td>
<td>+3%</td>
<td>-1%</td>
<td>+/-0%</td>
<td>+/-0%</td>
</tr>
<tr>
<td>I had money or other things taken from me or damaged.</td>
<td>+5%</td>
<td>-5%</td>
<td>-1%</td>
<td>+1%</td>
<td>-4%</td>
</tr>
<tr>
<td>I was threatened to do things I didn’t want to do.</td>
<td>+6%</td>
<td>+1%</td>
<td>-1%</td>
<td>-1%</td>
<td>-4%</td>
</tr>
<tr>
<td>I was bullied with mean names or comments about my race or color.</td>
<td>+7%</td>
<td>-2%</td>
<td>-2%</td>
<td>-2%</td>
<td>-4%</td>
</tr>
<tr>
<td>I was bullied with mean names, comments, or gestures with a sexual meaning.</td>
<td>+8%</td>
<td>-1%</td>
<td>-1%</td>
<td>-1%</td>
<td>-4%</td>
</tr>
<tr>
<td>I was bullied in another way.</td>
<td>+4%</td>
<td>-2%</td>
<td>-1%</td>
<td>-2%</td>
<td>+/-0%</td>
</tr>
</tbody>
</table>
As evidenced in Table 5, bullying activity appeared to decrease following the introduction and implementation of the Olweus Bullying Prevention Program. Though the decline was not as significant as seen in many of the studies outlined in chapter 2 of this paper, it was a relatively significant decrease. The decrease was most significant in the fifth grade. In the initial questionnaire administered in the spring of 2007, only 65% of the fifth grade students indicated they had not been a victim of bullying during the previous couple of months. From the OBQ administered the following year, after the introduction of the treatment, 79% of the fifth grade students reported they had not been victimized by bullying behaviors during the preceding two months. Though not as dramatic, the other two grade levels demonstrated a reduction in bullying activity as well.

*OBQ AMS 2007 results.* Similarly, the staff at Adams Middle School (AMS) administered the OBQ a few weeks before the end of the 2006-2007 school year. This initial survey found that 44% of the students at AMS had been the victim of bullying at some level in the previous two months. Twenty percent said they were victimized on a frequent basis, and 10% said they had been victimized several times a week. This means that close to 160 students at AMS felt they were being bullied multiple times every week. When asked about the specific forms of bullying, more students reported being “called mean names, made fun of, or teased in a hurtful way than any other category.” Forty-two percent of those participating in the survey said they had been bullied in this manner. The second leading form of bullying was verbal abuse. Thirty-six percent of the students reported they had had other students tell “lies or spread false rumors about me and tried to make others dislike me.” When looking at the occurrence of physical bullying, 28% of the participants reported they had been “hit, kicked, pushed, shoved around, or locked
indoors,” on a frequent basis. The least common form of bullying was being “threatened or forced to do things I didn’t want to do.” Eighty percent of the student body stated that this had not happened in the previous two months. (See Table 6)

<table>
<thead>
<tr>
<th>Table 6</th>
<th>Results of OBQ from Spring 2007 at AMS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Question</strong></td>
<td>not at all</td>
</tr>
<tr>
<td>How often have you been bullied at school in past couple of months?</td>
<td>56%</td>
</tr>
<tr>
<td>I was called mean names, was made fun of, or teased in a hurtful way.</td>
<td>58%</td>
</tr>
<tr>
<td>Other students left me out of things on purpose, excluded me from their group of friends, or ignored me.</td>
<td>72%</td>
</tr>
<tr>
<td>I was hit, kicked, pushed, shoved around, or locked indoors.</td>
<td>72%</td>
</tr>
<tr>
<td>Other students told lies or spread false rumors about me and tried to make others dislike me.</td>
<td>64%</td>
</tr>
<tr>
<td>I had money or other things taken from me or damaged.</td>
<td>72%</td>
</tr>
<tr>
<td>I was threatened to do things I didn’t want to do.</td>
<td>80%</td>
</tr>
<tr>
<td>I was bullied with mean names or comments about my race or color.</td>
<td>72%</td>
</tr>
<tr>
<td>I was bullied with mean names, comments, or gestures with a sexual meaning.</td>
<td>70%</td>
</tr>
<tr>
<td>I was bullied in another way.</td>
<td>72%</td>
</tr>
</tbody>
</table>

The breakdown of the data by grade level again reinforced the studies previously reviewed in chapter 2. The sixth grade reported the lowest level of bullying activity in the school, with 62% saying they had not had problems with bullying behaviors in the recent past. In the seventh grade, 56% said they had not been bullied during the past two months. The data for the eighth grade students, on the other hand, demonstrated that nearly half the students had been victimized by a bully in the preceding two months. The eighth grade also reported the greatest frequency for bullying activity when compared to
the other two grade levels. Of those in the 8th grade that were surveyed, 16% said they were the victim of a bully several times a week. This translates to close to 1 in 6 of the 8th graders at AMS were being subjected to bullying at a high rate of frequency. (See Table 7)

<table>
<thead>
<tr>
<th></th>
<th>6th</th>
<th>7th</th>
<th>8th</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often have you been bullied at school in past couple of months?</td>
<td>not at all</td>
<td>1-2 times</td>
<td>about once a week</td>
</tr>
<tr>
<td>6th</td>
<td>62%</td>
<td>25%</td>
<td>1%</td>
</tr>
<tr>
<td>7th</td>
<td>56%</td>
<td>27%</td>
<td>1%</td>
</tr>
<tr>
<td>8th</td>
<td>51%</td>
<td>20%</td>
<td>3%</td>
</tr>
</tbody>
</table>

The rate of bullying activity reported by gender was consistent with the previous studies discussed in chapter 2. Of the girls responding to the questionnaire, 61% stated that they had no problems with being the target of bullies. Only 52% of the boys could say the same. Twenty-two percent of the boys reported being victimized frequently, while 17% of the girls made the same claim. Slightly more than 1 in 10 boys stated that they had been targeted by bullies at a rate of several times a week. When considering a rate of at least 2 to 3 times a month or more, almost 1 in 4 boys at AMS identified themselves as bullying victims. (See Table 8)

<table>
<thead>
<tr>
<th></th>
<th>not at all</th>
<th>1-2 times</th>
<th>2-3 times a month</th>
<th>about once a week</th>
<th>several times a week</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often have you been bullied at school in past couple of months?</td>
<td>Girls</td>
<td>61%</td>
<td>21%</td>
<td>2%</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td>Boys</td>
<td>52%</td>
<td>26%</td>
<td>3%</td>
<td>8%</td>
</tr>
</tbody>
</table>

**OBQ AMS 2008 results.** At the conclusion of the 2007-08 school year, after a year of the Olweus Bullying Prevention Program, the follow up survey indicated reduction in bullying activity in almost all areas. Overall, 64% of the students stated that
they had not been bullied during the preceding two months. Only 1% of the student body indicated that they had been the victim of bullying several times a week. When asked about being “threatened or forced to do things I didn’t want to do,” 95% of those surveyed said it had not happened to them in the recent past. Eighty-five percent of those questioned said they had not had money or other things taken from them in the past couple of months, and 83% stated they had had no problems with bullies “hitting, kicking, pushing, shoving or locking him/her indoors.” Of those that stated they had been bullied in the past two months, only a very small number indicated that it was happening at a frequency of “several times a week.” In the majority of areas, 0% of the students reported any bullying had been a problem at a frequency of “several times a week.” (See Table 9)

