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THE EFFECTS OF AN ANTI-CYBERBULLYING PROGRAM ON DECREASING THE NUMBER OF AGGRESSIVE EXPERIENCES FOR STUDENTS WHILE USING DIGITAL TECHNOLOGY

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THE EFFECTS OF AN ANTI-CYBERBULLYING PROGRAM ON DECREASING
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DIGITAL TECHNOLOGY

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B.A., Psychology, Ohio Wesleyan University, 1984
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Patricia-Ann Schullery Corso

Western Connecticut State University

Abstract

This study examined the effect of an anti-bullying program, Cyberbullying: A Prevention Curriculum for Grades 6 – 12 (Limber, Kowalski & Agatston, 2008). A quasi-experimental post-test design was used to investigate (a) whether or not participation in the program was related to the frequency of aggressive on-line experiences for victims and/or offenders, or cyberbullying, and (b) whether the mode of program delivery (student-led versus teacher-led) had an effect on frequency of aggressive on-line experiences for victims and/or offenders, or cyberbullying. The student led experimental group, as well as the teacher led experimental group, received Cyberbullying: A Prevention Curriculum, while a control group completed team building activities not related to the topic of bullying. The sample population consisted of 154 students in middle school from a middle to upper middle class school district in the Northeast. At the conclusion of the study, all participants were administered the Cyberbullying and Online Aggression Survey Instrument (Hinduja & Patchin, 2007) to
measure their experiences with on-line aggressive victim and offender experiences. Data were analyzed using four chi-square tests of independence analyses. Results showed that, overall, participation in the program was associated with fewer than expected on-line victim and/or offender experiences when an anti-cyberbullying program was implemented. However, when expected and observed frequencies for student-led and teacher-led groups were compared, participation in the program led by a student leader was only associated with fewer than expected on-line victim and/or offender experiences on the offending subscale.
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APPROVAL PAGE

School of Professional Studies
Department of Education and Educational Psychology
Doctor of Education in Instructional Leadership

Doctor of Education Dissertation

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CHAPTER ONE: INTRODUCTION TO THE STUDY

There is increasing evidence that bullying is widespread and possibly the most underreported problem found in American schools today (Sampson, 2002). In fact, over the last decade, school violence has ignited global concern for the safety of school children. This concern has stimulated research about bullying and encouraged the development of anti-bullying programs (Salvatore, 2006).

Bullying occurs when a child, who is stronger, either physically or emotionally, uses his or her power to intimidate a weaker child. Whereas bullying was once believed to be harmless playground behavior, it is “now known to have long-lasting harmful effects, for both the victim and the bully” (Sampson, 2002, p.1). In general, boys who bully tend to use physical aggression while girls tease, spread rumors, and isolate others. Traditionally, bullying has taken place throughout the school day, and children could retreat to the safety of their homes once the school bell rang. With the growth of digital technology, the methods used by bullies have changed dramatically. The use of e-mail, mobile phone text messaging, mobile phone calls, mobile phone cameras, chat rooms, and websites by students to bully their peers has taken the concept of bullying to a new, heightened level (Cross, Hearn, & Erceg, 2007). Bullying can now occur outside of the school building, 24 hours a day, 7 days a week. According to the Child Health Promotion Research Unit (Cross, Hearn & Erceg, 2007), virtual technology has caused bullying to take on a new identity that has implications embedded in the areas of social, emotional, and mental health.

Traditional style bullying is currently being combated through the introduction of anti-bullying programs and police presence on school campuses throughout the United
States. Two widely used anti-bullying programs, developed respectively by Olweus (1985) and Rimm-Kaufmann (2001), use a wide variety of activities (e.g., reinforcement of school-wide rules against bullying, holding regular classroom meetings with students to increase knowledge and empathy, interventions with those who bully and those who are victimized) and involve the entire school community. Teachers or counselors within a school setting lead these programs. A number of empirical research studies have demonstrated the effectiveness of these programs (Olweus, 1985; Rimm-Kaufmann, 2001).

Information on the topic of cyberbullying and programs to address this form of bullying, however, are virtually non-existent (Gulek & Demirtas, 2005). In fact, a review of the literature revealed only two programs that specifically targeted cyberbulling: Cyber Safe Kids: Cyber Savvy Kids, developed by Nancy Willard (2007), and Cyberbullying: A Prevention Curriculum for Grades 6-12, developed by Limber, Kowalski and Agatston (2008). Neither of these programs has been investigated empirically. Therefore, research that considers the effectiveness of these new programs is important.

**Statement of the Problem**

Educators and parents realize “that many youths are misusing online technologies to bully others and that there is a need to increase awareness about the impact of cyberbullying” (Cross, Hearn & Erceg, 2007, p.12). They also point out that students do not understand the implications of their on-line bullying behaviors and how detrimental they can be to others and themselves in the short and long term. Despite the need to find ways to deal with the problem of cyberbullying, the topic of cyberbullying and programs to combat these behaviors remain absent from research literature (Campbell, 2005). The
The purpose of the present study was to address this problem by investigating the effect of Limber, Kowalski, and Agatston’s (2008) program, Cyberbullying: A Prevention Curriculum for Grades 6-12 on the reported experiences of cyberbullying.

In addition, this research was interested in the mode of program delivery. Peer mediation has long been an accepted strategy within the educational setting (Heron & Heward, 1997; Topping, Holmes, & Bremner, 2001). However, an adult has implemented all of the anti-bullying programs described above. This research study compared the effectiveness of the program when it was student-led versus when it was teacher-led. Duffy (2005), explored the concepts of within group similarity, group norms, group identification, and intra-group position and found that they have “important implications for the way in which bullying is conceptualized” (p. 346). Bullying involves group dynamics. Bystanders play a critical role in encouraging bullying and often do not intervene to help stop it (Salmivalli, Kaukiainen, & Voeten, 2005). In other words, mob psychology often supports the continuation of the bullying. Harnessing the power of peer groups in a positive way and having students teach anti-cyberbullying behaviors may lead to positive outcomes.

**Potential Benefits of the Research**

The results of this research may help educators and parents who want to adopt effective programs to combat cyberbullying. In addition to providing information about the effectiveness of a specific cyberbullying program, this research delved into an area that had not been studied before, namely, the effectiveness of peer-led programs to combat bullying. While peer mediation has been used throughout the academic areas to
better help students learn and understand material, no research using peer leaders had been conducted in the area of bullying.

Finally, results of this research may raise the awareness of teachers, parents, and students about cyberbullying and why it is harmful. It may equip students with the tools they need to protect themselves and others when using digital technology. Students may gain knowledge about how and where to seek help if they are being cyberbullied. Through greater awareness of cyber etiquette, the negativity of cyber experiences can be decreased for students who participated in the program.

**Definition of Key Terms**

1. *Bullying* is commonly described as involving repeated intentional aggressive acts and interactions between individuals with different levels of social power (Solberg, Olweus & Endreson, 2007; Willard, 2007).

2. *Cyberbullying* is defined as bullying through email, instant messaging, in a chat room, on a Web Site, or through digital messages or images sent to a cellular phone or personal digital assistant (PDA) (Kowalski et al., 2008).

3. *Cyberthreats* are the sending or posting of direct threats or distressing material that raises concerns that an individual may be contemplating a violent act (Willard, 2007).

4. *Experiences of Online Aggressive Behaviors* refers to the frequency of occurrences of an act of cyberbullying.

5. *Student Leader* is a trained student who is charged with leading a group of students in using the anti-cyberbullying curriculum.
6. **Teachert Leader** is a trained teacher who leads a group of students in learning and using the anti-cyberbullying curriculum.

7. **Digital Technology** is the use of electronic devices to e-mail, instant message, chat, blog, take photos, or make phone calls in order to make contact with others (Willard, 2007).

8. **Cyber Etiquette** is the use of appropriate and acceptable behavior while using digital technology (Willard, 2007).

9. **Bully** is an individual who harasses or demeans others, especially those who are different or deemed inferior (Willard, 2007).

10. **Victim** is the individual who is viewed as socially weaker and is on the receiving end of the act of bullying (Limber et al, 2008; Willard, 2007).

**Review of Related Literature**

**Bullying Behaviors**

Educators are reporting an increase in the number of cases of bullying by the students at the middle school and high school levels (Olweus, 2004). Bullying by boys has always been a part of the norm in schoolyards and on playgrounds, with boys using aggressive behaviors to overcome smaller or more timid boys. Over the last few years, the number of incidences of girls being bullies and being the target of bullying, beginning in the sixth grade and continuing through the eighth grade, has been on the increase (Leckie, 1998). Bullying by girls is very different than that of boys; it is more covert in nature (Leckie, 1998).

Olweus (1993) has conducted numerous studies in the area of bullying. He has measured a wide range of bullying behaviors by surveying students in grades three
through 12. Some areas that have been researched are: (a) students’ exposure to the
different types of bullying, (b) observed types of bullying or harassment toward other
students, (c) environmental aspects, and (d) attitudes about bullying. Olweus (1985)
completed a study in which an intervention campaign against bullying was implemented.
The campaign employed the Olweus prevention program. Olweus concluded from these
studies that the frequency of bullying behaviors decreases as students moved to higher-
grade levels. The amount of physical force used in bullying also decreases as students
begin high school.

Leckie (1998) is one of the few researchers to concentrate solely on the area of
bullying of girls by girls. Her study examined the link between the relationships among
girls and their bullying behavior. Results from the study confirmed that girls understood
the concept of bullying as the intent to deliberately and repeatedly harm someone who is
weaker in her power status. Bullying done by girls is not through physical aggression,
but rather psychological and, occasionally, verbal aggression.

**Cyberbullying Behaviors**

A recent study (Patchin & Hinduja, 2006) analyzed the perceptions of youths
regarding electronic bullying. The true extent of cyberbullying is difficult to gauge due
to the “privacy” of e-mails, one-to-one chat messages and cellular text messages. Direct
observation can only occur when comments are posted in a public forum. The results of
Patchin and Hinduja’s study reveal that on-line bullying does occur, and the authors
suggested that parents, teachers, police officers, and other community leaders stay abreast
of technological advances in order to combat the negative effects.
Programs to Combat Bullying

A number of programs exist that can be used within the schools to help teach children to learn how to cope with situations related to bullying. Olweus, considered the “father” of bullying research (Salvatore, 2006), designed one of the most popular anti-bullying programs. This program includes school-level interventions, classroom activities, individual interventions, and community activities to help children learn about bullying and how to combat it. This program has been developed and evaluated over the last 20 years, and builds on four principles derived from research in the area of behavior problems, specifically aggressive behaviors (Olweus, 2003). The principles were formulated around the belief that the home and school environment should: (a) be warm with positive interest and involvement from adults; (b) have firm limits on unacceptable behavior; (c) have consistent application of non-punitive, non-physical sanctions for unacceptable offenses; and (d) have positive role models and authority figures (Olweus, 2003).

Another program, the Responsive Classroom, emphasizes the social, emotional, and academic needs of children in a strong and safe school community (Rimm-Kaufmann, 2001). There are seven guiding principles, which encompass the beliefs that social and academic curriculums are equally important, and that children’s cognitive processes expand mostly through social interaction. Children who are taught social skills will be more successful both academically and socially. Knowledge of content area is important; however, knowledge of an individual student’s family, culture, and developmental level are equally important. A school community that works together results in students who are successful socially, emotionally, and academically.
Books have also been written on the subject of bullying to be used by the classroom teacher. *Bullyproof: A Teacher’s Guide on Teasing and Bullying for Use with Fourth and Fifth Grade Students* is one example. This guide teaches children the difference between teasing and bullying through the use of classroom role-plays and discussions, as well as incorporating art exercises. Other programs incorporate student ideas into the designs of the lessons (Department of Education, 1998). School districts are also collaborating with community medical and domestic violence institutions (SafePlace), and local universities to design and implement programs to help decrease the frequency of bullying incidences and to prevent violence amongst school children (Department of Education, 1998).

While anti-bullying programs seem to be abundant, programs dealing with cyberbullying are difficult to find. Nancy Willard (2007) conducted research in this area and has written a book *Cyber Safe Kids: Cyber Savvy Teens* that explains the topic, as well as provides parents and educators with helpful strategies for dealing with cyberbullying. The program begins with addressing various forms of cyberbullying and the technological aspects involved.

The program that was the focus for this research is Cyberbullying: A Prevention Curriculum for Grades 6 – 12 (Limber, Kowalski & Agatston, 2008). This new cyberbullying curriculum consists of eight sessions that are expected to help students understand cyberbullying and its consequences. Each session is intended to help students prevent cyberbullying. The curriculum consists of a weekly lesson plan, parent resources, student handouts, and training materials for facilitators. It aims to give students the tools necessary to combat cyberbullying. This unchartered territory requires
a great deal of examination in order to give our children the tools they need to grow, develop, and remain safe in this technological era.

**Peer Mediation**

Peer mediation has long been an accepted strategy within the educational setting. Peers have been used successfully in the areas of peer tutoring, conflict mediation, and positive reinforcement by researchers (Heron & Heward, 1997; Topping, Holmes & Bremner, 2001). Peer-led literature discussion groups have been shown to lead to a better understanding of information through student engagement in “problem-solving talk” (Maloch, 2002, p. 98). As cyberbullying becomes more prominent in today’s society, it is well worth educators’ time to explore implementing a peer led program. This stems from the belief that children can become advocates or mediators for “resolving conflicts” in a peaceful manner (Cassella, 2000). This belief is embedded in Albert Bandura’s Social Learning Theory (1977), which states that people learn from others by observing and modeling behaviors. This has an important implication for the topic of bullying in the schools today. Peers assisting in the interventions will allow a classroom teacher to spend more time teaching (Christensen, Young & Marchant, 2004). As these studies support academic peer-led programs, to date, none has been completed in the area of cyberbullying.

**Methodology**

**Research Questions and Hypotheses**

**Research Question One.** Is the proportion of expected versus observed incidences of aggressive on-line victim and/or offender experiences different for students who participate in an anti-cyberbullying curriculum and those who do not?
**Hypothesis One A.** The proportionate breakdown of reported incidents of aggressive on-line victim experiences will be smaller for students who participate in an anti-cyberbullying curriculum than for those who do not participate in the curriculum.

**Hypothesis One B.** The proportionate breakdown of reported incidents of aggressive on-line offender experiences will be smaller for students who participate in an anti-cyberbullying curriculum than for those who do not participate in the curriculum.

**Research Question Two.** Is the proportion of expected versus observed incidences of aggressive on-line victim and/or offender experiences different for students who participate in an anti-cyberbullying curriculum delivered by a student leader versus a teacher leader?

**Hypothesis Two A.** The proportionate breakdown of reported incidents of aggressive on-line victim experiences will be smaller for students who participate in an anti-cyberbullying curriculum delivered by a student leader compared to a teacher leader.

**Hypothesis Two B.** The proportionate breakdown of reported incidents of aggressive on-line offender experiences will be smaller for students who participate in an anti-cyberbullying curriculum delivered by a student leader compared to a teacher leader.

**Description of the Setting and the Subjects**

Participants in this study were 154 middle school students in grades 6 through 8 who attend a K-8 elementary school in a rural community (pop. 4,110) in the Northeast. The socio-economic status of residents is middle to upper class, with a median household income of $89,500 and a median home value of $456,400. The participants in the study were a sample of convenience selected to suit the purposes of the study. The school district consisted of a single elementary school of approximately 500 students. Consent
was received from parents and assent forms were completed by the student volunteers who participated in the study. Refer to Appendices A and B for copies of these forms.

Students in grades 6, 7, and 8 participated in this study. After, students in these grades had been divided into nine color team groups prior to the beginning of the school year by school personnel; each color team group consisted of approximately 14 students and included students from all three grades. Three color team groups were randomly assigned to the control condition, and three color team groups were randomly assigned to each of two treatment conditions (student-led and teacher-led). The treatment groups participated in the cyberbullying curriculum, and the control group participated in team building activities. The school counselor and middle school teachers chose three student leaders based upon strong leadership qualities, while the three teacher leaders were chosen on the basis of volunteerism. The three student leaders and three teacher leaders were trained in the implementation of the anti-cyberbullying curriculum by this researcher and had access to the eight curricular activities. Training occurred during mid-March for student and teacher leaders. Prior to implementation of each lesson, a brief review session occurred. Data collection occurred during late March, April, and May of 2009.

**Instrumentation**

Data were collected using the Cyberbullying and Online Aggression Survey Instrument (2007) developed by Sameer Hinduja, Ph.D from the Department of Criminology and Criminal Justice at Florida Atlantic University and Justin W. Patchin, Ph.D in the Department of Political Science at the University of Wisconsin – Eau Claire. The internal consistency for the 38-item Aggression Instrument, evaluated using
Cronbach's alpha coefficient, was 0.736 for the cyberbullying victimization subscale (section one). The internal consistency of the cyberbullying offending subscale (section two), also evaluated using Cronbach’s alpha coefficient, was 0.761.

The survey contains five sections. However, only data from sections one and two were analyzed to answer the research questions. Section one contains questions that ask how often the student has been victimized within the past 30 days. A 5-point Likert-type response format ranging from “a” (never) to “e” (everyday) is utilized. Section two employs the same 5-point scale to collect data about how often a student had offended others using digital technology within the last 30 days. Although this instrument utilizes a Likert-type response format, it does not provide total or scaled scores; therefore, the data it yielded were categorical and not interval data.

**Description of the Research Design**

The study utilized a quantitative posttest analysis. Three color team groups described above were randomly assigned to the control group and three color team groups were randomly assigned to each of the two experimental groups (student-led and teacher-led). During an eight-week period, students in the student-led and teacher-led experimental groups participated in the anti-cyberbullying curriculum that contained eight curricular activities (Limber, Kowalski, & Agatston, 2008). The student-led groups had adults present for supervisory purposes only. The adults did not participate as leaders in any activities. The students in the control group participated in activities that were teacher-led but unrelated to anti-bullying or anti-cyberbullying.

The cyberbullying curriculum consists of eight lessons. According to Limber, Kowalski, and Agatston (2008), the program concentrates on the attitudes and behaviors
expected to be associated with cyberbullying. The goal of the curriculum was to help
students understand what cyberbullying is and why it can be so harmful to others. It was
also designed to give student the tools necessary to use digital technology responsibly.
Students are also given information on who to trust and ask for help should cyberbullying
incidences occur. This curriculum was intended for use with the school setting.

**Description and Justification of the Analyses**

Responses to the Cyberbullying and Online Aggression Survey Instrument
yielded categorical data, thus the statistical test used to analyze the data was a chi-square
test of independence. For question one the chi-square test of independence examined the
variables of program implementation (treatment and no treatment) and frequency of
expected and observed cyberbullying experiences for each of the groups. For question
two the chi-square test of independence addressed the variables of group leader (student
leader or teacher leader) and frequency of expected and observed cyberbullying
experiences for each of the groups. Because there were two research questions, the alpha
level was set at ≤ .0125, i.e., 0.05, divided by the number of research questions, each
with two subscales (Hinkle, 2003, p. 547). EXCEL Spreadsheet (2007) was utilized to
compute the chi-square test of independence analyses as described in Hinkle (2003).

**Organization of the Study**

This study is organized in five chapters. Chapter one introduces the study.
Chapter two reviews the relevant literature and empirical studies that support the study.
Chapter three provides the methodology of the study including the design, subjects,
procedures, instrumentation, and data analysis. Chapter four presents the results of the
Lastly, chapter five presents conclusions, discussions of the results, recommendations, and suggestions for future research.
CHAPTER TWO: REVIEW OF THE LITERATURE

The purpose of this review of the literature is to provide an understanding of previous research related to the topic of bullying, cyberbullying and the roles peers may play in fueling and stopping incidences of each. The chapter begins with a discussion of Bandura’s Social Learning Theory. Second, research on bullying in the schools will be presented and the relationship between victims and offenders will be explored. The differences between male and female bullying behaviors also will be reviewed as well as current trends in bullying by both sexes. Third, recent research describing cyberbullying and documenting its increased use with the proliferation of digital technology in the schools will be reviewed. Fourth, current programs to combat bullying and cyberbullying will be reviewed. Finally, literature demonstrating the success of peer led or mediated programs will be reviewed.

Bandura’s Social Learning Theory

Bandura’s Social Learning Theory posits that children learn from the direct experience of interacting with others in social situations. In other words, for Bandura, “Examples speak louder than words“ (Berger, 1991, p. 49). The effects produced from a particular behavior will enhance that behavior if positive results were yielded, while the behavior will diminish if negative results were generated. Bandura (1977) also states “learning by reinforcement is commonly portrayed as a mechanistic process in which responses are shaped automatically and unconsciously by their immediate consequences” (p. 17). The relationship between actions and consequences is so strong that simple actions can easily be altered without awareness of the effect by the student. This is due, in part, to the fact that not all human thought is conscious. It is the response that a
student receives from others to his or her behavior that serves as a motivator to continue
the behavior. Through past experiences in social interactions, students have created
expectations of the benefit a certain behavior will yield. This motivates them to continue
the behavior. As the behavior continues, it is unconsciously reinforced. In order to
change their behaviors, students need to be aware that their behaviors exist and
understand the exact nature of the behavior that needs to be changed. They also must be
aware of the reactions of others toward the behavior.

According to Bandura, most human behavior occurs because learning has taken
place through the observation of the others. “Learning would be exceedingly laborious,
not to mention hazardous, if people had to rely solely on the effects of their own
actions…” (Bandura, 1977, p. 22). By modeling others, through observation, new ideas
can be formed which in turn can yield new behaviors. This type of learning decreases the
number of errors in behavior that a student may make. This idea has important
implications for the topic of bullying. As students make observations of bullying
behaviors, it is important they have a reference point for the correct behavior. Bullying
behaviors are often reinforced because students get caught up in the behaviors of those
around them that may be negative and hurtful (Bandura, 1977). Children, as well as
adults, are more likely to model the behavior of those they deem as admirable or
powerful (Berger, 1991). In the case of bullying, the offender (or bully) is, by definition,
more powerful physically, mentally, or socially (Olweus, 1985). If children can model
the behaviors from others that are positive, the incidences of bullying or cyberbullying
may be decreased. How children react and solve the issues of bullying or cyberbullying
stems from the belief that children learn best by modeling their peers. The growing
concern about the topic of interpersonal conflict necessitates finding a new way to combat bullying, more specifically cyberbullying. This stems from the belief that children can become advocates or mediators for “resolving conflicts” in a peaceful manner (Casella, 2000).

A number of programs using peer leaders and peer mediators have been developed to help students perform better academically (Maloch, 2002) and solve conflicts with peer in the social arena (Heron & Heward, 1997). These programs will be described later in this literature review. However one such program, the Peace Pal peer mediation program, designed to reduce violence in elementary schools, demonstrates the relationship between a peer led program and Bandura’s Social Learning Theory. In this program, the belief was that children would duplicate or replicate peer responses in social situations, assimilate these patterns, and later draw on these new cognitions for use in future social interactions (Schellenberg, Parks-Savage, & Rehfuss, 2007). The Peace Pal mediation training sought to apply this approach to the concept of peer mediation in the hopes children would learn to self-monitor their behavior during a conflict (Bandura, 1986). This theory was further applied to conflict resolution within the schools. Bandura (1986) emphasized that children were change agents of their own behavior. They were able to model adults and duplicate their responses to situations involving conflict. Students who observed conflict resolution or peer mediation experienced both an emotional and intellectual effect from the process that allowed them to move on with their social lives (Stomfay-Stitz, 1994).
**Bullying in the Schools**

**Definition and Incidences of Bullying**

Olweus (1991) states that bullying is defined as a repeated intentional aggressive acts and interactions between individuals with different levels of social power and is meant to be harmful to a less powerful individual who did not provoke the behavior in any way. Once believed to be innocent behaviors by boys on playgrounds the behavior now seems to be touching the lives of all students. In many cases, it has caused such negative effects for students that both victims and offenders have dropped out of school (Boivin, Hymel, & Hodges, 2001). With an estimate of 30% of children being bullied (National Resource Center for Safe Schools [NRCSS], 2001), it is difficult for educators and parents to deal with the numerous cases of bullying that arise within the school day or year. Therefore, it is imperative to address bullying on a more massive scale.

Harris and Petrie (2007) researched bullying behaviors of middle school students in two different schools in a southern city. The purpose of the research was to find out if bullying was taking place at this level. There were 198 students at the eighth grade level involved in the research. Both schools had populations of more than 1,000 students. The research was conducted in the eighth grade physical education classes in which the teacher gave a survey to the students at the end of the fall semester of the class. Of the 198 students, 131 were male and 67 were female. The survey was completed anonymously during class by each of the students. The ethnic background of the students (35% Hispanic, 35% White, 26% African American, and 4% other) involved in the study matched that of the population of the school.
The survey that was administered is available in both English and Spanish and was adapted for use in the United States from the Peer Relations Questionnaire (Rigby & Slee, 1995). Information was gathered about the issues of bullying that occurred at the middle school level. The researcher also sought information about how often bullying occurred and where it most often occurred. In addition, the survey questioned students about who they would tell when an incidence of bullying was observed or experienced. This is of particular interest, since many students believe teachers do not tend to intervene when an incidence of bullying is brought to their attention (Sampson, 2002).

The 30-item survey asked for one of three responses from the students. The possible responses were never, sometimes, and often for the majority of the questions while other questions required a numerical response. The survey was divided into five categories for analysis: (a) How often does bullying occur? (b) Where or when does bullying occur? (c) What types of bullying occur? (d) How do students feel after being bullied? and (e) Whom do students tell about bullying? The survey data were collected, coded and analyzed using version 10.0 of SPSS. The data collected were disaggregated for gender and ethnicity using a Pearson Chi-square test of independence at a significance of $p = 0.05$.

The researcher found that for each of the categories described above the findings were:

**Category One** – How often does bullying happen at your school? Of the 198 students surveyed, 59% of the students stated that bullying occurred “sometimes”, 33% noted bullying happened “often”, while 7% reported they had “never” noticed bullying taking place at their school. Of those students who noted bullying did occur, 63% stated
that they personally had “never” been bullied, while 20.5% reported being bullied “less than once a week,” and 15.5% said they had been bullied “at least once a week”. There is a disparity between the numbers of incidences seen and how many happened to individuals. This may due to the fact that students choose not to report incidences of bullying directed at oneself (Juvonen, Nishina, & Grahan, 2001).

**Category Two** – Where or when does bullying happen? Students responded to all choices that were pertinent to answering this question. The response of “sometimes” was given for each of the following: (a) at lunch (83.0%), (b) in the classroom (77.0%), (c) co-curricular activities (63.0%), (d) on the way home from school (62.0%), (d) at recess (61.0%), and (e) on the way to school (34.0%). When the responses for boys and girls were compared, girls reported more incidences of bullying at co-curricular activities than boys (70.2% to 61.0%). Boys reported more occurrences of bullying on the way to school (13.3% to 1.5%) than girls.

**Category Three** – What kinds of bullying do students experience? Middle school students reported numerous types of bullying behaviors taking place in the schools at least “some of the time”. The two most frequent types of behaviors reported were name calling (49.5%) and teasing (45.5%). Students also reported being left out of activities and groups (34.0%) as a type of behavior that was sometimes seen. The two types of behavior seen the least amount of times by students at the middle school level were being physically harmed (22.0%) and threatening (20.0%). When a comparison of boys and girls was done, girls reported being left out almost twice as much as boys.
(44.8% to 29.0%). Hispanic students also felt more left out of groups and activities than White or African American students.

Category Four – How do students feel they have been bullied? The responses for this section of the instrument varied from the other sections of the survey. Students had the following choices as possibilities: “miserable”, “angry”, “not bothered”, or “not bullied”. Of the 60% who stated they had been bullied, 11.0% reported feeling “miserable”, while 23.5% said they felt “angry”. There were significant differences between boys and girls in this category. Girls (22.4%) reported feeling “miserable” as compared to the boys 3.8%, while the boys (25.7%) reported being more “angry” than the girls (17.9%). Twenty one percent of these students reported they either had or wanted to stay home from school on more than one occasion.

Category Five – Whom do students tell about bullying? During the schooling years it is important for students to have someone, whether it be a teacher, a parent, or a peer, to tell that incidences of bullying have occurred (Harris & Petrie, 2007). This study found that 47.0% of middle school students did not tell anyone when bullying had taken place. Those students who did tell (34.0%) either told a friend or their mother. From the data gathered, only 2.5% of the students stated that they would ever tell their father or a teacher.

Harris and Petrie (2007) concluded that their findings show bullying is a problem at the middle school level. Over 50% of students feel bullying takes place some time during the school day. Most bullying behaviors seem to take place during the non-
structured portions of the day when teachers are not readily available to intervene. The
two types of bullying behaviors that were most prominent were teasing and name calling,
while being left out followed closely behind. Girls felt being left out occurred more often
than boys. Bullying made girls feel miserable while it made the middle school boys
angry. Harris and Petrie point out that because students do not feel comfortable reporting
incidences of bullying to adults, the behaviors seem to manifest for students and, in some
cases, school truancy does occur.

Olweus (1993) has conducted numerous studies in the area of bullying. He used
surveys in grade 3 through 12 to measure a wide range of bullying behavior, such as,
students’ exposure to the different types of bullying, observed types of bullying or
harassment toward other students, environmental aspects, and attitudes about bullying.
Olweus (1985) surveyed students in all primary and secondary high schools in Norway,
which supplied him with a good estimate of the frequency of bully and victim behaviors.
A parallel study by Olweus (1993), completed in Sweden with grades 3-9 yielded
comparable results to those found in Norway. Results were similar in both countries and
have been summarized by Salvatore (2006): (a) 60 – 70% of the total student population
are not involved in bullying, (b) 60% of girls reported being bullied by boys, (c) 80% of
boys reported being bullied by boys, (d) approximately 50% of those bullied reported that
this occurred from a small group with a negative leader, (e) 25% of victims reported a
single student was responsible for the bullying, (f) 15% of the total student population
reported involvement in bullying situations (either as bully or victim), (g) 9% of the
students were victims, (h) 7% were bullies, (i) 3% reported being bullied one or more times per week, (j) < 2% reported bullying others one or more times per week, (k) 1.6% reported being both bully and victim.

Results of the studies conducted by Olweus suggested that the percentage of bullying decreased as students moved to higher grade levels. In addition, the amount of physical force used in bullying also decreased as students began high school. These studies also yielded unanticipated findings that surprised the author, such as: (a) low self-esteem was not a character trait of bullies, (b) when bullies were compared to the general student, they were found to have more positive attitudes toward violence, (c) in contrast to victims of bullying, bullies are popular among their peer groups, (d) two character traits of students who bully are impulsivity and the need to dominate in social situations and (e) students who bully others do not tend to show tendencies of being anxious or insecure.