<table>
<thead>
<tr>
<th>Question</th>
<th>not at all</th>
<th>1-2 times</th>
<th>2-3 times a month</th>
<th>about once a week</th>
<th>several times a week</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often have you been bullied at school in past couple of months?</td>
<td>64%</td>
<td>25%</td>
<td>5%</td>
<td>5%</td>
<td>1%</td>
</tr>
<tr>
<td>I was called mean names, was made fun of, or teased in a hurtful way.</td>
<td>58%</td>
<td>25%</td>
<td>8%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Other students left me out of things on purpose, excluded me from their group of friends, or ignored me.</td>
<td>72%</td>
<td>20%</td>
<td>2%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>I was hit, kicked, pushed, shoved around, or locked in doors.</td>
<td>72%</td>
<td>10%</td>
<td>6%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Other students told lies or spread false rumors about me and tried to make others dislike me.</td>
<td>64%</td>
<td>28%</td>
<td>7%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>I had money or other things taken from me or damaged.</td>
<td>72%</td>
<td>14%</td>
<td>1%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>I was threatened to do things I didn’t want to do.</td>
<td>80%</td>
<td>5%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>I was bullied with mean names or comments about my race or color.</td>
<td>72%</td>
<td>15%</td>
<td>2%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>I was bullied with mean names, comments, or gestures with a sexual meaning.</td>
<td>70%</td>
<td>11%</td>
<td>7%</td>
<td>3%</td>
<td>0%</td>
</tr>
<tr>
<td>I was bullied in another way.</td>
<td>72%</td>
<td>25%</td>
<td>0%</td>
<td>2%</td>
<td>0%</td>
</tr>
</tbody>
</table>
**OBQ AMS results comparison.** The comparison of the pre-survey and the post-survey indicates a significant drop in bullying activity at AMS following the introduction of the Olweus Bullying Prevention Program. Overall the number of students that reported they had had no problems being bullied in the past couple of months increased from 56% to 64%. This 8% increase represents close to 125 more students that no longer were the victims of bullying activity. The greatest decrease in a particular type of bullying was seen in the area of being “threatened or forced to do things I didn’t want to do.” In the pre-survey only 80% of the reporting students said they had had no problems in this area, in the post-survey this percent increased to 95%. The other 5% of the students reported this had been a problem for them “only once or twice” in the previous couple of months.

Another area that showed a dramatic decrease in bullying activity was being physically abused by a bully. In the initial study, 28% of the students indicated they had been “hit, kicked, pushed, shoved around, or locked indoors” during the previous couple of months. In the follow up survey, only 17% reported still having difficulty in this area of bullying. The post-survey also offered evidence that there had been a significant reduction in the frequency of bullying activity. In the pre-survey, 10% of the students said they had been bullied at a rate of several times a week. However, in the post-survey, only 1% of the students said they were bullied that often. This means that before the introduction of the Olweus Bullying Prevention Program at AMS, near 160 students felt they were victimized by bullies several times during the course of a week. At the conclusion of the first year of the prevention program, there were close to only 16 students that felt they were victimized at this high frequency. (See Table 10)
Table 10  Comparison of Results of OBQ from Spring 2007 to Spring 2008 at AMS

<table>
<thead>
<tr>
<th>Question</th>
<th>not at all</th>
<th>1-2 times</th>
<th>2-3 times a month</th>
<th>about once a week</th>
<th>several times a week</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often have you been bullied at school in past couple of months?</td>
<td>+8%</td>
<td>+1%</td>
<td>+3%</td>
<td>-3%</td>
<td>-9%</td>
</tr>
<tr>
<td>I was called mean names, was made fun of, or teased in a hurtful way.</td>
<td>+4%</td>
<td>+3%</td>
<td>-2%</td>
<td>+3%</td>
<td>-8%</td>
</tr>
<tr>
<td>Other students left me out of things on purpose, excluded me from their group of friends, or ignored me.</td>
<td>+5%</td>
<td>+6%</td>
<td>-6%</td>
<td>-3%</td>
<td>-2%</td>
</tr>
<tr>
<td>I was hit, kicked, pushed, shoved around, or locked indoors.</td>
<td>+11%</td>
<td>-6%</td>
<td>+/-0%</td>
<td>-3%</td>
<td>-2%</td>
</tr>
<tr>
<td>Other students told lies or spread false rumors about me and tried to make others dislike me.</td>
<td>-3%</td>
<td>+8%</td>
<td>-1%</td>
<td>-2%</td>
<td>-2%</td>
</tr>
<tr>
<td>I had money or other things taken from me or damaged.</td>
<td>+12%</td>
<td>-12%</td>
<td>-1%</td>
<td>+1%</td>
<td>+/-0%</td>
</tr>
<tr>
<td>I was threatened to do things I didn’t want to do.</td>
<td>+15%</td>
<td>-3%</td>
<td>-8%</td>
<td>-4%</td>
<td>+/-0%</td>
</tr>
<tr>
<td>I was bullied with mean names or comments about my race or color.</td>
<td>+8%</td>
<td>+1%</td>
<td>-4%</td>
<td>-2%</td>
<td>-3%</td>
</tr>
<tr>
<td>I was bullied with mean names, comments, or gestures with a sexual meaning.</td>
<td>+9%</td>
<td>-13%</td>
<td>+3%</td>
<td>+3%</td>
<td>-2%</td>
</tr>
<tr>
<td>I was bullied in another way.</td>
<td>+1%</td>
<td>+9%</td>
<td>-6%</td>
<td>+/-0%</td>
<td>-4%</td>
</tr>
</tbody>
</table>

MAP Results

The following section discusses the Measures of Academic Progress (MAP) results for the experimental elementary school first, then the experimental middle school, next the control elementary school and lastly the control middle school. Finally, the changes in scores from the fall to the spring of the MAP assessment are compared for the experimental and control elementary schools and then the experimental and control middle schools.

MAP WES results fall. In the fall of 2007, the Measures of Academic Progress (MAP) assessment was administered to all the students at WES. The mathematic normative score for incoming third grade students is a score of 192. The students at WES
averaged a score of 193.5. The overall score of the third grade was at the 50.9 percentile. The norm score for the MAP reading assessment for the beginning of third grade is also 192. WES third grade students scored an average of 194.0 on the reading test, which was at the 54.6 percentile (See Figure 1). The third grade boys had an average score of 191.4 on the math portion and an average score of 191.7 on the reading portion. The girls had an average score of 195.4 for math and 196.0 for reading.

As for the start of fourth grade, the national math norm is a score of 203, and a score of 201 for reading. The fourth grade as a whole scored an average of 203.2 for the math assessment and a 201.6 for reading (See Figure 2). The fourth grade math score was at the 48.5 percentile and the fourth grade reading score was at the 52.3 percentile. Fourth grade boys scored an average of 201.1 on the math assessment which was at the 42.8 percentile and a 198.9 at the 46.5 percentile on the reading portion of the MAP assessment. The fourth grade girls scored a 205.3 on the math test and a 204.1 on the reading, which was at the 54.3 and the 57.7 percentile respectively.

The norm average for the fifth grade math test is 212 and a 208 for reading. The fifth grade at MES scored an average of 210.0 on the math assessment and a 207.8 on the reading assessment (See Figure 3). This put the fifth grade class as a whole at the 46.1 percentile in math and the 53.7 percentile for reading. Fifth grade boys scored 212.8 in math which was at the 52.5 percentile and a 207.6, at the 53.5 percentile, on the reading assessment. With a 207.4 math score, the fifth grade girls were at the 40.0 percentile, and with a 208.0 for reading, the fifth grade girls were at the 54.0 percentile.