In summary, bullying is an aggressive behavior in which a less powerful individual is repeatedly harmed verbally, physically or emotionally by a peer deemed more powerful. Thirty percent of all school age children are being bullied. Bullying is taking place at all levels of schooling: elementary, middle, and high school. Bullying is on the increase at the elementary and middle schools, but researchers have seen a decrease at the high school level.
**Incidences of Bullying by Girls**

Leckie (1998) is one of the few researchers to concentrate strictly in the area of bullying of girls by girls. Her study investigated the link between the relationships the girls had formed with each other and their bullying behavior. A self-report survey was administered to 987 Australian girls in Catholic and Independent Schools. Seven schools were involved in the study: 5 were single sexed and 2 were co-educational. Results from the study confirmed that girls clearly understood the concept of bullying as a repeated intentional aggressive act and interaction between individuals with different levels of social power. Bullying with girls is not shown through physical aggression, but rather psychologically and occasionally verbally. Verbal bullying included comments critical of clothing and ones’ appearance (71%). Teasing (85.7%) and name-calling (77.8%) also took place. Girls also perceive spreading rumors (87.4%), writing notes (66.7%), gossiping (15.7%) and isolation (14.7%) as bullying. Although girls saw these areas as bullying, they didn’t feel they were harmful or necessarily occurred repeatedly. Research needs to continue in this area as the responses supported that there may be more to the concept of bullying for girls. Leckie (1998) suggested further questions that need to be answered: (a) what is the intent of bullying for girls if it is not to harm? and (b) what are the struggles for power that exist since bullying seems to take place between girls of similar status? Based on these questions, continued investigations are required.

In summary, bullying, once believed to take place among boys on the playground, has become common amongst girls. Unlike the physical bullying by boys, girl bullying
tends to be psychological and verbal. Girls clearly understand the concept of bullying, but do not believe these behaviors are harmful acts. More research needs to be done in order to understand the intent behind girl bullying behaviors.

**Motivators to Bully**

Jacobson (2007) examined the motivation behind bullying in the schools. Jacobson (2007) states that “to stop the bullying we must affect desire” (p. 1933). For years, researchers have sought to characterize the offender and the victim in these situations to eradicate the behaviors. However, understanding the characteristics has not yet led to the end of the bullying behaviors. This current study grew out of what is referred to as The Southside Incident. The Southside Incident is a story of four boys who attended Southside School, a public K-8 school, which relied heavily on parent involvement. The school had a reputation as one with compassion and caring, and the parents were well aware of the atmosphere.

The four boys involved in the Southside Incident had been friends throughout most of their schooling until the sixth grade. Initially, the bullying began as playground banter, but grew as three of the boys encouraged bystanders to join them in eliminating the fourth boy from the games and activities. As the group grew larger and all 30 students in the class were participating in eliminating the child from the games, the power in status of the original three also grew.

School administrators intervened quickly. Parents were contacted, and the boys were reprimanded. While the overt bullying stopped, the bullying behavior became more
covert in nature and continued until the victim found it necessary to transfer to a new school to gain a fresh start. The bullying subsided for this child but it continued at Southside School as the bullies found a new target the following year.

From this story came research intent on discovering the motivators behind bullying as well as understanding bullying in terms of educational transformation (Jacobson, 2007). Jacobsen examined three theories: Lakatos (1970), Benjamin (1988), and Foucault (1995) to better understand the interpersonal skills related to bullying and how these skills help victims respond to bullying. All three theories posit that change can occur through the mastery of certain interpersonal skills. Jacobsen concluded that the work of these three theorists provided a fresh perspective on the topic of bullying: the boys understood what they were doing by eliminating the boy from the game on some level, and what they were doing made sense to them. The question for Jacobsen, then, was “how can the thinking of the boys be changed”? Lakatos believes the answer lies in rational transformations. Benjamin, on the other hand, believes the answer can be found by understanding the process or idea of domination. Foucault finds the answer in how children model cultural situations or practices in discourse that they are exposed to.

After reviewing each of the theories, Jacobsen (2007) found that much more information above and beyond the simple fact that bullying is painful to the victim, who needs to be viewed as a person, must be taken into consideration. Jacobsen (2007) concluded that further information would help transform the processes that cause the child who bullies to bully. He suggested that current programs need to be revamped to
help children change. A better understanding of skills development and motivation underlying dominant behaviors would help end bullying encounters.

In summary, the Southside Incident is the story of four boys who attended school together and began as close friends. Eventually three of the four boys alienated and bullied the fourth boy. Although the bullying subsided when adults became involved, the victim transferred school in order to have a fresh, new start. According to Jacobson (2007) the incident brought three different theories of motivation for bullying to light and offered some understanding: (a) optional transformation, (b) understanding the process or idea of motivation and (c) how children model situations and practices in discourse.

Double Position

Solberg, Olweus, and Endresen (2007) explored whether offenders and victims are the same students in the educational setting or whether there are clear-cut offenders and victims in the schools. This study emerged from a 2001 study conducted by Olweus in which he identified two types of victims: “passive [victims] and provocative [aggressive] victims” (p. 8). Most previous research had concentrated on two distinct categories of students involved in bullying situations: the bully (offender) and the victim, but Olweus began to wonder whether one student could be both a victim and an offender; he referred to this as the double position. Although this topic is beginning to emerge, knowledge of this category of student still remains limited (Solberg, Olweus, & Endersen, 2007).
Solberg, Olweus, and Endersen (2007) investigated the prevalence of the ‘double position’ in which a student is both a bully and a victim. For the purposes of this research, a student holding the double position was referred to as a bully-victim (Solberg, Olweus & Endersen, 2007). This research aimed to establish any degree of overlap that may occur between bully-victim and the other main categories of bully and victim (Solberg, Olweus & Endersen, 2007).

Two studies (Olweus, 2001) were combined to yield the findings of this research. The participants in the first study consisted of 5,171 Norwegian students in grades 5 through 9, with ages ranging from 11 years to 15 years. The configurations of the schools were 26 elementary schools, 9 lower secondary schools and 2 schools that contained both primary and secondary levels. The participants were 2,544 females and 2,627 males.

The second study consisted of 12,983 participants in grades 4 through 10, with ages ranging from 10 years to 16 years. Sixty-six schools were involved in the research; 40 primary schools, 9 lower secondary and 17 schools with both primary and secondary levels. The number of females participating in the study was 6,371 and the number of males was 6,612. The student population for both studies was representative of the country as a whole (Olweus, 2005).

Both studies used the Olweus Bully/Victim Questionnaire (Olweus, 1996). In the first study the questionnaire was administered by personnel trained in the use of the instrument, while in the second study, the classroom teachers or other school employees
who administered the questionnaire were not trained in the use of the instrument. Students in study one also had a break during the two-hour testing session while students in study two did not. Students were given explicit directions on how to fill out the questionnaire, as well as a detailed definition of what the term bullying meant.

The definition of bullying given to the students for the purpose of filling out the questionnaire was taken from the earlier work of Olweus (1985). A student is being bullied when another student or group of students do any of the following: (a) say mean or hurtful things or make fun of him or her; (b) exclude him or her from the group; (c) physically hurt or threaten him or her; (d) spread lies or rumors to make others dislike him or her, or (e) any other communication that can be deemed hurtful. Any or all of these must take place repeatedly over a period of time and have malicious intent to be considered bullying. Teasing or joking is not bullying as long as those involved believe the intent is not harmful. The victim in each of these scenarios would find it difficult to defend themselves against those doing the bullying.

Both sets of questions refer to the frequency a student had either been bullied or bullied in the school setting. The global questions for study one for students as victims was “How often have you been bullied at school this term?” and for the students as offenders was “How often have you taken part in bullying another pupil(s) at school this term?” The global questions for study two varied slightly from those in study one. Students in study two were asked “How often have you been bullied at school in the past couple of months?” and “How often have you taken part in bullying another pupil(s) in
the past couple of months?" Responses to these questions allowed the authors to
categorize participants as: bullies, victims, the dual role of bully-victim or not involved.

Students in both studies were given the same fixed response categories and they were
coded from 0-4 or 1-5. Possible choices were ‘I haven’t been bullied/bullied other pupils
at school’, ‘only once or twice’, ‘2 or 3 times a month’, ‘about once a week’, or ‘several
times a week’. In distinguishing between bully, victim or bully-victim, a student needed
to respond that they had been bullied and had bullied another student with the third
response, ‘2 or 3 times a month’, in order to fall into the dual category of bully-victim. If
a student had been bullied ‘2 or 3 times a month but responded not involved on questions
regarding bullying, the student was classified as a victim. To be categorized as a bully,
the opposite criteria must be met.

Solberg, Olweus, and Endersen (2007) concluded that incidences of bullies and
victims being the same individuals is very low at 1.9% combined prevalence, for both
study one and study two. However, within these results, gender differences did exist.
The percentage of male bully-victims (2.6%) was double that of female bully-victims
(1.1%) when studies were combined. When stricter criterion was used, the percentages
of bully-victim prevalence fell to 0.4% for study one and 0.7% for study two. Of the total
percentage of bullies, victims, bully-victim and those not involved, the highest percentage
group was that of the students not involved in bullying at all at 84.0%.

This study (Solberg, Olweus & Endersen, 2007) also aimed to establish the
percentage of overlap for victims and bullies as bully-victims. For victims, when
combined with bully-victim, the percentage of females classified as victims was 10% and males was 21.7%, twice as high. The total percentage for bullies when combined with bully-victim was 30.0% with only a slight difference between females (31.1%) and males (29.8%). These numbers showed that the percentage of pupils who reported being bullied and bullying at some point in time was very low in most cases. Further analyses showed that the most overlap occurred in grade five for males and grade nine for females and diminished for both groups over time.

Solberg, Olweus, and Endersen (2007) concluded that bullies and victims are very rarely the same students. The results also show that the overlap percentage between the categories of bully and victim occur rarely, although the results were slightly higher in the primary grades as compared to the secondary grades. More research needs to be done in this area to further explore the larger degree of overlap of bullies and victims at the primary grades.

In summary, most research regarding bullying relates to two distinct classifications – the bully and the victim. Research by Solberg, Olweus, and Endersen, (2007) delves into a third classification where the bully and the victim are one in the same. This new category has been referred to as the bully-victim. The research showed that less than two percent of the population falls into this category. However, there is a higher percentage of bully-victim in the male population than in the female population. More research must be done to explore the prevalence of this third classification.
Female Bullying Acts and Intervention

The Public Health Agency of Canada (2005) published an official report in regard to the increase of bullying and other violent acts involving males and females over the last 20 years. For males, bullying and violent crimes increased by 50% and for females the rate nearly tripled. The increase in this type of crime can possibly be attributed to the stricter rules and laws in regard to bullying in the schools. Many school districts across the United States have adopted a no tolerance attitude in regard to incidences that were once accepted as typical playground behavior or unfortunate mishaps (Public Health Agency of Canada, 2005). As previously stated, bullying occurs as part of power play in which a student wants to dominate or control others. Females bully for very different reasons and in very different ways than males. Girls tend to use less direct and overt aggressive behaviors and may even employ boys to do the physical more violent bullying behaviors for them (Artz, 1998). Due to this covert behavior by girls, ways to intervene and prevent these types of behaviors in girls are often overlooked (Public Health Agency of Canada (2005). Girls who are aggressive often model the behaviors set forth by boys of the same age. Male domination and control is seen as normal by many girls who in turn use these same behaviors over girls viewed as weaker or in competition for male attention (Public Health Agency of Canada, 2005). Bandura (1977) claims most human behavior occurs because learning has taken place through the observation of the others. To prevent these behaviors in the female population it is important afford them with prevention initiatives that take aim at each of the following areas: (a) counter low self-
esteem as girls reach adolescence, (b) focus on early intervention, (c) provide positive experiences, (d) provide social skills groups, and (e) help girls form lasting relationships based on acceptance (Public Health Agency of Canada, 2005). Just as girls who are at risk model the behaviors of dominant and aggressive males, they can also model the behaviors of female caretakers that have shown a positive interest in them. When an empathic sharing of emotions, experiences, and clear expectations of acceptable behaviors are modeled, girls who were aggressive and violent can learn sensitivity and responsibility (Surrey, 1991). With the lack of empirical research in the area of girls as bullies, there is a need for deeper exploration in order to better understand why girls bully others.

In summary, bullying by girls is less direct and more covert than that of boys. Because of this, intervention can be difficult. Many girls see dominance and control as normal male characteristics and see no harm in these actions. In order to prevent the adoption of these male characteristics in girls, preventive initiatives aiming at self-esteem, providing more positive experiences, group social skills and forming lasting relationships through acceptance need to be in place. Further research on why girls bully and how to prevent the learning of this behavior must be explored to decrease acts of bullying and other violent crimes.

**Cyberbullying Behaviors**

Wang, Iannotti, and Nansei (2007) state that cyberbullying – bullying with the use of electronics, such as computers and cell phones – has become a phenomenon that is on
the increase amongst tweens and teens (grades 6 – 10). Although traditional bullying still remains in the forefront, due to the influx of technology in the schools and homes, 13.6% of tweens and teens (Wang, Iannotti & Nansei, 2007) report either bullying or being victimized by a computer, cell phone, or other electronic device. Research in this area is limited due to how rapidly the technological world has advanced. Pioneers in research in this area (Agatston, Kowalski, & Limber, 2007; Patchin & Hinduja, 2006; Willard, 2007) have worked to gain a better understanding of the impact cyberbullying has for students. Willard (2007) states “cyberbullying and cyber threats are new concerns that have not been fully researched by the academic community” (p. 2). This is a challenging topic to discuss as new information is constantly emerging and teenagers are becoming more tech savvy with digital equipment.

Patchin and Hinduja (2006) analyzed the perceptions of youths regarding electronic bullying. The authors state the true extent of cyberbullying is difficult to gauge due to the privacy of e-mails, one-to-one chat messages, and cellular text messages. Direct observation can only occur when comments are posted in a public forum. Through the use of an internet-based survey, a total of 571 individuals participated, with 384 younger than age 18. The majority of respondents were female and Caucasian. The findings showed that 11% of youths reported bullying others while on-line, 29% reported being a victim of cyberbullying and more than 47% have witnessed on-line bullying (Patchin & Hinduja, 2006). The results support that on-line bullying
does occur and it is suggested that parents, teachers, police officers, and other community leaders stay abreast of technological advances to combat the negative effects.

Kowalski and Limber (2007) point out that today’s youth have been afforded a new means of bullying through electronic technologies used for communication. According to these authors this topic is being discussed extensively in the news and on news shows, and educators are looking for information to help gain a better understanding of cyberbullying. They add that one of the largest issues stemming from the topic of on-line or cyberbullying is the anonymity behind it. They point out that there are few studies assessing the nature and extent of cyberbullying amongst students. Most studies that exist look at the degree of computer and Internet use by students at the middle and high school level. The 2007 research by Kowalski and Limber aimed to examine the actual task of online bullying or cyberbullying by middle school students.

The participants in this study were 1,915 female and 1,852 male school children (grade 6, 7, and 8) from six elementary and middle schools in the southeastern and northwestern United States. The schools and students were chosen because they were going to implement an anti-bullying program to gain information regarding the degree to which bullying occurred in the schools. Of the six schools involved in the study, four were urban schools, one was located in a large central city and one was representative of a rural town. One urban school housed students in grades pre-K through six while two others were middle schools with students in grade six through eight and the final had middle school children in grades seven and eight, only. The large central city school
housed students in grades 5 through 8 school and the small rural school contained students in grades K – 9. The schools ranged in numbers from 125 (small rural) to just over 1500 for one of the urban schools. The ethnicity for the majority of the students at each school was White with much smaller numbers of Black, Hispanic, Asian, and American Indian. Each student had the opportunity to decline participation in the study; otherwise blanket passive consent was obtained for each school.

Each student completed the Olweus Bully/Victim Questionnaire (39 questions) and an Electronic Bullying Questionnaire (23 questions). The Olweus Questionnaire is a valid and reliable self-report survey. The Electronic Bullying Questionnaire was also a self-report survey modeled after the Olweus Questionnaire and developed specifically for this research, however, reliability and validity for the instrument has not been gathered. Key questions from the questionnaire regarding cyberbullying were: (a) How often have you been bullied electronically in the past couple of months? and (b) How often have you electronically bullied someone in the past couple of months?

For the purposes of this research, electronic bullying was defined as “bullying through email, instant messaging, in a chat room, on a website, or through text message sent to a cell phone” (Kowalski & Limber, 2007, p. 8). All questions were answered using a 5-point Likert-type response format, which was used in the Olweus Bully/Victim Questionnaire, with the exception of one yes/no question. The responses ranged from cyberbullying hadn’t occurred to it had happened several times per week. The yes/no
question asked students if they had been bullied through any of the domains described in the above definition.

After completing the surveys, students were divided into four groups depending on how they had answered the questions. The four categories were students who: had no incidences of bullying on line, were victims only, were bullies only, or had the ‘double position’ of bully/victim. The data yielded the following results: 78% of students had no experiences with on-line bullying, 11% were categorized as victims only, 7% held the dual position as bully/victim, and 4% were bullies only. There were significant gender and grade differences noted through the use of a chi-square test of independence analysis. Girls’ percentages for victims only (15%) and bully/victim (10%) were higher than that of boys (7% and 4%, respectively). Boys and girls who bully only were about even at 4% for girls and 5% for boys. Grade level differences were much greater when students in grade six were compared to their peers in grades 7 and 8. Of the grade 6 students, 85.6% reported never having been involved in on-line bullying, while 76.3% of seventh grade students and 74.1% of eighth grade students reported no involvement in on-line bullying. When a comparison of the methods used for bullying is made both victims and bullies report that most bullying took place through the use to instant messaging followed by chat room experiences. Both groups reported bullying on websites and through the use of text messaging as more rare occurrences.

The data suggest that cyberbullying is an issue that needs to be addressed at the middle school level. Since the data only assessed a student’s experience with
cyberbullying over the two months prior, the true statistics are probably underestimated (Kowalski & Limber, 2007). Also, as with any self-report survey, students are often afraid to tell exact numbers for fear that someone will think badly of them, a factor that could also lead to an underestimation of the statistics for the amount of on-line bullying or victimization. The authors point out that while the numbers reported seem high, for the amount of time adolescents are found using electronics, the numbers should not be all that surprising.

Agatston, Kowalski and Limber (2007) aimed to extend the work of Kowalski and Limber (2007) to gain an understanding of cyberbullying and its impact on students at the middle school and high school level. It was also seeking information on the need for prevention programs for educators, parents and students. The participants in the focus groups for this research were 148 students from two middle schools and two high schools. Students ranged in age from 12 – 17 years. The four schools were chosen based on reports showing diverse socioeconomic data. During focus groups, students were divided by gender and were given pertinent information regarding the definition of cyberbullying. For the purposes of this research, cyberbullying is “using the Internet or other digital technologies such as cellular phones and personal digital assistants to be intentionally mean or to harass others” (Kowalski & Limber, 2007, p. 5).

Results showed that students are very familiar with and are using technology on a consistent basis. The majority of teenagers owned or had access to a cell phone, including text messaging, as well as access to the Internet. When males and females
were compared in regard to cyberbullying being a problem, males did not think it was a problem where as the majority of girls felt it was a serious problem. Both males and females agreed that the cyberbullying usually took place outside the academic school day, however, incidences of text messaging did occur during school hours. These incidences were very rarely reported to school administrators due to the policies and rules in effect regarding cellular phone use during the school day. Students were also less likely to report incidences of cyberbullying to parents, although some did, out of fear of the loss of Internet and cellular phone privileges.

Agatston, Kowalski, and Limber (2007) conducted focus groups that allowed students to offer their thoughts regarding ways of dealing with and stopping cyberbullying. One suggestion was to simply block the student who is cyberbullying. Another was to ignore the cyberbullying, not giving the cyberbully the reaction he or she was looking for. Finally, changing the privacy settings of the account would also change those students one would have contact with. However, students were not able to offer strategies on how to help students being cyber bullied when they found themselves in the role of bystander.

Agatston, Kowalski, and Limber (2007) recommended that as technological advances continue to be made, educators must prepare themselves to deal with digital electronics that have many more capabilities than those currently on the market. These highly advanced electronics will allow for more cyberbullying during the school day. Administrators must implement better policies and offer programs to help students learn
the etiquette necessary when using the devices. Not only are policies necessary for the acceptable use of technology but also there need to be ramifications for not following the policies and these must be strictly enforced. Current bullying programs mandated by states and districts must also be expanded to include cyberbullying.

Agatston, Kowalski, and Limber (2007) point out that many school districts also have policies about the use of social networking sites, such as MySpace and Facebook, during the academic day. However, today’s students are so technologically sophisticated that they have learned ways to circumvent the filtering systems that have been put in place. As most students are in class during these periods of time, most students stated that there wasn’t any real motivation to log in to the sites. This is more of an issue at the high school level rather than the middle school level as high school students have blocks of time when they are not in academic classes.

Cyberbullying is different than traditional bullying due to the anonymity of the action, but there is also a lack of a personal aspect. Kowalski and Limber (2007) point out that adolescents no longer have to face their victims and likewise a student who was once victimized can now face their bully without fear, possibly even seeking revenge for previous offenses. According to these authors, another aspect of the impersonal is that some students may not feel they are actually harming someone since they cannot observe the hurt they have caused. They, therefore, protect themselves from the knowledge that they have done something that is viewed as wrong. As with traditional bullying, males tend to be overt and physical in their bullying ways (Leckie, 1998). Therefore,
cyberbullying trends seem to show more incidences of cyberbullying by girls because it is more covert and indirect. These findings have implications for all stakeholders in the educational arena. They call for more awareness by parents and administrators in educating children to prevent incidences of cyberbullying and address cyberbullying that has occurred (Kowalski & Limber, 2007).

In summary, Kowalski and Limber (2007) state that middle and high school students are using electronics daily in and out of the school building without much concern for the consequences of their behaviors. With this influx of technological advances, students are taking bullying into a new realm. Cyberbullying – bullying using electronics – is on the rise. Data suggest this new concern needs to be fully explored at the middle school level and strategies for dealing with and combating cyberbullying must be implemented for students who have access to these electronics.

Programs on Bullying

According to the National Resource Center for Safe Schools (2001), to combat cyberbullying, states must mandate anti-bullying programs to help stay one step ahead of the problem. Before implementing a program of any type, the National Resource Center for Safe Schools (2001) suggested the following steps toward this means: (a) begin with a school needs assessment, (b) develop anti-bullying policy, (c) provide training for all school staff, (d) include parents, (e) identify and gather resources, (f) increase supervision in unstructured zones and times, and (g) integrate anti-bullying activities into the core curriculum.
A number of programs exist that can be used within the schools to help teach children learn how to cope with situations related to bullying. Olweus, considered the “father” of bullying research designed the most popular anti-bullying program (Salvatore, 2006). This program includes school-level interventions, classroom activities, individual interventions and community activities to help children learn about bullying and how to combat it. This program has been developed and evaluated over the last 20 years and builds on four principles derived from research in the area of behavior problems, specifically aggressive behaviors (Olweus, 2003). The principles were formulated around the belief that the home and school environment should: (a) be warm with positive interest and involvement from adults; (b) have firm limits on unacceptable behavior; (c) have consistent application of non-punitive, non-physical sanctions for unacceptable offenses; and (d) have positive role models and authority figures (Olweus, 2003). A prerequisite to the program prior to implementation is adult awareness and involvement. This will allow the program to be properly carried out with movement toward restructuring the current social environment. Furthermore, this program has been shown to be effective due to its incorporation of a reward structure. The most comprehensive study completed, supporting the use of this program, was done between 1983 and 1985. The quasi-experimental research yielded results showing a 50% decrease in the frequency of bullying incidences. This has been further supported by research studies spanning more than 20 years in the United States, Norway, and Germany.
The Responsive Classroom program emphasizes the social, emotional, and academic needs of children in a strong and safe school community (Rimm-Kaufmann, 2001). There are seven guiding principles of the program: (a) the social curriculum is as important as the academic curriculum, (b) how children learn is as important as what they learn: process and content go hand in hand, (c) the greatest cognitive growth occurs through social interaction, (d) to be successful academically and socially, children need a set of social skills: cooperation, assertion, responsibility, empathy, and self-control, (e) knowing the children we teach—individually, culturally, and developmentally—is as important as knowing the content we teach, (f) knowing the families of the children we teach and working with them as partners is essential to children's education, and (g) how the adults at school work together is as important as their individual competence. Lasting change begins with the adult community (Northeast Foundation for Children, 1981).

Elliott (1995) conducted a three-year longitudinal study implementing the Responsive Classroom approach with 212 elementary school (pre-K – six) children in 26 schools. The ratio of males to females was 47.2% to 52.8%. The sample was further characterized by ethnicity: 41.2% Caucasian, 43.1% African American, 10.4% Hispanic, and 3.8% other groups. Three non-responsive classrooms were compared with three responsive classrooms. The results supported the effectiveness of the program over the course of a school year. Students exposed to the program had higher levels of social skills and fewer behavior problems than those with limited or no exposure to the program (Elliott, 1995). The findings were consistent across all racially diverse samples.
In 2000, the Don’t Laugh at Me Program was established to address the problem of bullying and teasing in the schools. Three different versions of the curriculum were developed with different target groups in mind. There are curriculums for grades 2-5, 6-8 and summer camp use. The goal of this program was to support educators in transforming the schools into caring and compassionate environments (Operation Respect, 2000). Since children learn through modeling (Bandura, 1977) and doing, the program was designed to allow students to experience their education in a caring community. The Don’t Laugh at Me program goes beyond teaching children that bullying and teasing are not acceptable and can be harmful. The program uses activities and strategies that allow children to express their feelings freely and learn to care about other students within the classroom. It also teaches the children to formulate creative solutions to conflict and to appreciate the differences that exist amongst children. “Don’t Laugh at Me addresses issues of the heart, as well as the mind” (Operation Respect, 2000, p. 9).

Books have also been written on the subject of bullying to be used by teachers. For example, *Bullyproof: A Teacher’s Guide on Teasing and Bullying for Use with Fourth and Fifth Grade Students*. This guide by Sjostrom and Stein (1996) contains 11 sequential lessons designed to help students understand the difference between teasing and bullying and gain awareness about the topics through class discussions, role-playing and academic and art activities (Department of Education, 1998). Other programs use innovative approaches, such as, having the students discuss and design lessons. Many
school districts across the United States are also collaborating with medical institutions, domestic violence institutions (SafePlace), and local universities to design and implement programs to help alleviate bullying incidences and prevent violence.

A manual distributed by the U. S. Department of Education (1998) for the prevention of bullying clearly outlines the types of bullying that exist within society: physical, verbal, emotional, and sexual. A comprehensive approach is suggested which includes interventions at the school level, the classroom level, the individual level as well as at the community level. School level interventions include a student survey to determine the degree of bullying and a committee of teachers whose purpose is to plan and monitor school activities. Teacher in-service is also suggested to review data and prepare the activities. Suggested classroom level interventions are regular meetings with students to discuss bullying, as well as time to work on anti-bullying activities and role-plays. At the individual level, parent involvement is key as well as a quick response to incidences of bullying. The formation of groups in which acceptable behavior is modeled, is also suggested, in addition to friendship groups for victims. Efforts should be made to involve the community in programs offered at the school level in order to have continuity outside the school building and day. Also included in the manual are strategies for teachers, students and parents. Some suggested strategies for teachers are to give students the opportunity to talk about and understand bullying, to involved students in setting classroom rules regarding bullying, and develop classroom policies that teach cooperative learning. Suggestions for students include seeking help from
adults either in the school building or at home, report incidences immediately, expressing disapproval of bullying behaviors and show support for students who are victimized. Parents should call the school if their child is involved in a bullying situation, either as bully or victim. They should also offer support to the child, but be careful in making contact with the offender. Parents should be patient and be careful not to encourage the child to be aggressive. Until children learn new and different ways to communicate and deal with bullying situations in school, it is important to draw from resources within the community, especially trusted adults.

While anti-bullying programs seem to be abundant, programs dealing with cyberbullying are difficult to find. Nancy Willard (2007) has conducted some research in this area and has written a book *Cyber Safe Kids: Cyber Savvy Teens* that explains the topic, as well as providing parents and educators’ helpful strategies for dealing with cyberbullying. The program begins with addressing forms of cyberbullying and the technological aspect involved, including the forms cyberbullying takes in the parameters of ‘cyber space’. Various Internet and online activities that are often implicated as the culprits of cyberbullying are further discussed and related to the concept of bullying in general. The links between traditional bullying and cyberbullying are made with an in-depth discussion of violent acts that occur as a result of both. Students often put themselves at risk when using the Internet. This book delves into the aspect of privacy and confidentiality when using digital technology. Students have allowed personal information to appear on websites and social networks that not only give information to
offenders, but have given information to other predators, as well. Legal considerations and ramifications for administrators and schools are put forward with suggestions on how to respond. Many times, due to laws in place, outside authorities are brought in to rectify the situation. The program that will be the focus for the research is Cyberbullying: A Prevention Curriculum for Grades 6 – 12 (Limber, Kowalski & Agatston, 2008). This new cyberbullying curriculum consists of eight sessions that are expected to help students understand cyberbullying and its consequences. Each session is set up to help students prevent cyberbullying. The curriculum consists of a weekly lesson plan, parent resources, student handouts and training materials for facilitators. It also is expected to give students the tools necessary to combat cyberbullying.

In summary, cyberbullying is unchartered territory that requires a great deal of examination in order to give our children tools they need to grow, develop, and remain safe in this technological era. Anti-bullying programs must be state mandated to keep the problem of bullying at bay. According to the National Resource Center for Safe Schools (2001) policies must be developed and school districts need to provide training for teachers prior to implementing any program. Programs with interventions that include the entire school community, as well as the individual, seem to yield the best results. However, there is little empirical data regarding programs. Cyberbullying programs were virtually non-existent prior to 2007. More research is needed regarding this topic as it is brought to the forefront.
Peer Mediation

Peer mediation has long been an accepted strategy within the educational setting. Peers have been used successfully in the areas of tutoring, conflict mediation and positive reinforcement by many researchers (Heron & Heward, 1997; Topping, Holmes & Bremner, 2001); however, studies on their effectiveness are few (Schellenberg, Parks-Savage, & Rehfuss, 2007). As cyberbullying becomes more prominent, it is well worth educators’ time to explore implementing a peer-led program. The importance of this topic stems from the belief that children can become advocates or mediators for resolving conflicts in a peaceful manner (Casella, 2000). The growing concern about the topic of interpersonal conflict necessitates finding a new way to combat bullying, more specifically cyberbullying. Peer-led literature discussion groups have been shown to lead to a better understanding of information through student engagement in problem-solving (Maloch, 2002). While these studies support peer-led groups in the academic arena, there has been successful research utilizing the power of peer groups, but not specifically peer-led anti-bullying groups. Bystanders seem to play a critical role in encouraging bullying, but few students (bystanders) intervene to stop bullying behaviors by withdrawing from the situation or pretending not to notice what is occurring (Salmivalli, Kaukiainen, & Voeten, 2005). As these studies support academic peer-led programs, to date, none has been completed in the area of cyberbullying. As cyberbullying becomes more prominent, educators should consider implementing peer led programs.
Implementation of Peace Pal, a program used to help curb violence at the elementary level, was based on the belief that children learn from the behaviors others, whether positive or negative (Bandura, 1977). There were five main questions developed from goals of the program. The evaluation question of most interest from this study was whether or not students could resolve conflict by participating in peer mediation sessions. The participants in this study were 825 elementary students from the mid-Atlantic region of the United States. Fifteen students were chosen to complete the peer mediation training. They ranged in age from 8 through 11 years old and were in grades 3, 4, and 5. They were selected for the Peace Pal program on recommendations from peers and teachers. Students were chosen based on leadership qualities, positive attitude and character, as well as academic achievement. Ethnicity information was gathered from school records and revealed the following: African American (62%), Caucasian (33%) and other (5%). The peer mediation program was available to all students in the school. Prior to the study, 13 students had been trained in Peace Pal mediation and did not participate in the knowledge assessment portion of the study. Fifteen new students were trained as mediators for the purposes of this study. Each student (N = 825), including those chosen as a peer mediator, was given a pre and post-test assessment to gather data on knowledge development in three areas: conflict, conflict resolution, and peer mediation.