*MAP WES results spring.* The spring administration of the MAP assessment demonstrated academic growth in both mathematics and reading, though the growth was
below the status norms. By the end of the third grade year the norm average for third
grade students for math is 203. In math the third grade students at WES scored an
average of 201.2, which was at the 50.8 percentile (See Figure 1). Boys scored an
average of 199.4 at the 45.3 percentile, and girls were at the 55.8 percentile with an
average of 202.9. The norm average for third graders on the reading assessment is 200.
The overall reading average for the third grade class at WES was 199.5, which was at the
53.9 percentile. (See Figure 1) Boys scored an average of 196.1 at the 46.3 percentile,
and girls scored a 202.5, which was at the 60.6 percentile.

The norm average in the spring for the fourth grade assessment for math is 211,
and for reading is a 207 (See Figure 2). On the math test, fourth grade boys scored 204.4
and girls scored a 210.0. The boys’ score placed them at the 37.2 percentile, while the
girls were at the 49.7 percentile. In reading, at the 49.2 percentile, the WES fourth grade
score was 204.9. Boys scored an average of 202.0, and girls averaged 207.5. Boys were
at the 43.8 percentile, and fourth grade girls were at the 54.3 percentile.

The fifth grade spring norm average in math is 220, and in reading it is 212. WES
fifth graders scored a math average of 216.6 and a reading average of 212.1, which was at
the 48.3 and the 53.9 percentile respectively (See Figure 3). In math, the fifth grade boys
scored an average of 218.4, at the 51.7 percentile and the girls scored a 214.9, at the 45.1
percentile. In reading the boys scored an average of 212.5, at the 54.4 percentile, and
girls scored 211.7, at the 53.4 percentile.
Figure 2
3rd Grade WES

<table>
<thead>
<tr>
<th>Time of Administration</th>
<th>Average Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>194</td>
</tr>
<tr>
<td>Norm f/ fall</td>
<td>192</td>
</tr>
<tr>
<td>Spring</td>
<td>202</td>
</tr>
<tr>
<td>Norm f/ spring</td>
<td>204</td>
</tr>
</tbody>
</table>

Math | Reading
--- | ---

Figure 3
4th Grade WES

<table>
<thead>
<tr>
<th>Time of Administration</th>
<th>Average Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>200</td>
</tr>
<tr>
<td>Norm f/ fall</td>
<td>198</td>
</tr>
<tr>
<td>Spring</td>
<td>212</td>
</tr>
<tr>
<td>Norm f/ spring</td>
<td>210</td>
</tr>
</tbody>
</table>

Math | Reading
--- | ---
MAP AMS fall. The administration of Adams Middle School (AMS) administered the MAP assessment in the fall of 2007. The sixth grade as a whole scored an average of 216.0 in math and a 211.2 in reading. The national norm for the beginning of sixth grade is 219 for math and 213 for reading. The sixth grade scored in the 45.8 percentile for math and the 49.7 percentile for reading. The sixth grade boys scored an average of 215.2 in math and a 208.7 in reading. The girls scored an average of 216.6 in math and a 213.5 in reading.

Seventh grade as a group averaged a 220.0 in math and a 213.8 in reading, which compares to a norm score of 225 in math and a 217 in reading. The math score placed the seventh grade class at AMS in the 42.7 percentile in math and at the 46.6 percentile for reading. The seventh grade boys scored an average of 220.7 in math, while the girl’s average was 219.2. In the reading assessment, the boys scored an average of 212.9, and the girl’s score was 214.8. Finally, the eighth grade class at AMS averaged a score of 225.1 on the math assessment, which was at the 42.0 percentile. The reading score, at
218.1, was at the 48.4 percentile. The normative scores for the beginning of eighth grade is 230 in math and 220 in reading. The eighth grade boys had an average score in math of 225.3, and a 216.8 in reading, while the eighth grade girls average score was 224.8 in math and a 219.4 in reading.

*MAP AMS spring.* In the spring of the same academic year the MAP assessment was re-administered to all of the students of AMS. Although gains were demonstrated for each area, the gains were not as great as those of the norm scores. The norm score for the end of the sixth grade year for the math test is 225 and is 216 for the reading test. The sixth grade class of AMS scored an average of 220.9 for math and a 212.9 for the reading assessment. (See Figure 4) These scores were at the 46.3 percentile for math and the 46.6 for reading. Sixth grade boys scored a 220.0 for math and a 210.6 average for reading. For math the sixth grade girls scored a 221.8 and a 215.1 for reading.

The seventh grade average for math was 224.3, while 216.6 was the reading average. (See Figure 5) This score was at the 43.8 percentile in math and the 47.5 percentile for reading. The boys scored a 225.8 in math and a 216.1 in reading, while the girls’ average score was a 222.6 in math and a 217.1 in reading. The eighth grade students scored a 228.7 average for math, which was at the 42.0 percentile. For reading the average for eighth grade was a 219.8 which put the eighth students at AMS at the 46.9 percentile. The eighth grade boys scored a 228.8 in math and a 217.8 in reading. Eighth grade girls scored a 228.5 in math and a 221.8 in reading. (See Figure 6)
Figure 5
6th Grade AMS

Time of Administration

Average Score

Fall  Norm f/ fall  Spring  Norm f/ spring

Math  Reading

Figure 6
7th Grade AMS

Time of Administration

Average Score

Fall  Norm f/ fall  Spring  Norm f/ spring

Math  Reading
MAP JES fall. The students at Jefferson Elementary School (JES) took the MAP assessment in the fall of 2007. The normative average for third grade students at the beginning of the academic year is 192 in math and a 192 in reading. The average score for the third graders at JES was a 197.1 in math and a 198.3 in reading. (See Figure 7) These scores placed Jefferson third graders in the 61.9 percentile in math and the 64.5 percentile in reading. The third grade boys scored an average of 197.7 in math and a 198.3 in reading. The girls in the third grade scored an average of 196.5 in math and a 199.1 in reading.

The fourth grade class as a whole scored a 204.0 in math and a 203.1 in reading. The fourth grade norms for beginning of the year is a 203 in math and a 201 in reading. (See Figure 8) The fourth grade class scored at the 52.5 percentile in math and at the 59.2 percentile for reading. The boys scored a 202.3 on the math assessment and a 200.9
on the reading. In math the girls scored a 205.3 and a 204.9 in reading. The national norm for the beginning of fifth grade is a 212 in math and a 208 in reading.

The fifth graders averaged a score of 210.0 in math and a 206.6 in reading. (See Figure 9) This score placed the fifth grade class at the 48.2 percentile in math and at the 49.4 percentile for reading. The fifth grade boys had an average score of 210.8 in math and in reading a 205.6. The fifth grade girls at JES had an average score of 209.2 on the math assessment and a 207.4 for the reading assessment.

*MAP JES spring.* When the administration at JES administered the test in the spring of 2008, the scores for each category increased, but did not increase at the rate of the normative scores. The national norm for third grade for the spring administration of the math assessment is 203 and a 200 for the reading assessment. The third graders of JES averaged a 202.1 in math and a 203.6 in reading. (See Figure 7) This placed the third grade class at the 54.9 percentile in math and the 64.3 percentile in reading. The third grade boys scored a 203.4 in math and a 203.6 in reading, while the girls scored a 200.5 in math and a 203.9 in reading.

The normative score for the spring for fourth grade students is a 211 in math and a 207 in reading. At the 46.1 percentile the fourth grade students averaged a 206.9 in math and at the 56.1 percentile a 206.8 in reading. (See Figure 8) The boys in fourth grade averaged a 204.6 in math and a 205.5 in reading. The girls had a 208.7 in math and a 207.7 in reading.