The findings, ascertained through qualitative means including triangulation for more accurate results, showed that 100% of the conflicts that resulted in peer mediation
were resolved to the satisfaction of both students involved in the conflict. At the end of
the school year, there had been 34 sessions conducted by peer mediators. The most
significant finding from this study was that just the presence of the Peace Pal Mediation
Program seemed to make a difference in the number of incidences of violence. Over a
five-year period, after the implementation of the program, there was a consistent drop in
both physical and verbal abuse. The findings of this study are limited based the
population of one small school and the lack of use of statistical analyses. Both of these
criteria make it difficult to generalize to the larger population.

According the Harper and Maheady (2007) an effective educational strategy for
children with disabilities is peer mediation. While students with disabilities need a high
quality education, they do not need one that varies greatly from the education shown to
be effective for other students (Harper & Maheady, 2007). Calhoon’s (2005) study
investigated the effects of peer mediation in teaching phonological skills and reading
comprehension to middle school students with reading disabilities. This was a two-part
study comparing the combined effects of the Linguistics Skills Program and the Peer
Assisted Learning Strategies Program (LST/PALS) to the traditional reading program.
The author was looking for gains in word recognition, reading comprehension, and
fluency in a whole class setting as well as within a special education classroom.

Teacher participants were four teachers from two southwestern middle schools.
The teachers, who volunteered to participate in the research study, all taught language
arts in self-contained special education classes. The classrooms consisted of students
with chronic reading disabilities. Random assignment of the teachers occurred to either of the two treatment groups (LST/PALS) or to the two control group. All teachers were women: three European Americans and one Hispanic. The mean age was 42.25 with an average of three years teaching experience. All teachers were currently holding emergency special education licenses. Three teachers held bachelor’s degree and the third had a bachelor’s plus 30 credit hours.

The student participants were chosen collectively from sixth (32 classes), seventh (5 classes), and eighth (one class) grade students in self-contained special education classes. All students met local, state, and federal eligibility requirements for learning disabilities in reading, had Individualized Education Plan (IEP) reading goals, and were receiving reading instruction. Moreover, all students were reading at least three grade levels below the current placement as determined by the Woodcock Johnson Test of Achievement. A chi-square test of independence analysis showed no significant difference between gender, race, grade level or IQ for the treatment groups. IQ was not readily available for one seventh grade student and one eighth grade student. However, significance was found for age.

The Woodcock Johnson III, a widely-used, norm referenced test with good internal consistency ($r \geq .80$ for all subtests), was administered to all students as a pre-test and post-test (Calhoon, 2005). The subtests administered were (a) letter word identification, (b) word attack, (c) reading fluency, and (d) passage comprehension. The
test was administered two weeks prior to the implementation of the treatment and at the culmination of the 31-week intervention.

The LST/PALS program had the following features (a) mediated verbal rehearsal, (b) positive feedback for correct responses and corrective feedback for incorrect responses, (c) verbal and written interaction between tutor/tutee, and (d) reciprocity in roles of tutor/tutee (Calhoon, 2005). The LST is a peer-mediated phonological skills program. The PALS program had three components: partner reading, paragraph shrinking and prediction relay. The traditional reading program was the Saxon Phonics Intervention combined with the SRA Skill Acquisition Program. This remedial reading program taught decoding skills, spelling, vocabulary, reading fluency and comprehension.

According to Calhoon (2005) teachers were trained at a one-day workshop for the LST/PALS program prior to implementation of the program into the classroom. In addition to the trained teacher (either LST/PALS or the traditional program) in each of the classrooms, a research assistant also was assigned to observe, assist, and support the teacher throughout the 31 weeks (Calhoon, 2005). Teachers of the LST/PALS returned to the classroom and taught the procedures of the program to the classes. All lessons were scripted for both LST/PALS and the traditional program.

Treatment fidelity was collected by direct observations of the research assistant and the author using observational checklists (Calhoon, 2005). All research assistants were trained in the collection of data. Teachers were not made aware of the researcher’s
observation schedule; observations occurred during the seventh week of the program. Observers were looking for correct implementation on the instructional elements of the program by either the teacher or the students (Calhoon, 2005).

According to Calhoon (2005) an Analysis of Variance (ANOVA) conducted on the Woodcock Johnson III pre-test showed no significant difference between treatment groups on any of the reading subtests. An ANOVA conducted on the posttest scores, however, did show a significant difference between the treatment groups. The LST/PALS group outperformed the control group on Letter-Word identification \( (p = .001) \), Word Attack and Passage Comprehension \( (p = .01) \). There was no significant difference in Reading Fluency. Group growth was also determined using an ANOVA. The LST/PALS group again showed significant growth over the traditionally taught group on Letter-Word identification \( (p = .001) \), Word Attack and Passage Comprehension \( (p = .01) \). There was no significant difference in Reading Fluency. The research did not support the use of the program for increased growth in reading comprehension. However, Calhoon (2005) concluded that using a peer-mediated program improved the reading performance of middle school children who had difficulties in the area of phonological skills.

Christensen, Young, and Marchant (2004) explored the results of a peer-mediated positive support program in evoking and maintaining appropriate responses for students with specific problem behaviors. Teachers are often seeking effective intervention strategies for children with behavior issues that are not time consuming and are easy to
implement (Mitchem & Young, 2001). One recommendation for teachers is to employ peer monitoring in tandem with a self-management program with students diagnosed with attention deficit disorder (Davies & Witt, 2000). The same study (Christensen, Young, & Marchant, 2004) investigated the use of positive behavior strategies for two students, Eduardo and Justin, who were chosen by teachers and administrators as at-risk students diagnosed with emotional behavior disorders. The two students were chosen from 42 students who were also diagnosed with emotional behavior disorders. These 42 students were chosen from an original pool of 573 students in an urban elementary school. The ethnicity of the school was 53% Caucasian, 40% Hispanic, and 7% other. Eduardo’s class had 23 students and the population closely resembled that of the school, although the Hispanic population was moderately higher. Justin’s class also had 23 students but was ethnically more diverse (38% Caucasian, 54% Hispanic, 8% Pacific Islander). Both boys either qualified for reduced or free lunch.

Eduardo was an eight year old, third grade student of Hispanic descent, from Ecuador. The predominant language spoken at home, where he resided with his grandparents, was Spanish. He had received English as a Second Language (ESL) instruction prior to the study, but had been released from the program at the time of the research. Due to the number of referrals for non-compliant behavior, Eduardo was referred by his classroom teacher for inclusion in the study. Based on observations by the behavioral specialist, Eduardo was labeled as at-risk in the previous school year. Eduardo’s achievement was low, but he did not qualify for special education services.
Justin was also referred for inclusion in the study based on the number of referrals for disruptive playground behavior. His referral came from both the classroom teacher and the school principal. Justin was an eight year old, Caucasian, third grade student who lived with his biological mother and stepfather. His parents, who were from a low socioeconomic background, had attended parenting classes due to prior issues within the household. Justin had previously received special education services for academic and behavioral issues, but did not meet the criteria to remain in the program at the time of the research (Christensen, Young, & Marchant, 2004).

Two female, Caucasian, third grade students from the boys’ classes were chosen as peer partners by the classroom teacher. These choices were based on attendance record, positive interactions with peers, ability to follow directions and build trusting, comfortable relationships (Christensen, Young & Marchant, 2004) and previous knowledge about the student. The peer partners had the responsibility of assisting the students with self-management procedures by offering praise and reinforcement when Eduardo and Justin behaved in socially acceptable ways in the classroom. They also offered feedback when the behaviors were unacceptable to help the boys self monitor and correct the behaviors. A control group was also chosen to establish a behavioral standard. Three students (10 females and 11 males) from each of seven classrooms in three schools participated in the study.

The materials used for the interventions by teachers and peer partners were rating cards, a signaling device, plastic tokens, and point sheets. The signaling device was used
to notify teachers and peers when to give ratings, feedback or reinforcement (Christensen, Young, & Marchant, 2004). Plastic tokens and point sheets were used to keep track of points given to students, as well as types of reinforcers.

Observers within the classroom collected data at 10-second intervals using small audiocassette recorders. At the start of each interval a voice on the audiocassette would state the interval number and then say “record”. The observer would track the behavior for each interval. An interval was marked as appropriate if the student engaged in acceptable behaviors for the entire 10-second time period. Information was gathered on self-monitoring and peer feedback (Christensen, Young, & Marchant, 2004). All four students would mark their perceptions of the behaviors during the intervals on the tracking sheets. Peer partners gave green tokens if the behavior was appropriate and acceptable. A red token was given if the behavior was not acceptable. During the self-monitoring period, the peer partners would give feedback to the boys about their behavior. Eduardo needed less feedback than Justin about behavior. Justin needed more feedback because his original relationships with peers were weak and he continued to seek the teachers’ attention.

Christensen, Young, and Marchant (2004) found that both Eduardo and Justin showed growth by the end of the study. The boys behaviors were compared to the students in the seven classrooms used to norm the behaviors originally. Social comparison data was collected through direct observations. Prior to the implementation of the positive support program, Eduardo had a socially appropriate behavior mean at
23% below that of his peers. After the program, 94% of his behaviors were found to be at or above the acceptable behavior for students in his class and the control classrooms. Justin’s original mean for frequency of appropriate behavior was 45% of the time.

According to Christensen, Young, and Marchant (2004), at the culmination of the program, four months later, the mean had risen to 82%. The results of this qualitative research support peer mediation when used in conjunction with other methods in the classroom.

In summary, peer mediated interventions have been shown to bring about positive effects on academic achievement for a broad range of students (Ryan, Reid & Epstein, 2004). Studies indicate that peer mediation has been successful across grade levels and academic subject areas (Ryan, Reid & Epstein, 2004). However, there is limited information about the factors that advance the success of peer-mediated programs (Casella, 2000). Most reported success of these programs has been anecdotal in nature (Miller, 1994). However, little empirical research on the impact of peer-mediated programs on reducing violence exists (Theberge & Karan, 2004).

**Summary**

Bullying, an aggressive act or interaction between individuals at different social levels, is widespread in American schools today and has ignited global concern in the last decade. Students under-report bullying, as they are fearful of any repercussions that may occur from reporting these incidences. The safety of our school children has stimulated research about the topic of bullying and has encouraged the development of anti-bullying...
programs. Traditional bullying took place on the playgrounds and during the school day, and children were able to escape to the safety of their own homes. However, with the introduction of technology, bullying through the use of electronics takes places 24 hours a day, seven days a week.

Although incidences of traditional bullying have increased at the elementary and middle school levels, they have begun to decrease at the high school level as bullying using electronic devices has become more prominent in the lives of the high school student. Bullying by girls is also on the increase, but it takes a very different form than traditional bullying by boys. Whereas bullying by boys has always been more physical, bullying by girls is more psychological and verbal. This is important research information, as students, especially girls, become more technologically sophisticated.

Cyberbullying, bullying through the use of electronics, is on the increase. However, it is difficult to gauge the actual number of incidences that occur due to the privacy of e-mail accounts, text messages, and one-to-one chats. It is only in public forums that the number of incidences can begin to be determined. With the implementation of policies regarding phones, e-mail use, and social networking sites by school districts, the number of incidences can be decreased during the school day.

Programs to combat bullying seem to be abundant; however, cyberbullying programs and curriculums are limited as the topic is just coming to the forefront. Only two programs are currently in existence, one, which is based on the most popular bullying program by Olweus, and is being used worldwide, with much success. That program, Cyberbullying: A Prevention Program for Grades 6 – 12 (Limber, Agatston, and Kowalski, 2008) will be used in the current research.
Peer mediation and peer-led literature groups have been an accepted strategy in the educational setting for many years. Children learn from other children because they listen to peers much more intently than to teachers and have the patience with each other to work through conflicts. However adults, usually teachers, have implemented all of the bullying programs in the classrooms.

Because technology continues to emerge and students misuse it to harm others psychologically and emotionally, programs need to be put into place. A program that will teach students the correct etiquette to use when using technology is important to find. This is a difficult task, as there is a lack of programs on the topic of cyberbullying since it is just making a move to the forefront. Therefore, there is a need to investigate the effectiveness of specific programs, as well as their mode of delivery. Adults implement programs, but research supports the use of students as leaders and mediators.
CHAPTER THREE: METHODOLOGY

The purpose of this study was two-fold in that it sought to examine the effects of an anti-cyberbullying program on decreasing the frequency of aggressive on-line victim and offender experiences for middle school students. It was also interested in investigating whether the mode of delivery (student led vs. teacher led) would decrease the number of online aggressive victim and offender experiences for these students. This section describes the methods and procedures that were utilized to conduct this research. Finally, chapter three includes the research question and hypothesis, a description of the setting and subjects, an explanation of the research design, the instrumentation, a description of the data collection and their analyses, and limitations to the study.

Research Questions and Hypotheses

Research Question One. Is the proportion of expected versus observed incidences of aggressive on-line victim and/or offender experiences different for students who participate in an anti-cyberbullying curriculum and those who do not?

Hypothesis One A. The proportionate breakdown of reported incidents of aggressive on-line victim experiences will be smaller for students who participate in an anti-cyberbullying curriculum than for those who do not participate in the curriculum.

Hypothesis One B. The proportionate breakdown of reported incidents of aggressive on-line offender experiences will be smaller for students who participate in an anti-cyberbullying curriculum than for those who do not participate in the curriculum.

Research Question Two. Is the proportion of expected versus observed incidences of aggressive on-line victim and/or offender experiences different for students
who participate in an anti-cyberbullying curriculum delivered by a student leader versus a teacher leader?

**Hypothesis Two A.** The proportionate breakdown of reported incidents of aggressive on-line victim experiences will be smaller for students who participate in an anti-cyberbullying curriculum delivered by a student leader compared to a teacher leader.

**Hypothesis Two B.** The proportionate breakdown of reported incidents of aggressive on-line offender experiences will be smaller for students who participate in an anti-cyberbullying curriculum delivered by a student leader compared to a teacher leader.