The national average math score for the spring for fifth grade students is a 220, and for reading it is a 212. Fifth graders at JES averaged a 211 for math and a 208.6 for the reading assessment. (See Figure 9) These scores placed the fifth graders at the 36.4
percentile in math and at the 46.1 percentile for reading. Fifth grade boys averaged 211.1 on the math assessment and a 208.3 for reading. The girl’s math average was a 210.9 and a 208.9 in reading.

Figure 8
3rd Grade JES

Figure 9
4th Grade JES
\textit{MMS MAP fall}. The students at Madison Middle School (MMS) took the MAP assessment in the fall of 2007. The norm for the beginning of sixth grade is a 219 in math and a 213 in reading. The sixth grade students at MMS scored a 215.3 in math and a 211.9 in reading. (See Figure 10) These scores placed the sixth grade at the 44.4 percentile for math and the 50.4 percentile for reading. The sixth grade boys scored a 215.9 in math and a 210.4 in reading, while the girls scored a 214.8 on the math assessment and a 213.4 on the reading assessment.

The seventh grade as a whole scored a 222.6 in math and a 210.5 in reading. The norm for the start of seventh grade is a 225 in math and a 217 for reading. (See Figure 11) The seventh grade students of MMS placed in the 46.8 percentile in math and the 41.1 percentile for reading. The boys had a math score of 222.6 and a reading score of 208.0. The seventh grade girls had a math score of 222.7 and a reading score of 213.1.
The MMS eighth grade class scored an average of 225.3 on the math portion of the test, and a 218.0 on the reading portion.

The national average for the beginning of eighth grade is a 230 in math and a 220 in reading. (See Figure 12) The eighth grader’s math score was at the 41.9 percentile, while the reading score was at the 48.5 percentile. The boys in the eighth grade had an average score of 224.8 in math and a 214.9 in reading. The girls averaged a 225.9 in math and a 221.6 in math.

*MAP MMS spring.* At the spring administration of the MAP assessment, growth was demonstrated at every grade level for both math and reading. Growth was also shown in every subgroup with the exception of the seventh grade boys’ math score. Where growth was seen it was not at the rate the MAP normative data indicated it should be. The average score for spring for sixth grade is 225 in math and a 216 in reading. The sixth grade students of MMS scored an average of 219.7 on the math assessment and a 213.3 on the reading assessment. (See Figure 10) The sixth graders’ score was at the 43.7 percentile for math and at the 46.8 percentile for reading. The boys in the sixth grade averaged a score of 219.6 in math and a 212.2 for reading. The girls’ average was a 219.8 for math and a 214.4 in reading.

The norms for the seventh grade in the spring are a 230 on the math test and a 219 on the reading evaluation. The MMS seventh grade class average for math was a 223.4 and a 213.7 in reading. (See Figure 11) The boys’ average in math was a 222.4 and in reading was a 211.1, while the girls averaged a 224.4 in math and a 216.5 in reading. According to the national norms, in the spring eighth graders are expected to have an average score of a 234 on the math assessment and a 223 on the reading test.
Eighth graders at MMS scored a math average of 228.2 and a reading average of 219.2. (See Figure 12) This placed the eighth grade at the 40.9 percentile for math and the 46.2 percentile for reading. Eighth grade boys had a math average of 227.7 and a reading average of 216.3, while the girls had a math average of 228.8 in math and a 222.5 in reading.
MAP comparison of WES and JES. The comparison of the percent of increase in score between Washington Elementary School (WES) and Jefferson Elementary School (JES) demonstrated a greater percent increase in MAP scores for both math and reading scores for the students of WES. (See Figure 13) Students at WES, where the Olweus Bullying Prevention Program was implemented, increased their math assessment score by an average of 2.9%. This compares to the students at JES, where there was no systematic bullying intervention, and the students’ scores increased by an average of 1.4% on the math assessment. (See Figure 14) On the reading assessment, the students at WES increased their scores by an average of 2.1%, and the students at JES scores increased by 1.7%. In each of the three grade levels, the percent of increase was greater for the students at WES than for the JES students with the only exception being for the fourth grade reading assessment, where the students at WES increased by an average of 1.6% while JES scores increased by 1.8%. (See Figure 15)
The greatest difference in the percent of increases was seen for the fifth grade students. (See Figure 16) The fifth graders at the experimental school increased their reading MAP scores by an average of 2.0%, while fifth graders at the control school increased by 1.0%. In math the fifth graders score increased by only 0.5% at the control school, but at the experimental school the increase was 3.0%. (See Figure 13) A one-way analysis of covariance (ANCOVA) was conducted to compare the adjusted mean scores of the post-tests for the two elementary schools. The Levene’s Test of Equality of Error Variances found the underlying assumption of homogeneity of variance for the one-way ANCOVA was met, as evidenced by $F(1, 1196) = .649$. That is, $p(.649) > \alpha (.01)$. This affirms the assumption that there is a significant relationship between the covariate, the pre-test, and the dependent variable. The ANCOVA was significant, $F(1, 1195) = 14.29$, $p < .001$, for the elementary schools. (See Table 11)
Table 11

Results of Analysis of Covariance (ANCOVA) for Elementary Schools

Between Subjects Factors

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Test of Between-Subjects Effects

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Results of Analysis of Covariance (ANCOVA) for Elementary Schools

Pretest-posttest Means and Standard Deviations

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<td>Control</td>
<td>516</td>
<td>203.40</td>
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**Figure 17**
Comparision of 5th Grade Scores

MAP comparison of AMS and MMS. Similarly, the experimental middle school showed greater growth in both subjects in each of the three grade level, with the exception of seventh grade reading. The experimental middle school, Adams Middle School (AMS) demonstrated an overall growth of 2.9% in the math score and an increase of 1.0% in the reading score. (See Figure 17) The control middle school, Madison Middle School (MMS) demonstrated a growth in the math score of 1.1% and a 0.9% growth in reading scores. The AMS sixth graders scored 2.2% higher on the math assessment at the end of the year following the Olweus Bullying Prevention program implementation, while the MMS sixth graders scored 2.0% higher. (See Figure 18) On the reading test the sixth grade AMS students averaged 0.8% higher, and the MMS sixth graders average 0.7% higher.
The seventh graders at AMS managed to increase the average math test score by 1.9%, which was almost five times more than the 0.4% increase of the students at MMS. (See Figure 19) In reading the AMS seventh graders’ score was 1.3% higher and the MMS seventh graders’ scores were 1.5% higher. The eighth graders increased the average score of the math assessment by 1.6% at AMS and by 1.3% at MMS. In reading the AMS eighth graders increased the average score by 0.8% and the MMS eighth graders average increase was 0.5%. (See Figure 20)

A one-way analysis of covariance (ANCOVA) was conducted to compare the adjusted mean score of the post tests for the two middles schools. The Levene’s Test of Equality of Error Variances found the underlying assumption of homogeneity of variance for the one-way ANCOVA was met, as evidenced by \( F(1, 4591) = .168 \). That is, \( p (.168) > \alpha (.01) \). This affirms the assumption that there is a significant relationship between the covariate, the pre-test, and the dependent variable. The ANCOVA was significant, \( F(1, 4590) = 8.67, p < .001, \) for the middle schools. (See Table 12)
Table 12

*Results of Analysis of Covariance (ANCOVA) for Middle Schools*

**Between Subjects Factors**

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**Test of Between-Subjects Effects**

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**Results of Analysis of Covariance (ANCOVA) for Middle Schools**

**Pretest-posttest Means and Standard Deviations**

<table>
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Figure 19
Comparison of 6th Grade Scores

Figure 20
Comparison of 7th Grade Scores
A one-way analysis of covariance (ANCOVA) was conducted for this study. The independent variable, presence of the bullying reduction program, included the two levels of either present or not. The dependent variable was the post scores from the Measures of Academic Progress (MAP) assessment. From the Levene’s Test of Equality of Error Variances, the underlying assumption of variance for the one-way ANACOVA was met, as evidenced by $F(1, 5788) = .662, p = .416$. That is, $p (.416) > \alpha (.01)$. The ANCOVA was significant, $F(1, 5788) = 32.63, p < .001$. (See Table 13) The test assesses the differences among the adjusted means for the two groups. For the students that had not been involved in the bullying prevention program, the adjusted mean score was 215.641, while those involved in the prevention program had an adjusted mean score of 217.005.
Table 13
Results of Analysis of Covariance (ANCOVA) for All Schools
Between Subjects Factors

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Test of Between-Subjects Effects

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Results of Analysis of Covariance (ANCOVA) for All Schools
Pretest-posttest Means and Standard Deviations

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<th>Pretest</th>
<th>Posttest</th>
<th>Adjusted</th>
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</thead>
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<td>Treatment</td>
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<td>M</td>
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<tr>
<td>Treatment Group</td>
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Summary of Results

The experimental schools demonstrated significant reduction in self-reported bullying behaviors across grade levels and gender. The reductions were consistent with the studies reviewed in chapter two of the dissertation. In addition to these reductions in bullying activity, on average the experimental schools demonstrated a greater percentage of increase of MAP assessment scores when compared to the control schools. This greater average percentage of increase was seen in almost all subgroups for both the math and reading assessments. The greatest percentage of increase when compared to the control group was seen in the fifth grade, which also reported some of the greatest reductions in bullying activity.
5. Summary and Discussion

In order to facilitate the anticipated needs of the reader, this final chapter of the dissertation reiterates the research problem and re-examine the major methods used in the report. The chapter includes the statement of the problem, a review of the methodology, a summary of the results, and a discussion of the results.

Statement of the Problem

The evidence of bullying and its effect on the well being of the child has been well established over the past several decades. With an estimated 5 million students potentially facing the effects of being a bullying victim, many within the schools and the community sense the urgency to act. At the same time, most recognize the need for American public schools to answer the call for a greater emphasis on preparing our children for the global economy by providing them with a level of education that will allow them to compete with their peers from around the world. With the already limited resources of the school system being reduced by many state legislators, it would appear that school officials and communities will be forced to decide between effectively addressing the issue of bullying or effectively raising the standards to meet the demands of the global market place. Given the continued concern of administrators, educators, and parents over the effects of bullying within the school setting and the continued pressure from legislators and the community for an increase in the academic performance of students, this research investigated the potential link between the two. The research conducted sought to find the effect of the implementation of the Olweus Prevention Program on the academic performance of students in the third through eighth grade.
Review of the Methodology

As explained in chapter 3, the research conducted was a quasi-experimental study with treatment and control groups. The researcher compared surveys from the experimental groups to investigate the effectiveness of the implementation of the Olweus Bullying Prevention Program. The researcher compared the change in Measures of Academic Progress (MAP) scores from two schools that had implemented the Olweus Bullying Prevention Program with the change in scores from two schools that had not implemented any bullying prevention programs. From the two schools that had implemented the program, one was an elementary school and one was a middle school. Likewise, from the two schools that had not implemented the program, one was an elementary school and one was a middle school. The schools that had not implemented the program served as the control group and offered the researcher a standard by which to compare the scores from the other two schools. The two schools that had implemented the Olweus Prevention Program represented the experimental group. Both of the schools used as the experimental group started the Olweus Bullying Prevention Program at the beginning of the 2007-2008 school year.

The Olweus Bullying Prevention Program began with a survey concerning the prevalence and issues related to the bullying problem at the two individual schools. The results from the survey were then used to develop a plan of action to address the bullying dilemma. The plan for both schools included components that dealt with both education and prevention. The education component for both schools included lessons and activities designed to raise awareness of the bullying issue and to offer tools for both the bullying victim and the bystander to more effectively handle a bullying incident. The
prevention component of the plan used the results from the survey to place adults in the areas where the bullying most frequently occurred.

At the conclusion of the school year, the survey was administered again. The results from the second administration were used to determine the effectiveness of the strategies implemented during the school year. This provided the researcher with the information needed to determine if the incidences of bullying had actually been affected by the prevention program. The questions from the first and second survey were compared and analyzed, and the change in the bullying behaviors was documented.

The instrument chosen to measure change in academic performance was the Measures of Academic Progress (MAP) assessment. The MAP assessment is a computer adaptive test already utilized by each of the participating schools. The assessment is administered in the areas of mathematics, science, reading and language usage. The MAP assessment was created by the Northwest Evaluation Association and is administered three times throughout the school year. The researcher used the results from the assessment offered in the fall of 2007 and the spring of 2008. Since the fall administration was given early in the school year, the scores were considered to be a reflection of knowledge already possessed at the beginning of the school year. The spring administration of the MAP assessment was used to determine the change in academic performance throughout the school year.

Summary of the Results

WES 2006 bullying prevalence

The experimental elementary school, referred to as Washington Middle School (WES) administered the Olweus Bullying Questionnaire (OBQ) at the conclusion of the
2006-2007 school year. This survey administration was for the purpose of establishing a baseline set of data and to determine the extent of the bullying problems at WES. Of the 315 students participating in the survey, 29% indicated they had had some level of involvement as a victim of bullying. When asked about specific forms of bullying, 43% indicated they had been the victims of bullying by means of others spreading false rumors about them and being called mean names concerning their race or color. When questioned about the frequency of the bullying acts, 12% of the WES students indicated that they were “bullied with mean names or comments about my race or color” a minimum of once a week. Also troubling was that 10% of the students that reported they were harassed by bullies “with mean names, comments, or gestures with a sexual meaning” at least once a week. The OBQ revealed similar percentages in other studies previously discussed that examined the prevalence of bullying (Nansel et al., 2001; Limber, 2004; Seals, & Young, 2003; NCES, 2005).

WES bullying reduction

Toward the end of the first year of implementation of the Olweus Bullying Prevention Program, the staff of WES re-administered the OBQ. Data from the OBQ demonstrated an overall decrease in bullying activity at WES. When the students were asked if they had been bullied in the past two months, 81% indicated they had not been bullied during that time period. That is an increase of 10% from the previous administration of the OBQ. When asked about physical bullying behaviors such as “hitting, kicking, or shoving,” 84% stated they had not been a victim of this type of behavior during the previous two months, which was an increase of 6% from the pre-survey administration. While the occurrence of being “lied about and having false
rumors spread about me” decreased, there were still 16% of the students questioned that indicated this was a frequent problem at school, and only 62% said this had not happened to them over the previous couple of months. The second administration of the OBQ found that close to 75% of the students had not had any issues of bullying during the previous two months. This compares to 68% the previous year. Also, while 4.1% of those participants in the first survey indicated they were frequent victims of some type of bullying behavior, only 2.5% of those participating in the second survey reported being a frequent victim. When compared to the first survey results, it is obvious that the level of self-reporting instances of bullying behavior had significantly reduced after the first year of full implementation of the Olweus Bullying Prevention Program. For every question, there was a lower percentage of students reporting being a victim of bullying at the rate of several times a week. The only area that demonstrated a slight increase in frequent bullying behavior was for two questions in the frequency of about once a week.