**Description of the Setting and the Subjects**

Participants were 154 middle school students in grades 6 through 8 who attended a K-8 elementary school in a rural community (pop. 4,110) in the Northeast. The socio-economic status of residents was middle to upper class, with a median household income of $89,500 and a median home value of $456,400. The participants in the study were a sample of convenience selected to suit the purposes of the study. The school district consisted of a single elementary school with a total population of 448 students. The school had three full time administrators, 36 certified teachers, and 13 specialists, including a school counselor and a school psychologist. There were 3 sections of each grade level, with approximately 22 students per section, with the exception of kindergarten and first grade, which each had two sections. There was relatively little ethnic diversity within the school: 95.6% white, 1.9% Asian American, 1.3% black, 0.6% American Indian and 0.6% Hispanic. The total minority population is 4.4%. The ethnicity of the student population reflected the community.
As mentioned above, students in grades 6, 7, and 8 participated in this study. Students in those grades were divided into nine color team groups; each color team group consisted of approximately 14 students and included students from all three grades. The teams were formed prior to the start of the school year by the school counselor and middle school teachers who attempted to create groups that were equivalent in terms of number of students at each grade level, student leadership ability, gender, and temperament of the students (see Table 1). In the present study three color team groups were randomly assigned to the control condition, and three color team groups were randomly assigned to each of two treatment conditions (student-led and teacher-led)(see Table 2). The treatment groups participated in the cyberbullying prevention curriculum, and the control group participated in activities unrelated to the topic of cyberbullying, specifically, teambuilding. The school counselor and middle school teachers chose three student leaders based on strong leadership qualities while the three teacher leaders were chosen on the basis of volunteerism. The three student leaders and three teacher leaders were trained in the implementation of the cyberbullying prevention curriculum by this researcher and had access to the eight curricular activities. Initial training occurred during February 2009. The researcher then met with the leaders three days prior to the implementation of each of the lessons to review the goals and objectives of each lesson and hand out the necessary materials. Research/data collection occurred during March, April, and May of 2009.
Table 1

*Student Assignment to Group by Grade Level*

<table>
<thead>
<tr>
<th>Leader</th>
<th>Number Grade 6 Students</th>
<th>Number Grade 7 Students</th>
<th>Number Grade 8 Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Leader</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Student Leader</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>7</td>
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</tr>
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<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
<td>60</td>
<td>53</td>
</tr>
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</table>
Table 2

*Control and Experimental Groups Assignment by Leader*

<table>
<thead>
<tr>
<th>Leader</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Leader</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Experimental</td>
</tr>
<tr>
<td>2</td>
<td>Experimental</td>
</tr>
<tr>
<td>3</td>
<td>Experimental</td>
</tr>
<tr>
<td>4</td>
<td>Control</td>
</tr>
<tr>
<td>5</td>
<td>Control</td>
</tr>
<tr>
<td>6</td>
<td>Control</td>
</tr>
<tr>
<td>Student Leader</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Experimental</td>
</tr>
<tr>
<td>2</td>
<td>Experimental</td>
</tr>
<tr>
<td>3</td>
<td>Experimental</td>
</tr>
</tbody>
</table>

**Explanation of Research Design**

This study was designed to investigate the effects of a cyberbullying curriculum on aggressive on-line experiences for students at the middle school level, as well as researching the effects of the mode of program delivery (student led vs. teacher led). A quantitative analysis, using a quasi-experimental approach, was utilized. The dependent variable for this research was the decrease in the frequency of aggressive on-line experiences for the victim and/or offender, and the two independent variables included the cyber-bullying curriculum and the mode of delivery (student led vs. teacher led). During an 8-week period, for a total of eight lessons, students in the experimental group
received Limber, Kowalski, and Agatston’s (2008) cyberbullying curriculum, whereas those in the control group participated in team building activities. After the 8-week period, the Cyberbullying and Online Aggression Survey Instrument (2007) developed by Sameer Hinduja, Ph.D from the Department of Criminology and Criminal Justice at Florida Atlantic University and Justin W. Patchin, Ph.D in the Department of Political Science at the University of Wisconsin – Eau Claire was administered to all students in the study as a posttest. Random assignment of students to the treatment group was not feasible, as they had been previously assigned to groups. Table 3 delineates the quasi-experimental design.

Table 3

Delineation of the Quasi-experimental Design

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Group</td>
<td></td>
</tr>
<tr>
<td>(Student Led Group)</td>
<td>X</td>
</tr>
<tr>
<td>(Teacher Led Group)</td>
<td>X</td>
</tr>
<tr>
<td>Control Group</td>
<td></td>
</tr>
<tr>
<td>(Team Building Group)</td>
<td>O</td>
</tr>
</tbody>
</table>

Cyberbullying Curriculum

During an eight-week period, for a total of eight lessons, students in the experimental group, whose teachers, either student or adult, had received training in presenting the cyberbullying curriculum, participated in the cyberbullying curriculum activities. The students in the control group, whose teacher had not been trained in presenting the cyberbullying curriculum participated in team building activities. All other aspects of the students’ day remained the same.
The cyberbullying curriculum, designed by Limber, Kowalski, and Agatston (2008), consisted of eight lessons (see Table 4). According to the authors, the program deals with the attitudes and behaviors expected to be associated with cyberbullying. It strives to raise student awareness of what cyberbullying is and why it is so harmful, as well as to equip students with the necessary skills and resources needed to treat each other with respect when engaged in the use of digital technologies. Students were given information on how and where to get help if they or others are being cyberbullied as well as skills to become positive technology users. The curriculum was designed to be taught within a school environment.

The development of this program comes out of the work Limber completed with and under the supervision of Dan Olweus. While the cyberbullying curriculum is not a research-based program, it is “based on the latest research in prevention and the topic of cyberbullying,” (Limber, Kowalski & Agatston, 2008, p. 5) and the activities were patterned after prevention models that research has shown to be effective. According to the authors, the goal of such programs is to increase student attitudes toward refraining from engaging in negative behaviors and to decrease the frequency of negative student behaviors.
Table 4  

Summary of Lessons in Cyberbullying: A Prevention Curriculum for Grades 6 – 12

| Session 1: | Define bullying. |
| What Is Bullying? | Identify examples of bullying. |
| | Identify the roles students play in the “Bullying Circle.” |
| | Identify rules against bullying. |

| Session 2: | Define cyberbullying. |
| What Is Cyberbullying? | Identify the technologies used in cyber bullying. |
| | Identify cyberbullying situations |

| Session 3: | Identify the effects of cyberbullying on the child who is bullied, the bystanders, and the child (ren) who bully. |
| How Does Cyberbullying Affect People? | Identify how to use technology in a positive way |

| Session 4: | Identify reasons why people think they can get away with cyberbullying others. |
| Why Do People Cyber Bully Others? | State why they think cyberbullying is unacceptable. |

| Session 5: | Identify what steps to take if they are cyber bullied. |
| How Should You React to Cyberbullying? | Identify what steps to take if they know that someone else is being cyber bullied. |
Table 4 (continued)

*Summary of Lessons in Cyberbullying: A Prevention Curriculum for Grades 6 – 12*

<table>
<thead>
<tr>
<th>Session 6: Creating a Positive Cyber Site—</th>
<th>Part I</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Describe how some social networking sites began.</td>
</tr>
<tr>
<td></td>
<td>Explain what social networking sites do to curb abuse.</td>
</tr>
<tr>
<td></td>
<td>Describe the steps in planning a social networking site.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Session 7: Creating a Positive Cyber Site—</th>
<th>Part II</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Describe the components of an effective presentation.</td>
</tr>
<tr>
<td></td>
<td>Identify how they personally will commit themselves to stop or prevent cyber bullying.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Session 8: Creating a Positive Cyber Site—</th>
<th>Part III</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Make a public commitment to preventing cyberbullying.</td>
</tr>
<tr>
<td></td>
<td>Identify positive ways to use social networking Web sites.</td>
</tr>
</tbody>
</table>

Training of the student leaders took place with three initial one-hour sessions, due to their ages. The teacher leaders all received an initial three-hour training session as recommended by the authors. There were then follow up 10-minute meetings prior to each of the eight curricular lessons being implemented to answer questions and hand out materials for both student and teacher leaders. The terms bullying and cyberbullying
were defined. The harmful effects of and reasons for cyberbullying were also reviewed. The main components of each session were reviewed and each leader received a copy of the curriculum. Student leaders received the curricular lessons at each session prior to that week’s lesson.

**Instrumentation**

The study utilized the Cyberbullying and Online Aggression Survey Instrument (Hinduja & Patching, 2007). The internal consistency for the 38-item Aggression instrument, was evaluated using Cronbach’s alpha coefficient. For the cyberbullying victimization scale (items 1, 2, 3, 4, 5, 6, 9, 10, and 11) the Cronbach’s alpha was 0.736. For the cyberbullying offending Scale (items 14 – 18) the Cronbach’s Alpha was 0.761. Content validity was established through the use of a variation of the survey in three separate studies that yielded comparable results in all three. Construct validity evaluated the qualities the test measures. In this case, the test was shown to measure the aspects of cyberbullying intended by the authors. The survey contained five sections. Section one was concerned with how often the student had been victimized within the past 30 days. A 5-point Likert-type response format ranging from “a” (never) to “e” (everyday) was utilized. Section two employed the same 5-point scale to collect data about how often a student had offended others using digital technology within the last 30 days. Section three gathered data regarding how often a student had cyber bullied another. Two different scales were used with responses ranging from “a” (never) to “e” (every day) or “a” (never) to “e” (very often). Section four utilized a 5-point scale ranging from “a” (never) to “e” (many times) to gather information about recent experiences of being cyber bullied. Section five, the final section, employed a 6-point scale to gather data about
students’ feelings in regard to their cyberbullying experiences. The responses ranged from “a” (never) to “f” (not applicable). Although this instrument utilized a Likert-type response format, it did not provide total or scaled scores; therefore, the data it yielded were categorical data. While the survey contains five sections, data from only two of the sections (sections one and two) were used in the data analyses because they dealt specifically with the research questions

**Data Collection and Analysis**

Prior to the beginning of this study, in the fall of 2008, students in grades 6, 7, and 8 were assigned to one of nine color team groups by the school counselor and middle school teachers.

In January of 2009, the proposed research was approved by Western Connecticut State University’s Institutional Review Board. By late winter 2009, the researcher had distributed and collected letters of consent and assent for students to participate in the study. Student leaders and teacher leaders were trained in the implementation of the cyberbullying prevention curriculum.

In the spring of 2009, all participants, as members of the intact color team, were randomly assigned to either the control or experimental group. The experimental groups received instruction from Cyberbullying: A Prevention Curriculum for Grades 6 – 12 (Limber, Kowalski & Agatston, 2008) while the control group color teams participated in teambuilding activities. Of the experimental groups, three color teams received instruction from student leaders and three color teams were instructed by teacher leaders.

In late spring, 2009, all participants completed a posttest, the Cyberbullying and Online Aggression Survey Instrument (2007). The posttest was administered in week
nine of the study, one week after the last lesson of the cyberbullying prevention curriculum. This provided the researcher with a general assessment of the frequency of aggressive on-line experiences. Data provided information about the each of the students, both as a victim and as an offender.

Table 5 outlines the various steps in the data collection phase of the study. Descriptive and inferential statistics were utilized to answer the main research questions. An EXCEL Spreadsheet (2007) was the primary statistical program for this project. The dependent variable was frequency of online aggressive experiences. The independent variables were the cyberbullying prevention curriculum and leader (student or teacher). Differences between the experimental and control groups were analyzed using a chi-square test of independence test ($p < 0.0125$). By dividing .05 by the number of research questions and the two subscales, the alpha level was set at .0125 (Hinkle, 2003, p. 547). Initial differences between the control and experimental groups were thought to be controlled for because the school counselor and middle school teachers had attempted to create groups that were equivalent in terms of number of students at each grade level, student leadership ability, gender, and temperament of the students.
Table 5

Various Steps of the Collection Phase

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 2009</td>
<td>Research approved by IRB committee</td>
</tr>
<tr>
<td>January 2009</td>
<td>Student and teacher leaders chosen</td>
</tr>
<tr>
<td>February 2009</td>
<td>Parental consent and student assent was obtained for all students involved in the study</td>
</tr>
<tr>
<td>March 2009</td>
<td>Student and teacher leaders received initial training in the implementation of the cyberbullying prevention curriculum</td>
</tr>
<tr>
<td>March - May 2009</td>
<td>Cyberbullying prevention curriculum implemented by student and teacher leaders</td>
</tr>
<tr>
<td>May 2009</td>
<td>All participants (control and experimental) completed the Cyberbullying and Online Aggression Survey Instrument 2007 version to provide the researcher with data showing a change in the number, type, and frequency of incidences of cyberbullying that occur</td>
</tr>
<tr>
<td>June 2009</td>
<td>Descriptive and inferential statistics collected were used to test the research hypothesis. Data collected answered the main research questions</td>
</tr>
</tbody>
</table>

Statement of Ethics

Permission to participate in this research was sought from the district’s superintendent, the school principal, and all parents of students. To assure confidentiality, each participant was assigned a confidential identification number. All data were stored in a locked filing cabinet in the researcher’s home or office and were maintained there until the findings were published. Data will only be accessible to
researchers for whom the data will prove useful in further comparative analyses and who are enrolled in Western Connecticut State University’s Doctor of Education Instructional Leadership Program.

**Summary**

A quantitative analysis, using a quasi-experimental approach, was used to implement this study. This chapter outlined the methods the researcher employed to investigate the effects of the cyberbullying prevention curriculum and type of leader (student or teacher) on the frequency of aggressive online experiences for victims as well as offenders. It began with an introduction followed by the research questions and the researcher’s hypotheses. The setting and subjects for the study were described. Next, a detailed description of the research designed was provided, including elements of the cyberbullying prevention curriculum. The instrumentation and data collection and analysis were then explained. Chapter four will report the results of the study.
CHAPTER FOUR: ANALYSIS OF THE DATA AND FINDINGS

This study was conducted to examine whether participation in an anti-cyberbullying curriculum would influence the number of reported incidences of victim and offender on-line aggressive experiences for students. The study also compared reports of on-line aggressive experience for students who were taught by a student leader versus a teacher leader. The chapter includes a review of the research questions, the hypotheses, and a description of the analyses and findings of this study. Chapter Five will discuss the implications of these findings.

Research Questions and Hypotheses

Research Question One. Is the proportion of expected versus observed incidences of aggressive on-line victim and/or offender experiences different for students who participate in an anti-cyberbullying curriculum and those who do not?

Hypothesis One A. The proportionate breakdown of reported incidents of aggressive on-line victim experiences will be smaller for students who participate in an anti-cyberbullying curriculum than for those who do not participate in the curriculum.

Hypothesis One B. The proportionate breakdown of reported incidents of aggressive on-line offender experiences will be smaller for students who participate in an anti-cyberbullying curriculum than for those who do not participate in the curriculum.

Research Question Two. Is the proportion of expected versus observed incidences of aggressive on-line victim and/or offender experiences different for students who participate in an anti-cyberbullying curriculum delivered by a student leader versus a teacher leader?
Hypothesis Two A. The proportionate breakdown of reported incidents of aggressive on-line victim experiences will be smaller for students who participate in an anti-cyberbullying curriculum delivered by a student leader compared to a teacher leader.

Hypothesis Two B. The proportionate breakdown of reported incidents of aggressive on-line offender experiences will be smaller for students who participate in an anti-cyberbullying curriculum delivered by a student leader compared to a teacher leader.

Description of the Information

This research began with 154 participants: 105 participants completed the eight-week anti-cyberbullying curriculum (Agatston, Kowalski, & Limber, 2007); 54 were in student led groups, while 51 were in teacher led groups. The remaining 49 participants were engaged in teambuilding activities, all of which were led by adults. After the data were collected, they were analyzed using EXCEL Spreadsheet to determine whether on-line aggressive experiences were consistent within and/or between the groups. By dividing .05 by the number of research questions and the number of subscales per question (victimization and offender), the alpha level was set at .0125 (Hinkle, 2003).

Data Screening

Data from the Cyberbullying and Online Aggression Survey were analyzed to answer the two research questions. As described in chapter 3, the survey authors devised this instrument to gather information about victim and offender on-line aggressive experiences and grouped their survey item into two subscales; victimization and offending. The victimization subscale consisted of 9 questions (1, 2, 3, 4, 5, 6, 9, 10, and 11) that asked students about online activity in which they were the victims of cyberbullying; the offending subscale consisted of 5 questions (questions 14-18), which
asked students about on-line activities which involved offending (victimizing others). While the authors had gathered information about the internal consistency reliability for these two scales, they had not standardized this instrument. Therefore, the data were treated as categorical data and were analyzed by computing the frequency of responses across the victimization and offender subscales using chi-square test of independence analyses.