AMS 2006 bullying prevalence

Similarly, the staff at Adams Middle School (AMS) administered the OBQ a few weeks before the end of the 2005-06 school year. This initial survey found that 44% of the students at AMS had been the victim of bullying at some level in the previous two months. Twenty percent said they were victimized on a frequent basis, and 10% said they had been victimized several times a week. This means that close to 160 students at AMS felt they were being bullied multiple times every week. When asked about the specific forms of bullying, more students reported being “called mean names, made fun of, or teased in a hurtful way than any other category.” Forty-two percent of those participating in the survey said they had been bullied in this manner. The second leading
form of bullying was verbal abuse. Thirty-six percent of the students reported they had
had other students tell “lies or spread false rumors about me and tried to make others
dislike me.” When looking at the occurrence of physical bullying, 28% of the
participants reported they had been “hit, kicked, pushed, shoved around, or locked
indoors,” on a frequent basis. The data gathered was again consistent with percentages
from previous studies reviewed in this dissertation (Nansel et al., 2001; Limber, 2004;
Seals, & Young, 2003; NCES, 2005).

AMS bullying reduction

The comparison of the pre-survey and the post-survey indicates a significant drop
in bullying activity at AMS following the introduction of the Olweus Bullying Prevention
Program. Overall, the number of students that reported they had no problems being
bullied in the past couple of months increased from 56% to 64%. This 8% increase
represents close to 125 more students that no longer were the victims of bullying activity.
The greatest decrease in a particular type of bullying was seen in the area of being
“threatened or forced to do things I didn’t want to do.” In the pre-survey, only 80% of
the reporting students said they had had no problems in this area. In the post-survey, this
percent increased to 95%. The other 5% of the students reported this had been a problem
for them “only once or twice” in the previous couple of months.

Another area that showed a dramatic decrease in bullying activity was being
physically abused by a bully. In the initial study, 28% of the students indicated they had
been “hit, kicked, pushed, shoved around, or locked indoors” during the previous couple
of months. In the follow up survey, only 17% reported still having difficulty in this area
of bullying. The post-survey also offered evidence that there had been a significant
reduction in the frequency of bullying activity. In the pre-survey, 10% of the students said they had been bullied at a rate of several times a week. However, in the post-survey, only 1% of the students said they were bullied that often. This means that before the introduction of the Olweus Bullying Prevention Program at AMS, near 160 students felt they were victimized by bullies several times during the course of a week. At the conclusion of the first year of the prevention program, there were close to only 16 students that felt they were victimized at this high frequency.

ELEM MAP percent of change compared

The comparison of the percent of increase in scores between Washington Elementary School (WES) and Jefferson Elementary School (JES) demonstrated a greater percent increase in MAP scores for both math and reading scores for the students of WES. Students at WES, where the Olweus Bullying Prevention Program was implemented, increased their math assessment score by an average of 2.9%. This compares to the students at JES, where there was no systematic bullying intervention, and the students’ scores increased by an average of 1.4% on the math assessment. On the reading assessment, the students at WES increased their scores by an average of 2.1%, and the students at JES scores increased by 1.7%. In each of the three grade levels, the percent of increase was greater for the students at WES than for the JES students, with the only exception being for the fourth grade reading assessment, where the students at WES increased by an average of 1.6% while JES scores increased by 1.8%.

Middle MAP percent of change compared

Similarly, the experimental middle school showed greater growth in both subjects in each of the three grade levels, with the exception of seventh grade reading. The
experimental middle school, Adams Middle School (AMS) demonstrated an overall growth of 2.9% in the math score and an increase of 1.0% in the reading score. (See Figure 17) The control middle school, Madison Middle School (MMS) demonstrated a growth in the math score of 1.1% and a 0.9% growth in reading scores. The AMS sixth graders scored 2.2% higher on the math assessment at the end of the year following the Olweus Bullying Prevention program implementation, while the MMS sixth graders scored 2.0% higher. (See Figure 18) On the reading test, the sixth grade AMS students averaged 0.8% higher, and the MMS sixth graders average 0.7% higher.

Discussion of the results

The results from the present study were consistent with the data reviewed in chapter two that demonstrated a reduction in bullying activity when an effective prevention program is followed. Both of the experimental schools showed a significant reduction in bullying activity after the conclusion of the first year of the implementation of the Olweus Bullying Prevention Program. With little exception, the reduction was seen in every grade level and for every form of bullying activity. While based on this study alone, it is difficult to be certain that the reduction in bullying is solely a condition of the prevention program. Other studies have reported similar reductions in bullying activity following the introductions of school wide interventions (Nansel et al., 2001; Limber, 2004; Seals, & Young, 2003; NCES, 2005). If the original purpose of this study was to investigate the correlation of the implementation of the Olweus Bullying Prevention Program with the reduction of bullying activity, the correlation would have been shown to be relatively strong.
The academic gains of students at both the experimental and the control schools proved to be less than expected. While gains in performance were demonstrated in most subgroups, the gains failed to be compatible with the rate of the national norms. Each of the four schools investigated lost ground in percentile ratings from the first MAP administration in the fall to the final MAP administration in the spring. One reasonable explanation for the poor performance in the MAP assessment may be the lack of alignment with the state’s newly endorsed standards. While the MAP assessment has been shown to be an effective tool in measuring the academic growth of students with basic math and reading skills (NWEA, 2004), it may not be as effective in measuring the progression of students toward mastery of the standards that makeup the new curriculum for the state.

Limitations

The researcher recognized certain limitations in the study. First of all, it is difficult to attribute any of the changes in academic performance solely to the introduction of the Olweus Bullying Prevention Program. Perhaps the same attitude of concern and awareness that led the administration and staff of the experimental schools to seek out the Olweus Program may also have had an effect on the students’ academic performance. Other uncontrollable variables, such as parental involvement and teaching styles, may have had either a positive or a negative impact on the students’ performance. It is with this understanding that the researcher was not looking for causation, but instead only sought to find some level of possible effect. Secondly, though the researcher attempted to closely match the experimental and the control groups, the schools compared had a few differences worth noting. The size of the experimental middle
school was several hundred students larger than the size of the control middle school. The ethnic makeup of the two elementary schools was not as closely matched as the researcher would have preferred. And finally, the level of commitment to the Olweus Bullying Prevention Program varied from teacher to teacher. Though the majority of the teachers followed the plan developed by their school’s Olweus team, there were some that did not.

Another significant limitation is the number of uncontrolled variables that could potentially have an effect on the dependent variable. Some examples of these variables would be the overall school climate of the four schools. As mentioned earlier, the attitude and commitment of the administration and staff of the experimental schools, which led the school to commit to the prevention program may well have effected many other areas of the school that could possibly had a positive or negative effect on the post test scores. Another example would be the difference in socio-economic level of the experimental schools as compared to the control schools. Though the schools were matched as closely as possible, as is the case in a quasi-experimental experiment, it is usually outside the control of the researcher to math socio-economic levels of the participants.

Interpretation of the findings

While the academic gains may not have been as pronounced as one may desire when compared to the norm, the higher average gains of the experimental schools when compared to the control schools were easily ascertained. The percent of increase in MAP scores for the two experimental schools was higher, on average, than the increase for the control schools. While it is impossible to attribute this difference solely to the
introduction of the Olweus Bullying Prevention Program, it does demonstrate some level of correlation between the introduction of the program and higher academic progress when measured by MAP scores. The limited time period covered by the study may have possibly limited the results seen in the percent of increase. Given that the experimental schools had just begun addressing the issue of bullying, one may expect that over time further reductions in bullying activity may become evident and greater academic achievement may follow these reductions.

Relationship of the current study to previous research

As discussed in the review of literature from the dissertation, bullying appears to be a significant problem in schools. In the present study the levels of bullying activity found at the experimental schools seemed to be consistent with other studies. Olweus (1993) found that approximately 15% of the students in Norway were experiencing bullying problems with some level of regularity. The present study found that at the elementary level 13% of the students at the experimental school reported being a victim of bullying activity at least once or twice a month. The experimental middle school found 20% of the students reported being a victim at that rate of regularity.

Similar percents were seen in another study that demonstrated the same types of issues in schools in Northern Ireland. The study was conducted from a sample of both sixth and ninth grade students. The sixth grade primary pupils consisted of a sample size of 1,079 students, while the post-primary ninth graders consisted of 1,353 students (Collins, McAleavy & Adamson, 2004). The study, which was reportedly the first of its kind in Northern Ireland, found that 40% of the sixth grade students reported being bullied at school. Also, 30% of the ninth grade students reported having been bullied.
These percents compare to about 39% of the students in the current study’s experimental group that reported being bullied at school.

In Germany, Hanewinkel (2004) found that bullying activity peaked around the eighth grade. He surveyed third though twelfth grade students and found that starting with the third grade, the percentage for any level of involvement in bullying was 14.5%. In fourth grade it rose to 23%, in fifth grade it was still about 23%, in sixth grade it was 30.5%, in seventh grade it was 38.7%, in eighth grade it was 39.6%, and it peaked in ninth grade at 40.5%. From that point it began to descend to 36.9% in tenth grade, 25.2% in eleventh grade, and it fell to 17.7% in twelfth grade (Hanewinkel, 2004). In the current study, 29% of the elementary students reported at least some bullying activity, while 44% of the middle school students reported the same.

Previously reviewed literature consistently revealed a correlation between bullying behavior and poor mental and physical health for both the victim and the bully (Nansel et al., 2001; Saluja et al., 2004; Arseneault et al., 2008; Fekkes et al., 2006). Other studies demonstrated a correlation between mental and physical health issues and academic performance (Cheurprakobkit & Bartsch, 2005; Rotter, 1966; Swearer et al. 2004; Seirfert, 2004; Saluja et al., 2004; Arseneault et al., 2008; Fekkes et al., 2006; Nansel et al., 2004). The present study attempts to bridge the gap and establish the presence of a correlation between bullying activity and academic performance. While the study can not, on its own, establish this direct correlation, it has provided a foundation by which future studies can build upon to research the possibility of a relationship between the two variables.
The current study attempted to bridge the gap between bullying prevention and academic performance. One potential connection is the effect bullying has on motivation. The motivational factor, and its effect on a student’s ability to perform well academically, has been of concern and interest to educators for decades. Because of this concern, several theories about motivation and its origins have been constructed (Seifert, 2004). Four theories are most prominent in contemporary educational psychology. One of these leading theories is the self-efficacy theory, which refers to a person’s judgment about his/her capability to perform a task at a specific level of performance. Secondly, attribution theory refers to the perceived cause of a particular outcome. For example, one student may believe he/she failed a test because he/she didn’t study the material, while another may think he/she failed the test because the teacher was in a bad mood. The next dominant theory in the area of student motivation is the self-worth theory, which simply attributes the motivation of a student to do well to his/her desire to maintain or enhance their self-worth. The final theory for motivation is achievement goal theory, which states that students’ motivation can be understood as attempts to achieve goals (Seifert, 2004). While all of these theories certainly have their merit, bullying has been shown to be associated with barriers to all four.

In the original implementation of the Olweus Bullying Prevention Program, Olweus (1993) found that reports of bullying decreased by close to 50% from before the program. Though not as dramatic, reductions were also seen in South Carolina where self-reporting of bullying behavior decreased by approximately 20%, while bullying was increasing at the school without a prevention program (Limber, 2004). Along with the reduction in bullying, there were also statistically significant differences in school
misbehavior, vandalism, and general delinquency between the students enrolled in the prevention program and those that did not receive the Olweus Prevention Program.

Another study in Philadelphia measured the effectiveness of the Olweus program. At the baseline of the study, incident density was reported at 65 incidents per 100 student hours. After four years, incident density decreased to 36 incidents per 100 student hours. This represented a 45% decrease in the incident density over the four years. (Black & Jackson, 2007). The present study found that self reported instances of bullying behaviors decreased by approximately 10% at the experimental schools after the prevention program had been implemented.

Recommendations for educators

While a safe school for all students is in itself a worthwhile goal for educators to seek, a relationship between providing a safe school environment and greater academic achievement further justifies an educator’s decision to spend time and resources in dealing with the issue of bullying. Just as was demonstrated in the present study, effective prevention programs are effective tools in reducing the number of children that are becoming bullying victims within the schools. Administrators, teachers, staff, and parents need to be active in the attempt to allow every child within the school to feel safe during the school day. No matter where they come from every child in our nation’s schools should know that the adults in that school are concerned about their well being and will take every step necessary to ensure a protected learning environment. If in this effort to protect our most innocent, greater academic progress is achieved, it will only further justify the action taken.
The evidence is clear that bullying has adverse effects on the well being of children. The physical, emotional, and psychological impact on the life of a bullied student is often felt throughout a lifetime. These effects may also have its impact on the long-term goals and achievement of the bullying participants. If the impact of bullying really does have an impact on the academic performance of students, the long term consequence could be an unfilled potential in the lives of those involved. As educators, if we are able to reduce these devastating effects in the early years of these innocent victims, an increase in academic performance may well be the least of the advantages gained.

Suggestions for additional research

Further investigation into any link between bullying activity and academic progress is easily justified. A study to shed light on the academic performance of students that have been involved in prevention measures over a greater length of time would be beneficial to the present body of knowledge. A more controlled study into what aspect of bullying behavior has the greatest impact on a student’s ability to achieve in the classroom would also be a contribution to the educational field. Finally, more study into the long-term effect of being involved in bullying activity may have on the academic performance of individual students would be beneficial.
References


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Appendix

Olweus Bullying Questionnaire

1. How do you like school?
   a. I dislike school very much
   b. I dislike school
   c. I neither like nor dislike school
   d. I like school
   e. I like school very much

2. Are you a boy or a girl?
   a. girl
   b. boy

3. How many good friends do you have in your class(es)?
   a. none
   b. have in your class(es)?
   c. I have 1 good friend in my class(es)
   d. I have 2 or 3 good friends in my class(es)
   e. I have 4 or 5 good friends in my class(es)
   f. I have 6 or more good friends in my class(es)

4. How often have you been bullied at school in the past couple of months?
   a. it hasn't happened at school in the past couple of months
   b. it has only happened once or twice
   c. 2 or 3 times a month
   d. about once a week
   e. several times a week

5. I was called mean names, was made fun of, or teased in a hurtful way
   a. it hasn't happened to me in the past couple of months
   b. only once or twice
   c. 2 or 3 times a month
   d. about once a week
   e. several times a week

6. Other students left me out of things on purpose, excluded me from their group of friends, or completely ignored me
   a. it hasn't happened to me in the past couple of months
   b. only once or twice
   c. 2 or 3 times a month
   d. about once a week
   e. several times a week

7. I was hit, kicked, pushed, shoved around, or locked indoors
   a. it hasn't happened to me in the past couple of months
   b. only once or twice
   c. 2 or 3 times a month
   d. about once a week
   e. several times a week
8. Other students told lies or spread false rumors about me and tried to make others dislike me
   a. it hasn’t happened to me in the past couple of months
   b. only once or twice
   c. 2 or 3 times a month
   d. about once a week
   e. several times a week

9. I had money or other things taken away from me or damaged
   a. it hasn’t happened to me in the past couple of months
   b. only once or twice
   c. 2 or 3 times a month
   d. about once a week
   e. several times a week

10. I was threatened or forced to do things I didn’t want to do
    a. it hasn’t happened to me in the past couple of months
    b. only once or twice
    c. 2 or 3 times a month
    d. about once a week
    e. several times a week