A chi-square test of independence requires that certain criteria be met. The sample must be randomly drawn from the population, data must be reported in raw frequencies; measured variables must be independent; values on the independent variables must be mutually exclusive and exhaustive; and expected frequencies cannot be too small (Cronk, 2008; Gall, Gall & Borg, 2003). Preliminary analysis revealed that this last assumption was violated when the 5-point response format was maintained; namely, more than 20% of the cells have expected frequencies of less than 5 (Cronk, 2008; Gall, Gall & Borg, 2003). When this assumption is violated, Hinkle (2003) suggests that the researcher “combine adjacent rows or columns if this will not result in a distortion of the data” (p. 563). For this reason, to analyze the data for research question one, the researcher collapsed the five levels of subject responses into four levels by combining responses “d” and “e.” Thus, response categories “a. never,” “b. once or twice,” and “c. a few times,” were retained as separate categories, while response categories “d. many times,” and “e. every day” were collapsed into one category. When collapsing occurred in this manner, it was found that the cell frequency assumption was met. However, when this method of collapsing across response format was used for research question two, it was found that 20% of the cells violated the assumption. Therefore, the researcher
collapsed the five levels of subject responses into two levels by combining responses “b,” “c,” “d,” and “e.” Thus, response category “a. never” was retained as a separate category, while response categories “b. one or two times,” “c. a few times,” “d. many times,” and “e. every day” were collapsed into one category. When these data was analyzed it was found that the resultant cell frequencies met the assumptions of the chi-square test of independence, and data analysis could proceed.

**Reported Responses**

Table 6 depicts the responses to each item on the instrument, providing a comparison for subjects in each of the two curriculum groups (cyberbullying and team building). It is important to note that the majority of students in both curricular groups (cyberbullying and teambuilding) answered “never” to each item on the survey. Few students responded “every day” to the items on the survey, however, more students in the teambuilding had a response in this category than did students participating in the cyberbullying curriculum. It is also important to note that responses to items 7 and 8 have a preponderance of responses clumped in the middle due to the nature of the items (communication with parents and teachers).
Table 6

Contingency Table for Item Responses for Cyberbullying and Teambuilding Curriculums

<table>
<thead>
<tr>
<th>Item</th>
<th>Type of Curriculum</th>
<th>Response 0 (never)</th>
<th>Response 1 (once or twice)</th>
<th>Response 2 (a few times)</th>
<th>Response 3 (many times)</th>
<th>Response 4 (every day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cyberbullying</td>
<td>90</td>
<td>13</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Teambuilding</td>
<td>42</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Cyberbullying</td>
<td>95</td>
<td>8</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Teambuilding</td>
<td>39</td>
<td>9</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>Cyberbullying</td>
<td>103</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Teambuilding</td>
<td>42</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Cyberbullying</td>
<td>98</td>
<td>6</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Teambuilding</td>
<td>42</td>
<td>7</td>
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<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Cyberbullying</td>
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<td>18</td>
<td>2</td>
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<td></td>
<td>Teambuilding</td>
<td>43</td>
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<td>Cyberbullying</td>
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<td></td>
<td>Teambuilding</td>
<td>31</td>
<td>14</td>
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</tr>
<tr>
<td>7</td>
<td>Cyberbullying</td>
<td>34</td>
<td>47</td>
<td>19</td>
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<td></td>
<td>Teambuilding</td>
<td>27</td>
<td>11</td>
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<tr>
<td>8</td>
<td>Cyberbullying</td>
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<td>19</td>
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<td></td>
<td>Teambuilding</td>
<td>22</td>
<td>15</td>
<td>9</td>
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<tr>
<td>9</td>
<td>Cyberbullying</td>
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<td></td>
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<td>0</td>
</tr>
<tr>
<td>11</td>
<td>Cyberbullying</td>
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<td>9</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Teambuilding</td>
<td>40</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>Cyberbullying</td>
<td>96</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Teambuilding</td>
<td>45</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 6 (continued)

*Contingency Table for Item Responses for Cyberbullying and Teambuilding Curriculums*

<table>
<thead>
<tr>
<th>Item</th>
<th>Type of Curriculum</th>
<th>Response 0 (never)</th>
<th>Response 1 (once or twice)</th>
<th>Response 2 (a few times)</th>
<th>Response 3 (many times)</th>
<th>Response 4 (every day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Cyberbullying</td>
<td>78</td>
<td>19</td>
<td>5</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Teambuilding</td>
<td>40</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>14</td>
<td>Cyberbullying</td>
<td>79</td>
<td>18</td>
<td>8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Teambuilding</td>
<td>31</td>
<td>1</td>
<td>5</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>Cyberbullying</td>
<td>96</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Teambuilding</td>
<td>29</td>
<td>3</td>
<td>2</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>16</td>
<td>Cyberbullying</td>
<td>98</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Teambuilding</td>
<td>34</td>
<td>1</td>
<td>7</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>17</td>
<td>Cyberbullying</td>
<td>92</td>
<td>9</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Teambuilding</td>
<td>33</td>
<td>0</td>
<td>6</td>
<td>6</td>
<td>4</td>
</tr>
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<td>18</td>
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<td>7</td>
<td>7</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Teambuilding</td>
<td>33</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 7 depicts the responses to each item on the instrument, providing a comparison for subjects in student led verse teacher led groups. It is important to note that the majority of students in both the student led and teacher led groups responded “never” to each item on the survey. Few students responded “every day” to the items on the survey, however, more students (2) in the teacher led had a response in this category than did students in the student led group. It is also important to note that responses to items 7 and 8 seem to have a preponderance of responses clumped in the middle due to the nature of the item (communication with parents and teachers).
Table 7

Contingency Table for Item Responses for Student and Teacher Leader

<table>
<thead>
<tr>
<th>Item</th>
<th>Type of Curriculum</th>
<th>Response 0 (never)</th>
<th>Response 1 (once or twice)</th>
<th>Response 2 (a few times)</th>
<th>Response 3 (many times)</th>
<th>Response 4 (every day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Student Teacher</td>
<td>47</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>43</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>Student Teacher</td>
<td>48</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>47</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>Student Teacher</td>
<td>53</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Student Teacher</td>
<td>50</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>48</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Student Teacher</td>
<td>40</td>
<td>12</td>
<td>2</td>
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<td>0</td>
</tr>
<tr>
<td></td>
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<td>0</td>
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<td>6</td>
<td>Student Teacher</td>
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</tr>
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<td>38</td>
<td>11</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>Student Teacher</td>
<td>17</td>
<td>23</td>
<td>10</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17</td>
<td>24</td>
<td>9</td>
<td>1</td>
<td>0</td>
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<td>8</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>5</td>
<td>14</td>
<td>30</td>
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</tr>
<tr>
<td>9</td>
<td>Student Teacher</td>
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<td></td>
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<td>4</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>Student Teacher</td>
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<tr>
<td></td>
<td></td>
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<td>1</td>
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<td>0</td>
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<tr>
<td>11</td>
<td>Student Teacher</td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
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<td>48</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
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<td>12</td>
<td>Student Teacher</td>
<td>48</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>48</td>
<td>2</td>
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<td>0</td>
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</tr>
</tbody>
</table>
Table 7 (continued)

*Contingency Table for Item Responses for Student and Teacher Leader*

<table>
<thead>
<tr>
<th></th>
<th>Student</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
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<td>11</td>
<td>4</td>
<td>1</td>
<td>0</td>
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</tr>
<tr>
<td></td>
<td>44</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>17</td>
<td>52</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>18</td>
<td>48</td>
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<td>0</td>
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<td></td>
<td>40</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**Research Question One: Description of Analysis**

To answer the first research question concerning whether the proportion of students receiving an anti-cyberbullying curriculum would experience fewer than expected on-line aggressive victim and/or offender experiences, two chi square analyses were run, one for the victimization subscale and one for the offending subscale. As can be seen in Table 8, the chi –square value of 14.49 for the victimization subscale was significant ($p = .002$). Observed frequencies differed from expected frequencies for students who participated in the cyberbullying curriculum as compared to those who did not participate in the cyberbullying curriculum. The analysis of the 2 x 4 chi-square test of independence is reported for each curriculum using an alpha level of .0125. An
examination of the standardized residuals reveals that response 2 for the teambuilding group was the main contributor to this significant chi-square test of independence.
Table 8

*Contingency Table for Type of Curriculum for Victims*

<table>
<thead>
<tr>
<th>Type of Curriculum</th>
<th>Response 0 (never)</th>
<th>Response 1 (once or twice)</th>
<th>Response 2 (a few times)</th>
<th>Response 3 (many times to every day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyberbullying</td>
<td>Observed Count</td>
<td>843</td>
<td>89</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>822.69</td>
<td>102.41</td>
<td>16.39</td>
</tr>
<tr>
<td></td>
<td>Standard Residual</td>
<td>0.71</td>
<td>-1.32</td>
<td>-0.84</td>
</tr>
<tr>
<td>Teambuilding</td>
<td>Observed Count</td>
<td>362</td>
<td>61</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>382.30</td>
<td>47.59</td>
<td>7.61</td>
</tr>
<tr>
<td></td>
<td>Standard Residual</td>
<td>-1.04</td>
<td>1.94</td>
<td>1.23</td>
</tr>
</tbody>
</table>

\[ X^2(3, \ N = 154) = 14.49, \ p = .002 \]

As can be seen in Table 9, there was a significant difference between observed and expected frequencies on the offending subscale for type of curriculum, \( X^2(3, \ N=154) = 116.13, \ p = .000 \). The analysis of the 2 x 4 chi-square test of independence is reported for each curriculum using an alpha level of .0125. An examination of the standardized residuals reveals that responses 0, 1, and 2 for the teambuilding group and response 3 for the cyberbullying and teambuilding groups were the main contributors to this significant chi-square test of independence.
Table 9

*Contingency Table for Type of Curriculum for Offenders*

<table>
<thead>
<tr>
<th>Type of Curriculum</th>
<th>Response 0 (never)</th>
<th>Response 1 (once or twice)</th>
<th>Response 2 (a few times)</th>
<th>Response 3 (many times to every day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyberbullying</td>
<td>Observed Count</td>
<td>453</td>
<td>46</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>417.95</td>
<td>37.50</td>
<td>29.32</td>
</tr>
<tr>
<td></td>
<td>Standard Residual</td>
<td>1.71</td>
<td>1.39</td>
<td>-1.72</td>
</tr>
<tr>
<td>Teambuilding</td>
<td>Observed Count</td>
<td>160</td>
<td>9</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>195.05</td>
<td>17.50</td>
<td>13.68</td>
</tr>
<tr>
<td></td>
<td>Standard Residual</td>
<td>-2.51</td>
<td>-2.03</td>
<td>2.52</td>
</tr>
</tbody>
</table>

$X^2(3, N = 154) = 116.13, p = .000$

The implementation of an anti-cyberbullying curriculum was associated with fewer than expected on-line aggressive victim and offender experiences.

**Research Question Two: Description of Analysis**

The following data refer to the second research question: Is the proportion of expected and observed frequencies in on-line aggressive victim and/or offender experiences different for students who received the curriculum delivered by a student versus a teacher leader? As can be seen in Table 10, there was a not a significant difference between observed and expected frequencies on the victimization subscale, $X^2(1, n = 105) = 1.69, p = .019$. The analysis of the 2 x 2 chi-square test of independence is reported for each curriculum using an alpha level of .0125.
Table 10

**Contingency Table for Type of Leader for Victims**

<table>
<thead>
<tr>
<th>Type of Leader</th>
<th>Response 0 (never)</th>
<th>Response 1 (more than once)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Observed Count</td>
<td></td>
</tr>
<tr>
<td>Student Leader</td>
<td>430</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td></td>
</tr>
<tr>
<td></td>
<td>423.45</td>
<td>62.55</td>
</tr>
<tr>
<td></td>
<td>Standard Residual</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.319</td>
<td>-0.829</td>
</tr>
<tr>
<td>Teacher Leader</td>
<td>Observed Count</td>
<td></td>
</tr>
<tr>
<td></td>
<td>362</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td></td>
</tr>
<tr>
<td></td>
<td>368.55</td>
<td>54.45</td>
</tr>
<tr>
<td></td>
<td>Standard Residual</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.341</td>
<td>0.888</td>
</tr>
</tbody>
</table>

\[X^2(1, n = 105) = 1.69, p = .019\]

As can be seen in Table 11, there was a significant difference between observed and expected frequencies on the offending subscale for type of leader, \[X^2(1, n = 105) = 18.69, p = .000\]. The analysis of the 2 x 2 chi-square test of independence is reported for each type of leader using an alpha level of .0125. An examination of the standardized residuals reveals that response 1 for the both the student leader and the teacher leader was the main contributor to this significant chi-square test of independence.
Table 11

*Contingency Table for Type of Leader for Offenders*

<table>
<thead>
<tr>
<th>Type of Leader</th>
<th>Response 0 (never)</th>
<th>Response 1 (more than once)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Leader</td>
<td>Observed Count</td>
<td>250</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>232.97</td>
</tr>
<tr>
<td></td>
<td>Standard Residual</td>
<td>1.12</td>
</tr>
<tr>
<td>Teacher Leader</td>
<td>Observed Count</td>
<td>203</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>220.03</td>
</tr>
<tr>
<td></td>
<td>Standard Residual</td>
<td>-1.15</td>
</tr>
</tbody>
</table>

\[X^2(1, n = 105) = 18.69, p = .000\]

The implementation of an anti-cyberbullying curriculum that was taught by students (peers) was not associated with fewer than expected on-line aggressive victimization experiences. However, there was a significance difference between observed and expected frequencies of on-line aggressive experiences on the offender scale.

In summary, the hypotheses that the proportionate breakdown of reported incidents of aggressive on-line victim and offender experiences will be smaller for students who participate in an anti-cyberbullying curriculum than for those who do not participate in the curriculum was supported for both the victimization and offender subscales. The hypothesis that the reported incidents of aggressive on-line offender experiences will be smaller than expected for students who receive the anti-cyberbullying
curriculum from a student leader was supported. However, the hypothesis that reported incidents of on-line victim experiences will be smaller was not supported.
CHAPTER FIVE: SUMMARY AND CONCLUSIONS

The purpose of this study was to examine whether participation in an anti-cyberbullying curriculum would influence the number of on-line aggressive victim and offender experiences reported by students. The study also examined whether the type of program delivery (student vs. teacher) would be related to the number of reported incidences. The theoretical literature and empirical studies reviewed in chapter two support the use of anti-bullying programs to lessen the degree of bullying that occurs in the schools (e.g., Olweus, 2006; Operation Respect, 2000; Rimm-Kaufmann, 2001). However, programs designed to combat cyberbullying are difficult to find (Willard, 2007), and there is little research on their effectiveness. The current research addressed this problem by investigating an anti-cyberbullying program developed by Limber, Kowalski and Agatston, (2008). In addition, this study was interested in whether mode of delivery would be related to program success. Prior research had demonstrated that students could learn from peers who serve as peer tutors and peer mediators in academic settings (Heron & Heward, 1997; Topping, Holmes & Bremner, 2001). These results are consistent with beliefs that children have the potential to become advocates or mediators for resolving conflicts in a peaceful manner (Cassella, 2000).

Therefore, this researcher hypothesized that students receiving the anti-cyberbullying curriculum would report fewer victim and offender on-line aggressive experiences than would be expected. It was further hypothesized that students who were delivered the curriculum from peers (student led) would report fewer incidences of on-line aggressive experiences than would be expected.
This chapter includes a review of the findings related to the research questions and the hypotheses. The chapter also discusses how the current study is related to other studies described in chapter two: the review of the literature. Furthermore, limitations and implications of the study, as well as suggestions for future research, are presented.