11. I was bullied with mean names or comments about my race or color
    a. it hasn’t happened to me in the past couple of months
    b. only once or twice
    c. 2 or 3 times a month
    d. about once a week
    e. several times a week

12. I was bullied with mean names, comments, or gestures with a sexual meaning
    a. it hasn’t happened to me in the past couple of months
    b. only once or twice
    c. 2 or 3 times a month
    d. about once a week
    e. several times a week

13. I was bullied in another way
    a. it hasn’t happened to me in the past couple of months
    b. only once or twice
    c. 2 or 3 times a month
    d. about once a week
    e. several times a week
14. In which class(es) is the student or students who bully you?
   a. I haven’t been bullied at school in the past couple of months
   b. in a different class but same grade (year)
   c. in a higher grade
   d. in a lower grade
   e. in different grades

15. Have you been bullied by boys or girls?
   a. I haven’t been bullied at school in the past couple of months
   b. by 1 girl
   c. by several girls
   d. mainly by 1 boy
   e. by several boys
   f. by both boys and girls

16. By how many students have you usually been bullied?
   a. I haven’t been bullied at school in the past couple of months
   b. mainly by 1 student
   c. by a group of 2-3 students
   d. by a group of 4 – 9 students
   e. by a group of more that 9 students
   f. by several different students or groups of students

17. How long has the bullying lasted?
   a. I haven’t been bullied at school in the past couple of months
   b. it lasted one or two weeks
   c. it lasted about a month
   d. it has lasted about 6 months
   e. it has lasted about a year
   f. it has gone on for several years

18. Where have you been bullied?
   a. I haven’t been bullied in the past couple of months
   b. I have been bullied in one or more of the following places in the past couple of months

Have you been bullied?

18a. on the playground/athletic field (during recess or break times)?
   a. no
   b. yes

18b. in the hallways/ stairwells?
   a. no
   b. yes
18c. in class (with teacher present)?
   a. no  b. yes

18d. in the classroom (with teacher absent)?
   a. no  b. yes

18e. in the bathroom?
   a. no  b. yes

18f. in gym class or the gym locker room/ shower?
   a. no  b. yes

18g. in the lunch room?
   a. no  b. yes

18h. on the way to and from school?
   a. no  b. yes

18i. at the school bus stop?
   a. no  b. yes

18j. on the school bus?
   a. no  b. yes

18k. somewhere else in school?
   a. no  b. yes

19. Have you told anyone that you have been bullied at school in the past couple of months?
   a. I haven’t been bullied at school in the past couple of months
   b. I have been bullied but I have not told anyone
   c. I have been bullied and I have told somebody about it

Have you told (that you have been bullied)

19a. your class (home room) teacher?
   a. no  b. yes

19b. another adult at school (a different teacher, the principal, the school nurse, the custodian/school caretaker, the school psychologist/ mental health professional etc)?
   a. no  b. yes

19c. your parent(s)/guardian(s)?
   a. no  b. yes
19d. your brother(s) or sister(s)?
   a. no
   b. yes

19e. your friend(s)?
   a. no
   b. yes

19f. somebody else?
   a. no
   b. yes

20. How often do the teachers or other adults at school try to put a stop to it when a student is being bullied at school?
   a. almost never
   b. once in a while
   c. sometimes
   d. often
   f. almost always

21. How often do other students try to put a stop to it when a student is being bullied at school?
   a. almost never
   b. once in a while
   c. sometimes
   d. often
   f. almost always

22. Has any adult at home contacted the school to try to stop your being bullied at school in the past couple of months?
   a. I haven’t been bullied at school in the past couple of months
   b. no, they haven’t contacted the school
   c. yes, they have contacted the school once
   d. yes, they have contacted the school several times

23. When you see a student your age being bullied at school, what do you feel or think?
   a. that is probably what he or she deserves
   b. I don’t feel much
   c. I feel a bit sorry for him or her
   d. I feel sorry for him or her and want to help him or her
ABOUT BULLYING OTHER STUDENTS

24. How often have you taken part in bullying another student(s) at school the past couple of months?
   a. I haven’t bullied another student(s) at school in the past couple of months
   b. it has only happened once or twice
   c. 2 or 3 times a month
   d. about once a week
   e. several times a week

Have you bullied another student(s) at school in the past couple of months in one or more of the following ways?

Please answer all questions.

25. I called another student(s) mean names, made fun of or teased him or her in a hurtful way
   a. it hasn’t happened in the past couple of months
   b. it has only happened once or twice
   c. 2 or 3 times a month
   d. about once a week
   e. several times a week

26. I kept him or her out of things on purpose, excluded him or her from my group of friends or completely ignored him or her
   a. it hasn’t happened in the past couple of months
   b. it has only happened once or twice
   c. 2 or 3 times a month
   d. about once a week
   e. several times a week

27. I hit, kicked, pushed and shoved him or her around or locked him or her indoors
   a. it hasn’t happened in the past couple of months
   b. it has only happened once or twice
   c. 2 or 3 times a month
   d. about once a week
   e. several times a week

28. I spread false rumors about him or her and tried to make others dislike him or her
   a. it hasn’t happened in the past couple of months
   b. it has only happened once or twice
   c. 2 or 3 times a month
   d. about once a week
   e. several times a week
29. I took money or other things from him or her or damaged his or her belongings
   a. it hasn’t happened in the past couple of months
   b. it has only happened once or twice
   c. 2 or 3 times a month
   d. about once a week
   e. several times a week

30. I threatened or forced him or her to do things he or she didn’t want to do
   a. it hasn’t happened in the past couple of months
   b. it has only happened once or twice
   c. 2 or 3 times a month
   d. about once a week
   e. several times a week

31. I bullied him or her with mean names or comments about his or her race or color
   a. it hasn’t happened in the past couple of months
   b. it has only happened once or twice
   c. 2 or 3 times a month
   d. about once a week
   e. several times a week

32. I bullied him or her with mean names, comments, or gestures with a sexual meaning
   a. it hasn’t happened in the past couple of months
   b. it has only happened once or twice
   c. 2 or 3 times a month
   d. about once a week
   e. several times a week

33. I bullied him or her in another way
   a. it hasn’t happened in the past couple of months
   b. it has only happened once or twice
   c. 2 or 3 times a month
   d. about once a week
   e. several times a week

34. Has your class (home room) teacher or any other teacher talked with you about your bullying other students at school in the past couple of months?
   a. I haven’t bullied other student(s) at school in the past couple of months
   b. no, they haven’t talked with me about it
   c. yes, the have talked with me about it once
   d. yes, they have talked with me about it several times
35. Has any adult at home talked with you about your bullying other students at school in the past couple of months?
   a. I haven’t bullied other student(s) at school in the past couple of months
   b. no, they haven’t talked with me about it
   c. yes, the have talked with me about it once
   d. yes, they have talked with me about it several times

36. Do you think you could join in bullying a student whom you didn’t like?
   a. yes
   b. yes, maybe
   c. I don’t know
   d. no, I don’t think so
   e. no
   f. definitely no

37. How do you usually react if you see or understand that a student your age is being bullied by other students?
   a. I have never noticed that students my age have been bullied
   b. I take part in the bullying
   c. I don’t do anything, but I think the bullying is OK
   d. I just watch what goes on
   e. I don’t do anything, but I think I ought to help the bullied student
   f. I try to help the bullied student in one way or another

38. How often are you afraid of being bullied by other students in your school?
   a. never
   b. seldom
   c. sometimes
   d. often
   e. very often

39. Overall, how much do you think your class (home room) teacher has done to counteract bullying in the past couple of months?
   a. little or nothing
   b. fairly little
   c. somewhat
   d. a good deal
   e. much