**Review of the Findings**

A chi-square test of independence was used to analyze differences between the expected and observed frequencies for the experimental (students receiving the anti-cyberbullying curriculum) and the control (students not receiving the anti-cyberbullying curriculum, i.e. the teambuilding group). The expected and observed frequencies were also compared for the type of leader implementing the anti-cyberbullying curriculum (student leader vs. teacher leader).

Significance, \( p \leq .0125 \), was found for the victimization and offending subscales for question one regarding type of curriculum. There was a significant difference between observed and expected frequencies, \( X^2 (3, N = 154) = 14.49, p = .002 \), for the victimization subscale. There was also a significant difference between observed and expected frequencies, \( X^2 (3, N = 154) = 116.13, p = .000 \), on the offending subscale. Therefore, the hypothesis that the reported incidents of aggressive on-line victimization and/or offender experiences will be smaller for students who participate in an anti-cyberbullying curriculum was supported. The results for question two indicated that the proportionate breakdown of expected versus observed incidences for victim and/or offender experiences did not differ for students who participated in an anti-cyberbullying curriculum delivered by a student leader versus an adult leader on the victimization subscale. However, there was a significant difference between observed and expected
frequencies, $X^2 (1, n = 105) = 18.69, p = .000$, on the offending subscale. Therefore, the hypothesis that the reported incidents of aggressive on-line victim and/or offender experiences will be smaller for students who participated in a curriculum that was student led was supported for the offender subscale.

**Relationship to Review of the Literature**

Educators have reported an increase in the number of cases of bullying and cyberbullying by students at the middle school and high school levels (Olweus, 2004; Willard, 2007). Playground and schoolyard bullying have traditionally been accepted as part of school life (Hinduja & Patchin, 2007; Olweus, 1985); however, in recent years, incidences of bullying have become more widespread (Hinduja & Patchin, 2007; Leckie, 1998; Olweus, 2004); more girls have become involved in bullying (Leckie, 1998); and bullying has begun occurring on-line (Limber, Kowalski & Agatston, 2008; Willard, 2007). As a result, school districts have developed or adopted programs to help combat bullying within the schools, and there is evidence that these programs are successful.

As discussed in chapter two, the most widely used anti-bullying program was developed by Olweus (1985). Empirical data supporting the effectiveness of this program has been gathered in the United States, Norway and Scandinavia. Olweus (1985) completed a number of studies in which his intervention campaign against bullying was implemented. The most comprehensive study examined over 2,500 students whose ages ranged between 11 and 14 in 42 Norwegian schools. The outcome of the study yielded a 50% reduction in bullying as well as aggressive and anti-social behaviors. Olweus (1993) also surveyed students in all primary and secondary high schools in Norway, which supplied him with a good estimate of the frequency of bully
and victim behaviors. A parallel study by Olweus (1993) completed in Sweden with grades 3-9 yielded comparable results to those found in Norway. The results of these studies support the need for a program to combat not only traditional bullying, but also bullying in its new context: cyberbullying.

Research on the Responsive Classroom program (Rimm-Kaufmann, 2001) has yielded similar results. This program emphasizes the social, emotional, and academic needs of children in a strong and safe school community (Rimm-Kaufmann, 2001). Elliott (1995) performed a three-year longitudinal study implementing the Responsive Classroom approach with 212 elementary school (pre-K – six) children in 26 schools in the District of Columbia. Furthermore, this study was a duplication of the original study completed in a New Haven, CT school district and yielded similar results. The results supported the effectiveness of the program over the course of a school year for the three-year period. Students exposed to the program had higher levels of social skills and fewer behavior problems than those with limited or no exposure to the program.

Programs in the area of anti-cyberbullying are limited as are empirical studies of the programs that exist (Limber, Kowalski & Agatston, 2008; Willard, 2007). In fact, a review of the literature found no studies that examined the effectiveness of an anti-cyberbullying program. “To date the existing cyberbullying literature is devoid of an underlying theoretical basis that can be tested empirically and accepted, refined, or refuted based on empirical research and measurement.” (Griezel, Craven, Yeung, & Finger, 2008, p. 34) Thus, the present study added to and extended research in the area of bullying by examining the impact of an anti-cyberbullying program, Cyberbullying: A Prevention Curriculum for Grades 6 – 12 (Limber, Kowalski & Agatston, 2008). In
addition, this study used a newly developed instrument, Cyberbullying and Online Aggression Survey Instrument 2007 (Hinduja & Patchin, 2007), designed specifically to measure reported incidences of cyberbullying. Finally, this study added to the literature by comparing mode of program delivery (student led versus teacher led). All of the anti-bullying programs described above had been taught by adult leaders, usually teachers, despite evidence that students can learn from their peers in school settings (Ryan, Reid & Epstein, 2004).

Limitations of the Study

For the purposes of this study, the relationship between participation in an anti-cyberbullying curriculum, the mode of delivery of the curriculum (student leader vs. teacher leader) and the number of reported on-line aggressive experiences for victims and offenders was explored. A number of factors may have impacted the internal validity of this study. Each factor will be discussed to better understand its possible effect on the study and conclusions that were drawn.

As was discussed in chapter 3, it was assumed that initial differences between groups (students who received the anti-cyberbullying treatment and those who did not) were controlled because students had been assigned to color team groups prior to the start of the school year by the school counselor and the middle school teachers who attempted to create groups that were equivalent in terms of number of students at each grade level, student leadership ability, gender, and temperament of the students. However, some of these criteria were subjective and assignment to color teams was based on the judgment of the school counselor and teachers who made the assignments. Thus, the groups may not have been equivalent, and this may have affected the validity of the study.
The researcher acknowledges that the appropriate unit of analysis is group, not individual, when group is assigned to treatment, however, this was not possible because research was conducted in a school setting. However, color team groups were randomly assigned to the control and experimental groups. With this random assignment of color team groups, siblings were inadvertently placed in both the control and experimental groups. Conversations regarding the two curricula may have taken place within the homes of the participants, making students aware of what was being discussed in the opposite group.

In addition, all students at the eighth grade level had exposure to the topics of bullying and cyberbullying through the regular school curriculum. Unbeknownst to the researcher, the eighth grade Language Arts curriculum was scheduled to include discussions of the novel *Touching Spirit Bear* by Ben Mikaelsen prior to the implementation of the cyberbullying curriculum. This novel touches on topics such as anger management, bullying, abuse, and divorce, taking responsibility for one's actions, forgiveness, and how positive and negative life experiences lead to change. In addition, these same students also participated in a three-day workshop on harassment and dating issues offered by a local outreach agency. These discussions may have left lasting impressions on the students causing bullying behaviors to subside prior to participating in the 8-week anti-cyberbullying curriculum. These threats to internal validity were, however, experienced by eighth graders in both the experimental and control groups.

Due to the nature of the school setting and the requirement that students be supervised at all times by adults, a teacher was present as an observer in the classroom throughout the implementation of the 8-week anti-cyberbullying curriculum led by the
student leader. Having this observer present may have made the students more aware that they were participating in an experimental study, and they may have altered their normal behaviors and responses as a result.

Because the topic of cyberbullying is a relatively new area of research, an instrument designed to measure the degree to which students are using technology for the purposes of bullying was difficult to find. At the present time, only two such instruments appear to exist. The instrument chosen, Cyberbullying and Online Aggression Survey Instrument 2007, (Hinduja & Patchin, 2007) was the best available. Another instrument (Willard, 2007) had no evidence of validity or reliability. Hinduja and Patchin did present evidence of reliability for the subscales used in this study; however, at the time of the study, their instrument had not been standardized; no information about its validity had been gathered; and it had been used in only three other studies, all conducted by the authors.

Although the researcher attempted to minimize external validity threats by having a relatively large sample size (N=154), the findings of this study are most generalizable to other schools with demographics similar to those of the sample included in this study. As this was an educational setting, it was necessary to work within the confines of the parameters that were already in place and fixed prior to the beginning of the study (Isaac & Michael, 1981). Suggestions for further research will be discussed later in this chapter.

Implications of the Study

The researcher expected to find significant differences in observed versus expected frequencies on both the victimization and the offender scales of the Cyberbullying instrument for students who had participated in the anti-cyberbullying
curriculum. Data analysis revealed these differences on both the victimization and offending scale for question one. Thus, participation in the cyberbullying curriculum was associated with fewer than expected incidents of victimization and offending behaviors at the conclusion of the 8-week cyberbullying curriculum. The researcher also expected students in the student led group to demonstrate fewer than expected incidences of cyberbullying compared to those in the teacher led group. There was a significant difference between observed and expected frequencies on the offending subscale, although not on the victimization subscale. It is important to note that there was not much variability in responses on either subscale of the Cyberbullying and Online Aggression Survey Instrument 2007 (Hinduja & Patchin, 2007), but especially true of the victimization subscale. This may reflect the homogeneity of the participants or weaknesses in the instrument that interfere with its ability to discriminate among students on the behaviors being measured. In summary, the results of this study supported the implementation of an anti-cyberbullying curriculum at the middle school level, as well as the use of students as leaders in implementing such programs. These are important implications because, as Olweus (2002) points out, the success of any community’s prevention efforts depends on the prevention intervention program. This makes it imperative to identify approaches that have been shown to be effective.

**Suggestions for Future Research**

In general, more research is necessary in the area of cyberbullying to aid in the development and identification of programs that are effective in combating this problem as well as the development of valid instruments that can reliably measure outcomes. Replication of this study is highly recommended to provide more insight and support for
the findings of this study. Suggestions for replication include the need for: (a) additional research with participants drawn from populations with different demographic characteristics and from populations with greater heterogeneity; (b) use of research designs that assure the equivalency of the groups prior to treatment and of designs that can establish causation; and (c) use of a mixed design (quantitative with qualitative follow-up) to allow students to have more input to better understand and explain the findings.

Additional recommendations for enhancement of the anti-cyberbullying curriculum include: (a) extending the 8 lessons over a sixteen-week period to gain more powerful results; (b) analysis of how discussions in curricular areas impacted the anti-cyberbullying curriculum; (c) analysis of how the presentation by the specific leaders (demonstration, in-class discussions and feedback from reflections) impact responses on the posttest; and (d) extension of the allotted time for each lesson to be presented which was affected by school bell system constraints.

Finally, it is recommended that further work be done to develop instruments to measure aspects of cyberbullying. There are three major categories of reliability for instruments to be considered reliable: test-retest, equivalent form, and internal consistency (Isaac & Michael, 1981). Each measures consistency differently and a particular instrument does not need to meet the requirements of each. Test-retest measures consistency from one time to the next (Isaac & Michael, 1981). As the instrument has been used so few times, it is necessary to continue gathering data to support its reliability. Equivalent-form measures consistency between two versions of an instrument. At this time there is only one version of the instrument. There is only one
other instrument (Willard, 2007) available and as stated in chapter two, the instrument’s reliability and validity were not available. A personal correspondence with the author revealed evaluation was ongoing. Internal-consistency measures consistency among the questions within the instrument (Isaac & Michael, 1981). For research purposes, a minimum reliability of .70 is required. The current instrument did have this data, but it was limited to particular portions of the instrument, which were then used by this researcher.
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Appendix A

Letter of Consent for Parents
January, 2009

Dear Middle School Parent/Guardian,

My name is Patricia-Ann Corso, and I am a teacher in the Middle School at The Sherman School. I currently attend Western Connecticut State University where I am pursuing a doctoral degree in Instructional Leadership. As part of my program requirements, I will be conducting a research study involving current trends in bullying and how students are being affected by these trends. More specifically, I would like to take a look at knowledge and behavioral practices and their daily use of electronic technology after participating in an anti-cyberbullying curriculum. The Sherman Board of Education approved this study in April, 2008 at its regular board meeting.

The anti-bullying curriculum is taken from the book Cyberbullying (2008) by Susan P. Limber who has completed numerous research studies in the area of bullying. She is currently a professor at Clemson University in Clemson, South Carolina. Her research and writing have focused on child protection and child rights, particularly in the area bullying.

Because your child is under the age of 18, parental permission is required for him/her to participate. In addition to the consent of a parent or guardian, participant agreement to participate in the study is required. Your child’s participation in this research is voluntary, and he or she can withdraw or be withdrawn at any time without penalty. All participants are guaranteed complete anonymity, and no survey materials will be labeled with any personally identifying information. No names or identification numbers will be on any written materials.
All data will be anonymous and will be reported only as group results, not individual results. The surveys (one pretest and one posttest) will take approximately 30 minutes to complete and will not negatively impact your child’s instructional time. The use of the data collected will be limited to this research as approved by Western Connecticut State University, although results may be accessible other researchers and educators for whom the data will prove useful in further comparative analyses and who are enrolled in Western Connecticut State University’s Doctor of Education in Instructional Leadership Program.

You may contact me at The Sherman School with questions at any time. You may also contact my advisor, Dr. Kay Campbell, in the Education and Educational Psychology Department at Western Connecticut State University in Danbury, CT.

I appreciate the opportunity to work with your child in researching ways to make our school an even safer and more positive environment for everyone.

Your return of this letter, signed and dated at the bottom, is consent to have your child participate in this research study. Please return to your child’s homeroom teacher on or before January 15, 2009. I must collect every signed letter for verification. If you choose not to have your child participate, please fill out the student name portion only.

Sincerely,

Patricia-Ann Schullery Corso
Parent/Guardian Name (please print) ____________________________________________

Signed ___________________________ Date ____________________________

Student Name (please print) _________________________________________ HR _______
Appendix B

Letter of Assent for Students
January, 2009

Dear Middle School Student,

My name is Mrs. Corso and I am a teacher in the Middle School at The Sherman School. I currently attend Western Connecticut State University where I am pursuing a doctoral degree in Instructional Leadership. As part of my program requirements, I will be conducting a research study involving current trends in bullying and how students are being affected by these trends. More specifically, I would like to take a look at knowledge and behavioral practices and your daily use of electronic technology after participating in an anti-cyberbullying curriculum. The Sherman Board of Education approved this study in April, 2008 at its regular board meeting.

The anti-bullying curriculum is taken from the book Cyberbullying (2008) by Susan P. Limber who has completed numerous research studies in the area of bullying. She is currently a professor at Clemson University in Clemson, South Carolina. Her research and writing have focused on child protection and child right, particularly in the area bullying.

Because you are under the age of 18, parental permission is required for you to participate, however, your participation in this study is voluntary and you may choose to not participate even if your parent has given permission. Your participation in this research is voluntary and you can withdraw at any time without penalty. All participants are guaranteed complete anonymity and no survey materials will be labeled with any personally identifying information. No names or identification numbers will be on any written materials. All data will be anonymous and will be
reported only as group results, not individual. The surveys (one pretest and one posttest) will take approximately 30 minutes to complete and will not negatively impact your child’s instructional time. The use of the data collected will be limited to this research as approved by Western Connecticut State University, although results may be accessible other researchers and educators for whom the data will prove useful in further comparative analyses and who are enrolled in Western Connecticut State University’s Doctor of Education in Instructional Leadership Program.

You may contact me at The Sherman School with questions at any time. You may also contact my advisor, Dr. Kay Campbell, in the Education and Educational Psychology Department at Western Connecticut State University in Danbury, CT.

I appreciate the opportunity to work with you in researching ways to make our school and even safer and more positive environment for everyone.

Your return of this letter, signed and dated at the bottom, is consent for you participate in this research study. Please return to your homeroom teacher on or before January 15, 2009. I must collect every signed letter for verification. If you choose not to participate please fill out the student name portion only.

Sincerely,

Patricia-Ann Schullery Corso
Student Name (please print) ______________________________________ HR _______

Signed ____________________________ Date __________________________